The Enhancement and Standardization of Climate-Related Disclosures for Investors

AGENCY: Securities and Exchange Commission.

ACTION: Proposed rule.

SUMMARY: The Securities and Exchange Commission ("Commission") is proposing for public comment amendments to its rules under the Securities Act of 1933 ("Securities Act") and Securities Exchange Act of 1934 ("Exchange Act") that would require registrants to provide certain climate-related information in their registration statements and annual reports. The proposed rules would require information about a registrant’s climate-related risks that are reasonably likely to have a material impact on its business, results of operations, or financial condition. The required information about climate-related risks would also include disclosure of a registrant’s greenhouse gas emissions, which have become a commonly used metric to assess a registrant’s exposure to such risks. In addition, under the proposed rules, certain climate-related financial metrics would be required in a registrant’s audited financial statements.

DATES: Comments should be received on or before May 20, 2022.

ADDRESSES: Comments may be submitted by any of the following methods:

Electronic Comments
- Send an email to rule-comments@sec.gov. Please include File Number S7–249.310 (Form 10–K) under the Securities Act, and 17 CFR 249.308a (Form 10–Q), and 17 CFR 249.306 (Form 6–K), 17 CFR 249.25 (Form S–1), 17 CFR 249.18 (Form S–11), 17 CFR 249.25 (Form S–4), and 17 CFR 249.34 (Form F–4) under the Securities Act 3 and the Exchange Act, 2 and amend 17 CFR 239.11 (Form S–1), 17 CFR 239.18 (Form S–11), 17 CFR 239.25 (Form S–4), and 17 CFR 239.34 (Form F–4) under the Securities Act, and 17 CFR 249.210 (Form 10), 17 CFR 249.220f (Form 20–F), 17 CFR 249.306 (Form 6–K), 17 CFR 249.308a (Form 10–Q), and 17 CFR 249.310 (Form 10–K) under the Exchange Act.

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I. Introduction

We are proposing to require registrants to provide certain climate-related information in their registration statements and annual reports, including certain information about climate-related financial risks and climate-related financial metrics in their financial statements. The disclosure of this information would provide consistent, comparable, and reliable—and therefore decision-useful—information to investors to enable them to make informed judgments about the impact of climate-related risks on current and potential investments.

The Commission has broad authority to promulgate disclosure requirements that are “necessary or appropriate in the public interest or for the protection of investors.” 3 We have considered this statutory standard and determined that disclosure of information about climate-related risks and metrics would be in the public interest and would protect investors. In making this determination, we have also considered whether the proposed disclosures “will promote efficiency, competition, and capital formation.” 4

We are proposing to require disclosures about climate-related risks and metrics reflecting those risks because this information can have an impact on public companies’ financial performance or position and may be material to investors in making investment or voting decisions. For this reason, many investors—including shareholders, investment advisers, and investment management companies—currently seek information about climate-related risks from companies to inform their investment decision-making. Furthermore, many companies have begun to provide some of this information in response to investor demand and in recognition of the potential financial effects of climate-related risks on their businesses.

We are concerned that the existing disclosures of climate-related risks do not adequately protect investors. For this reason, we believe that additional disclosure requirements may be necessary or appropriate to elicit climate-related disclosures and to improve the consistency, comparability, and reliability of climate-related disclosures. With respect to their existing climate-related disclosures (to the extent registrants are already disclosing such information), registrants often provide information outside of Commission filings and provide different information, in varying degrees of completeness, and in different documents and formats—meaning that the same information may not be available to investors across different companies. This could result in increased costs to investors in obtaining useful climate-related information and impair the ability to make investment or voting decisions in line with investors’ risk preferences. Also, companies may not disclose certain information needed to understand their existing climate-related disclosures, such as the methodologies, data sources, assumptions, and other key parameters used to assess climate-related risks. To the extent companies primarily provide this information separate from their financial reporting, it may be difficult for investors to determine whether a company’s financial disclosures are consistent with its climate-related disclosures. 5 In addition, the information provided outside of Commission filings is not subject to the full range of liability and other investor protections that help elicit complete and accurate disclosure by public companies.

Investors need information about climate-related risks—and it is squarely within the Commission’s authority to require such disclosure in the public interest and for the protection of investors—because climate-related risks have present financial consequences that investors in public

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5 S&P Global, Seven ESG Trends to Watch in 2021 (Feb. 7, 2021), available at https://www.spglobal.com/en/research-insights/featured/seven-esg-trends-to-watch-in-2021. This study found that approximately 90% of S&P 500 companies publish sustainability reports but only 16% include any reference to ESG factors in their Commission filings.
companies consider in making investment and voting decisions. Investors have noted that climate-related inputs have many uses in the capital allocation decision-making process including, but not limited to, insight into governance and risks management practices, integration into various valuation models, and credit research and assessments. Further, we understand investors often employ diversified strategies, and therefore do not necessarily consider risk and return of a particular security in isolation but also in terms of the security’s effect on the portfolio as a whole, which requires comparable data across registrants.

While climate-related risks implicate broader concerns—and are subject to various other regulatory schemes—our objective is to advance the Commission’s mission to protect investors, maintain fair, orderly and efficient markets, and promote capital formation, not to address climate-related issues more generally. In particular, the impact of climate-related risks on both individual businesses and the financial system as a whole are well documented. For example, the Financial Stability Oversight Council’s (“FSOC’s”) Report on Climate-Related Financial Risk 2021 found that businesses, financial institutions, investors, and households may experience direct financial effects from climate-related risks, and observed that the costs would likely be broadly felt as they are passed through supply chains and to customers and as they reduce firms’ ability to service debt or produce returns for investors. As a result, these climate-related risks and their financial impact could negatively affect the economy as a whole and create systemic risk for the financial system. SEC-reporting companies and their investors are an essential component of this system.

Climate-related risks can affect a company’s business and its financial performance and position in a number of ways. Severe and frequent natural disasters can damage assets, disrupt operations, and increase costs. Transitions to lower carbon products, practices, and services, triggered by changes in regulations, consumer preferences, availability of financing, technology and other market factors, make the best possible decisions and to hold public companies accountable.


See also, More than 1,000 Core-principle-for-business-heres-how-leaders-can-act, www.economist.com/business-functions/automotive-and-transportation/article/30012665 (Sept. 7, 2021), at https://www.economist.com/business-functions/automotive-and-transportation/article/30012665 (stating that electric vehicles are a major priority for the U.S. financial system and to its ability to sustain the American economy)

As organizations commit to reduce the carbon footprints of the products and services they provide, they look to their suppliers to align their efforts with the organization’s sustainability goals.


can lead to changes in a company’s business model.\textsuperscript{17} Governments around the world have made public commitments to transition to a lower carbon economy, and efforts towards meeting those greenhouse gas (“GHG”) reduction goals have financial effects that may materially impact registrants.\textsuperscript{18} In addition, banking regulators have recently launched initiatives to incorporate climate risk in their supervision of financial institutions.\textsuperscript{19} How a company assesses and plans for climate-related risks may have a significant impact on its future financial performance and investors’ return on their investment in the company.

Consistent, comparable, and reliable disclosures on the material climate-related risks public companies face would serve both investors and capital markets. Investors would be able to use this information to make investment or voting decisions in line with their risk preferences. Capital allocation would become more efficient as investors are better able to price climate-related risks. In addition, more transparency and comparability in climate-related disclosures would foster competition. Many other jurisdictions and financial regulators around the globe have taken action or reached similar conclusions regarding the importance of climate-related disclosures and are also moving towards the adoption of climate-related disclosure standards.\textsuperscript{20}

This proposal builds on the Commission’s previous rules and guidance on climate-related disclosures, which date back to the 1970s. In 2010, in response to increasing calls by the public and shareholders for public companies to disclose information regarding how climate change may affect their business and operations, the Commission published guidance (“2010 Guidance”) for registrants on how the Commission’s existing disclosure rules may require disclosure of the impacts of climate change on a registrant’s business or financial condition.\textsuperscript{21} Since that time, as climate-related impacts have increasingly been well-documented and awareness of climate-related risks to businesses and the economy has grown,\textsuperscript{22} investors have increased their demand for more detailed information about the effects of the climate on a registrant’s business and more information about how a registrant has addressed climate-related risks and opportunities when conducting its operations and developing its business strategy and financial plans.\textsuperscript{23} It is appropriate for us to consider such investor demand in exercising our authority and responsibility to design an effective and efficient disclosure regime under the federal securities laws.

In developing these proposals, we have considered the feedback we have received to date from a wide range of commenters, including comments from investors as to the information they need to make informed investment or voting decisions, as well as concerns expressed by registrants with regard to compliance burdens and liability risk.\textsuperscript{24} While our proposals include disclosure requirements designed to foster greater consistency, comparability, and reliability of available information, they also include a number of features designed to mitigate the burdens on registrants, such as phase-in periods for the proposed climate-related disclosure requirements.\textsuperscript{25} A safety valve for certain emissions disclosures,\textsuperscript{26} and an exemption from certain emissions reporting requirements for smaller reporting companies.\textsuperscript{27} In addition, the existing safe harbors for forward-looking statements under the Securities Act and Exchange Act would be available for aspects of the proposed disclosures.\textsuperscript{28}

Although the various requirements we are proposing are supported by overlapping rationales, we emphasize that the different aspects of the proposal serve independent, albeit complementary, objectives. In addition, we have carefully considered how to craft this proposal to best advance investor protection and the public interest, consistent with the Commission’s disclosure authority and regulatory mission, and we welcome comments on how we can further achieve that goal.

A. Background

The Commission first addressed the disclosure of material environmental issues in the early 1970s when it issued an interpretive release stating that registrants should consider disclosing in their SEC filings the financial impact of


\textsuperscript{18} See Antony J. Blinken, Secretary of State, The United States Officially Rejoins the Paris Agreement, Press Statement, (Feb. 19, 2021). 191 countries plus the European Union have now signed the Paris Agreement. The central aim of the Paris Climate Agreement is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century to well below 2°Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5°C degrees Celsius. See Paris Agreement (Paris, Dec. 12, 2015) (entered into force Nov. 4, 2016). Moreover, at the UN Climate Change Conference (COP 26), the United States committed to become net zero by 2050, China by 2060, and India by 2070. Further, over 100 companies to disclose information to, among other matters, BlackRock invests in to, among other matters, 100+ companies formed a coalition to reduce methane emissions by 30 percent by 2030. See Environment Energy Leader, COP26 Net Zero Commitments will Speed Energy Transition, Increase Pressure on Industries. According to Moody’s Report (Nov. 17, 2021).


\textsuperscript{20} See infra Section I.C.2.


\textsuperscript{22} See, e.g., supra notes 6, 10, and 12.


\textsuperscript{25} See infra Section II.M.

\textsuperscript{26} See Section II.C.3.

\textsuperscript{27} See id.

Throughout the 1970s, the Commission continued to explore the need for specific rules mandating disclosure of information relating to litigation and other business costs arising out of compliance with federal, state, and local laws that regulate the discharge of materials into the environment or otherwise relate to the protection of the environment. These topics were the subject of several rulemaking efforts, extensive litigation, and public hearings, all of which resulted in the rules that now specifically address disclosure of environmental issues. After almost a decade of consideration, the Commission adopted rules in 1982 mandating disclosure of information relating to litigation and other business costs arising out of compliance with federal, state, and local laws that regulate the discharge of materials into the environment or otherwise relate to the protection of the environment. In addition to these specific disclosure requirements, the Commission’s other disclosure rules requiring, for example, information about material risks and a description of the registrant’s business, could give rise to an obligation to provide disclosure related to the effects of climate change. In its 2010 Guidance, the Commission observed that, in response to investor demand for climate-related information, many companies were voluntarily reporting climate-related information outside their filings with the Commission. The Commission emphasized that registrants should be aware that some of the information they may be reporting pursuant to these mechanisms also may be required to be disclosed in filings made with the Commission pursuant to existing disclosure requirements.

Specifically, the 2010 Guidance emphasized that climate change disclosure might, depending on the circumstances, be required in a company’s Description of Business, Risk Factors, Legal Proceedings, and Management’s Discussion and Analysis of Financial Condition and Results of Operations (“MD&A”). The 2010 Guidance further identified certain climate-related issues that companies may need to consider in making their disclosures, including the direct and indirect impact of climate-related legislation or regulations, international agreements, indirect consequences of business trends including changing demand for goods, and the physical impacts of climate change.

The proposals set forth in this release would augment and supplement the disclosures already required in SEC filings. Accordingly, registrants should continue to evaluate the climate-related risks they face and assess whether disclosures related to those climate-related risks must be disclosed in their Description of Business, Risk Factors, Legal Proceedings, and MD&A as described in the 2010 Guidance. These disclosures should be based on the registrant’s specific facts and circumstances. While climate risks impact many issuers across industries, the impacts of those risks on a particular registrant and how the registrant addresses those risks are fact-specific and may vary significantly by registrant. The disclosures required by

B. The March 2021 Request for Public Input

On March 15, 2021, Acting Chair Allison Herren Lee requested public input on climate disclosure from investors, registrants, and other market participants. The Acting Chair solicited input on several issues, including how the Commission could best regulate disclosure concerning climate change in order to provide more consistent, comparable, and reliable information for investors, whether the Commission should require the disclosure of certain metrics and other climate-related information, the role that existing third-party climate-related disclosure frameworks should play in the Commission’s regulation of such disclosure, and whether and how such disclosure should be subject to assurance.

The Commission received approximately 600 unique letters and over 5800 form letters in response to the Acting Chair’s request for public input. We received letters from academics, accounting and audit firms, individuals, industry groups, investor groups, registrants, non-governmental organizations, professional climate advisors, law firms, professional investment advisors and investment management companies, standard-setters, state government officials, and US Senators and Members of the House of Representatives.

Many of these commenters, including investors with trillions of dollars of assets under management collectively, broad-based does not, in our view, cause them to be generic. For example, thousands of companies in Houston were impacted by Hurricane Harvey. However, (1) their flood risk varied and some companies may have been far more impacted than others (and would be more vulnerable to future catastrophic storms); (2) their operations were different and some may have been more disrupted as a result than others—in a services business on the 10th floor of a building may have experienced just a few days of disruption while an oil refinery may have been shut down for weeks; and (3) their risk management processes may have been different—two similarly situated companies may have different continuity of operations plans or may have taken steps to mitigate those types of risks. In sum, while the source of the risk may be common to many companies, the impact is not.

We received letters from BlackRock (June 11, 2021) ($9T); Ceres (June 10, 2021) (representing Investor Network on Climate Risk and Sustainability) ($37T); Council of Institutional Investors (June 11,
supported implementation of climate-related disclosure rules. A number of commenters stated that mandated disclosures are necessary because climate change poses significant financial risks to registrants and their investors. According to one of the commenters, 68 out of 77 industries are likely to be significantly affected by climate risk. Many commenters criticized the current disclosure practice, in which some issuers voluntarily provide climate disclosures based on a variety of different third-party sources and have not produced consistent, comparable, reliable information for investors and their advisors, who otherwise have difficulty obtaining that information.

Other commenters, however, questioned whether climate change posed a risk to companies or their investors. These commenters stated their belief that the assumptions underlying the assessment of the impact of climate change were too uncertain to permit companies to ascertain the real risks to their operations and financial condition caused by climate change. These commenters stated that they opposed implementation of climate-related disclosure rules, and argued that such rules would exceed the Commission’s statutory authority. Some of these commenters also argued that such rules are not necessary because registrants are already required to disclose material climate risks, or that such rules would be more costly than the current “private ordering” of climate disclosures. Some commenters also argued that mandated climate disclosure rules could violate First Amendment rights.

As noted above, we have considered these comments and other feedback received from investors in formulating the current proposal. As part of its filing review process, the Commission staff also assessed the extent to which registrants currently disclose climate-related risks in their Commission filings. Since 2010, disclosures related to climate change have generally increased, but there is considerable variation in the content, detail, and location (i.e., in reports filed with the Commission, in sustainability reports posted on registrant websites, or elsewhere) of climate-related disclosures. The staff has observed significant inconsistency in the depth and specificity of disclosures by registrants across industries and within the same industry. The staff has found significantly more extensive information in registrants’ sustainability reports and other locations such as their websites as compared with their reports filed with the Commission. In addition, the disclosures in registrants’ Forms 10-K frequently contain general, boilerplate discussions that provide limited information as to the registrants’ assessment of their climate-related risks or their impact on the company’s business.

We are also mindful of the benefits to investors of requiring climate-related information in SEC filings. Providing more extensive climate-related disclosure in sustainability reports, while excluding such relevant information from Forms 10-K, may make it difficult for investors to analyze and compare how climate-related risks and impacts affect registrants’ businesses and consolidated financial statements. The inclusion of climate-related disclosures in SEC filings should increase the consistency, comparability, and reliability of climate-related information for investors. The placement of climate-related information in different locations can make it difficult for investors to find and compare this information. Further, information that is filed with the Commission in Exchange Act periodic reports is subject to disclosure controls and procedures (“DCP”), which help to ensure that a registrant maintains appropriate processes for collecting and communicating the necessary information by which to formulate the climate-related disclosures. Moreover, in formation filed as part of a registrant’s Form 10-K carries certain additional potential liability, which itself can cause registrants to prepare and review information filed in the Form 10-K more carefully than information presented outside SEC filings.

The staff of the Division of Corporation Finance has developed a sample comment letter for registrants to elicit improved disclosure on some of the deficient areas noted in their review of filings. See Climate Change Disclosure-Sample Letter, available at https://www.sec.gov/divisions/corpfin/sample-letter-climate-change-disclosures. The staff also noted that the liabilities provisions of Section 10(b) and Rule 10b-5 of the Exchange Act can apply to statements made in filings with the SEC or elsewhere, such as in sustainability reports or on company websites. See, e.g., SEC v. Stimson, No. 10–3130, 2011 U.S. Dist. LEXIS 65723, 2011 WL 2462038, at 12 (E.D. Pa. June 20, 2011) (finding defendants liable under Section 10(b) when they communicated material misstatements and omissions in direct solicitations via email, a webinar, and various websites). As such, registrants should scrutinize and ensure the accuracy of such statements whether or not filed with the Commission.

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Continued
Having considered the public feedback and the staff’s experience with climate-related disclosures, we believe that the current disclosure system is not eliciting consistent, comparable, and reliable information that enables investors both to assess accurately the potential impacts of climate-related risks on the nature of a registrant’s business and to gauge how a registrant’s board and management are assessing and addressing those impacts. The Commission has broad authority to promulgate disclosure rules that are in the public interest or for the protection of investors and that promote efficiency, competition, and capital formation. In light of the present and growing significance of climate-related risks to registrants and the inadequacies of current climate disclosures, we are proposing to revise our rules to include climate-related disclosure items and metrics to elicit investment decision-useful information that is necessary or appropriate to protect investors. We also believe that enhanced climate disclosures could increase confidence in the capital markets and help promote efficient valuation of securities and capital formation by requiring more consistent, comparable, and reliable disclosure about climate-related risks, including how those risks are likely to impact a registrant’s business operations and financial performance. The proposed requirements may also result in benefits to registrants, given existing costs to registrants that have resulted from the inconsistent market response to investor demand for climate-related information. In this regard our proposal would provide registrants with a more standardized framework to communicate their assessments of climate-related risks as well as the measures they are taking to address those risks. At the same time, we are open to exploring ways in which registrants could be afforded flexibility in making the necessary disclosures while still providing appropriate consistency and comparability, and are seeking comment in that regard.

**C. The Growing Investor Demand for Climate-Related Risk Disclosure and Related Information**

1. Major Investor Climate-Related Initiatives

As the Commission recognized in 2010 and earlier, there has been significant investor demand for information about how climate conditions may impact their investments. That demand has been increasing in recent years. Several major institutional investors, which collectively have trillions of dollars in investments under management, have demanded climate-related information from the companies in which they invest because of their assessment of climate change as a risk to their portfolios, and to investments generally, and also to satisfy investor interest in

and numerous direct requests to companies for information through surveys, the current private ordering-led system has increased the burden on companies—and investors—while still leaving many companies uncertain as to whether they are, in practice, providing the decision-useful information required by investors.

53 Providing a more standardized framework for climate-related disclosures would be consistent with the Recommendation from the Investor-as-Owner Subcommittee of the SEC Investor Advisory Committee Relating to ESG Disclosure (May 14, 2020) (“IAC Recommendation”), available at https://www.sec.gov/spotlight/investor-advisory-committee-2012/recommendation-of-the-investor-as-owner-subcommittee-on-eng-disclosure.pdf. The term “ESG” refers to environmental, social, and governance matters, of which climate-related disclosures is a part. The IAC Recommendation focused on the infeasibilities of ESG disclosures broadly, and not specifically involving climate. The IAC Recommendation stated that, to the extent that SEC reporting obligations would require a single standard of material, decision-useful ESG information, as relevant to each issuer, and based upon data that issuers already use to make their business decisions, such an approach would level the playing field between well-financed large issuers and capital constrained smaller issuers.

investments that are considered “sustainable.” As a result, these investors have sought to include and consider climate risk as part of their investment selection process. These institutional investors have formed investor initiatives to collectively urge companies to provide better information about the impact that climate change has had or is likely to have on their businesses, and to urge governments and companies to take steps to reduce investors’ exposure to climate risks. Among these initiatives:

- In 2019, more than 630 investors collectively managing more than $37 trillion signed the Global Investor Statement to Governments on Climate Change urging governments to require climate-related financial reporting; This investor initiative continued as the Investor Agenda’s 2021 Global Investor Statement to Governments on the Climate Crisis, which was signed by 733 global institutional investors, including some of the largest investors, with more than US $52 trillion in assets under management in the aggregate.
- The UN Principles for Responsible Investment ("PRI") has acquired over 4,000 signatories who, as of July 13, 2021, have, in the aggregate, assets under management exceeding $120 trillion as of July 13, 2021.
- The Net Zero Asset Managers Initiative, which was formed by an international group of asset managers, has 128 signatories that collectively

55 See supra note 23.
56 There is some overlap in the signatories to the listed initiatives.
58 The PRI was created by a UN-sponsored small group of large global investors in 2006. A stated core goal of the PRI is to help investors protect their portfolios from climate-related risks and to take advantage of climate-related opportunities that are associated with a shift to a low-carbon global economy. See PRI, Climate Change, available at https://www.unpri.org/climate-change.
manage $43 trillion in assets as of July 2021.61
• The Climate Action 100+, an investor-led initiative, now comprises 617 global investors that together have more than $60 trillion in assets under management;62 and
• The Glasgow Financial Alliance for Net Zero ("GFANZ"), a coalition of over 450 financial firms from 45 countries, responsible for assets of over $130 trillion, that are committed to achieving net-zero emissions by 2050, reaching 2030 interim targets, covering all emission scopes and providing transparent climate-related reporting.63

Each of these investor initiatives has emphasized the need for improved disclosure by companies regarding climate-related impacts. Each of these initiatives has advocated for mandatory climate risk disclosure requirements aligned with the recommendations of the Task Force on Climate-Related Financial Disclosures ("TCFD")64 so that disclosures are consistent, comparable, and reliable. The investor signatories of Climate Action 100+ emphasized that obtaining better disclosure of climate-related risks and companies’ strategies to address their exposure to those risks is consistent with the exercise of their fiduciary duties to their respective clients.65

At the same time, many companies have made commitments with respect to climate change, such as commitments to reduce greenhouse gas emissions or become "net zero" by a particular date.66 Companies may make these commitments to attract investors, to appeal to customers that prioritize sustainability, or to reduce their exposure to risks posed by an expected transition to a lower carbon economy.67

In response to these commitments, investors have demanded more detailed information about climate-related targets and companies’ plans to achieve them in order to assess the credibility of those commitments and compare companies based on those commitments.68

These initiatives demonstrate that investors are using information about climate risks now as part of their investment selection process and are seeking more informative disclosures about those risks. As an increasing number of investors incorporate this information, in particular GHG emissions, into their investment selection or voting decisions, this may in turn create transition risks for companies that are seeking to raise capital.

2. Third-Party Data, Voluntary Disclosure Frameworks, and International Disclosure Initiatives

Despite increasing investor demand for information about climate-related risks and strategies, many investors maintain that they cannot obtain the consistent, comparable, and material information that they need to properly inform their investment or voting decisions.69 In 2020, the Commission’s Investor Advisory Committee ("IAC") noted the fragmentation of information that has resulted from a rise in third-party data providers that have emerged to try to meet the informational demands of investors.70 The IAC recommended that the Commission take action to ensure investors have the material, comparable, consistent information about climate and other ESG matters that they need to make investment and voting decisions.

In addition, a diverse group of third parties has developed climate-related reporting frameworks seeking to meet investors’ informational demands. These include the Global Reporting Initiative ("GRI"),71 CDP (formerly the Carbon Disclosure Project),72 Climate Disclosure Standards Board ("CDSB"),73 Value Reporting Foundation (formed through a merger of the Sustainability Accounting Standards Board ("SASB") and the International Integrated Reporting Council ("IIRC")),74 and the TCFD.75

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.76 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.77 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. An analysis conducted by the World Business Council for Sustainable Development found that investors had difficulty using existing sustainability disclosures because they lack consistency and comparability.78 In addition, a 2020 study by the Yale Initiative on Sustainable Finance found that the proliferation of reporting frameworks may have made reporting more difficult for issuers.79 Moreover, given the voluntary nature of these third-party frameworks, there may not be sufficient incentives or external disciplines to ensure that companies are providing complete and robust disclosure under those frameworks.80

The staff has reviewed more than a dozen studies of climate-related disclosures conducted by third parties, such as the CDP,81 KPMG,82 TCFD83, and Ernst & Young,84 which assessed the adherence of the climate-related disclosures to various third-party frameworks, such as the TCFD. These studies have reinforced the staff’s observations from their review of filings that there is significant variation across companies and industries with regard to the content of current climate disclosures.85 Further, much of this climate-related information, particularly GHG emissions and targets, appears outside of Commission filings, in sustainability reports, and on corporate websites. Other analyses of current climate reporting have found a lack of transparency and standardization with regard to the methodologies companies apply in disclosing climate-related information.86

81 See CDP, ANALYSIS OF CA100+ COMPANY DATA (2020), available at https://cdn.cdp.net/cdp-projection/cms/reports/documents/0000/005/312/original/Analysis_of_CA100_Data_for_CDP_Investor_Signatories_v5.pdf.82 See KPMG, The Time Has Come-The KPMG Survey of Sustainability Reporting 2020 (Dec. 2020), available at https://assets.kpmg/content/dam/kpmg/xx/pdf/2020/11/the-time-has-come.pdf.83 See TCFD 2020 Status Report (Sept. 2020), available at https://assets.bhubb.com/company/sites/60/2020/09/2020-TCFD_Status-Report.pdf.84 See Ernst & Young, How can climate change disclosures protect reputation and value?: The 2019 EY Global Climate Risk Disclosure Barometer (Apr. 2020), available at https://www.ey.com/en_us/climate-change-sustainability-services/how-can-climate-change-disclosures-protect-reputation-and-value.85 For example, the TCFD report found that the average level of disclosure across the TCFD’s 11 disclosure categories was 40% for the energy sector, 30% for the materials and building sector, 18% for the consumer goods sector and 15% for the technology sector. The level of disclosure varied among categories with only 4% or reporting companies disclosing the resilience of their strategies in North America and 50% reporting their risks and opportunities (the category with the highest level of disclosure). The Ernst & Young report found many companies in industries considered to have high exposure to climate-related risks lack high quality climate disclosures. The Ernst & Young report graded the average quality of the disclosures at 27 out of 100.86 See, e.g., The SEC’s Time to Act, Center for American Progress (Feb. 19, 2021) (“[T]here is a lack of standardization of the data, assumptions, and methodologies companies use to meet the standards, with much of this information being opaque. Clearly, the current path of climate disclosure will not provide the transparency that an increasing number of investors are seeking and, indeed, a properly functioning market requires—consistency of disclosures across time, comparability of disclosures across companies, and reliability of the information that is disclosed.”) See also, Andy Green and Andrew Schwartz, Corporate Long-Termism, Transparency, and the Public Interest (Oct. 2, 2018) (“[C]orporate disclosure available today is insufficient, not comparable, and unreliable.”); and Managing Climate Risk in an Unstable Financial System, Report of the Climate-Related Market Risk Subcommittee, Market Risk Advisory Committee of the U.S. Commodity Futures Trading Commission (2020) (“Large companies are increasingly disclosing some climate-related information, but significant variations remain in the information disclosed by each company, making it difficult for investors and others to understand exposure and manage climate risks.”)

87 The IFRS Foundation refers to the International Financial Reporting Standards Foundation, which was established to develop a single set of “high-quality,” enforceable, and globally accepted accounting standards. See IFRS—Who we are, available at https://www.ifrs.org/about-us/who-we-are/. The IFRS Foundation was formed in 2001 and succeeded the International Accounting Standards Board (the “IASB”), which was formed in 2001.


89 IOSCO refers to the International Organization of Securities Commissions, of which the Commission is a member.

standards that an ISSB might eventually develop.91

In November 2021, the IFRS Foundation announced the formation of the ISSB.92 The ISSB is expected to engage in standard setting to build on the Prototype, including developing climate-specific disclosure standards based on the recommendations of the TCFD.93

Several jurisdictions, including the European Union,94 are developing or revising their mandatory climate-related disclosure requirements to provide investors with more consistent, useful climate-related financial information, including associated assurance requirements and data tagging to facilitate the use of the information.95

These international developments show an increasing global recognition of the need to improve issuers’ climate-related disclosures, which the proposed rules would help address, as well as the convergence of investors and issuers around the TCFD as a useful framework for communicating information about climate-related risks that companies may face.

D. Development of a Climate-Related Reporting Framework

In recent years, two significant developments have occurred that support and inform the Commission’s proposed climate-related reporting rules. The first involves the TCFD, which has developed a climate-related reporting framework that has become widely accepted by both registrants and investors.96 The second involves the Greenhouse Gas Protocol (“GHG Protocol”), which has become a leading accounting and reporting standard for greenhouse gas emissions.97 Both the TCFD and the GHG Protocol have developed concepts and a vocabulary that are commonly used by companies when providing climate-related disclosures in their sustainability or related reports. As discussed in greater detail below, the Commission’s proposed rules incorporate some of these concepts and vocabulary, which by now are familiar to many registrants and investors.

1. The Task Force on Climate-Related Financial Disclosure

Our proposed climate-related disclosure framework is modeled in part on the TCFD’s recommendations. A goal of the proposed rules is to elicit climate-related disclosures that are consistent, comparable, and reliable while also attempting to limit the compliance burden associated with these disclosures. The TCFD framework has been widely accepted by issuers, investors, and other market participants, and, accordingly, we believe that proposing rules based on the TCFD framework may facilitate achieving this balance between eliciting better disclosure and limiting compliance costs.98

In April 2015, the Group of 20 Finance Ministers directed the Financial Stability Board (“FSB”) to evaluate ways in which the financial sector could address climate-related concerns.99 The FSB concluded that better information was needed to facilitate informed investment decisions and to help investors and other market participants to better understand and take into account climate-related risks. The FSB established the TCFD, an industry-led task force charged with promoting better-informed investment, credit, and insurance underwriting decisions.100 Since then, the framework for climate-related disclosures developed by the TCFD has been refined and garnered global support as a reliable framework for climate-related financial reporting.101

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: Governance, strategy, risk management, and metrics and targets.102


96 A number of registrants recommended basing the Commission’s climate-related disclosure rules on the TCFD framework. See, e.g., letters from Adobe; Alphabet Inc. et al.; BPN Paribas (June 11, 2021); bp; Chevron (June 11, 2021); ConocoPhilips; and Walmart. Similarly, numerous investors and investor groups recommended the TCFD framework. See letters from Alberta Investment Management Corporation; BlackRock; CalPERS; CALSTRS (June 4, 2021); Impact Investors, Inc.; and San Francisco Employees Retirement System. See also infra Section II.A.1 for further discussion of the many commenters that recommended basing the Commission’s climate-related disclosure rules on the TCFD framework.

97 See, e.g., letter from Natural Resources Defense Council (stating that most companies providing climate-related information do so using the three-part [scope] framework developed by the GHG Protocol and noting other organizations, such as the CDP, that use the GHG Protocol’s framework and methodology); see also GHG Protocol, Companies and Organizations (stating that 92% of companies responding to the CDP in 2016 used the GHG Protocol’s standards and guidance).

98 See infra Section II.A.1 and notes 145 through 149.

99 See TCFD, 2020 Status Report (Oct. 2020). The Group of 20 (“G20”) is a group of finance ministers and central bank governors from 19 countries, including the United States, plus the European Union, which was formed in 1999 to promote global economic growth, international trade, and regulation of financial markets. According to the G20, its members represent more than 80% of world GDP, 75% of international trade, and 60% of the world population. See G20, About the G20, available at https://g20.org/about-the-g20/.


101 See, e.g., Climate Action 100+, The Three Asks, available at https://www.climateaction100.org/approach/the-three-asks/ (requiring participating investors to ask the companies with which they engage to provide enhanced corporate disclosure in line with the TCFD’s recommendations; and CDP, How CDP is aligned to the TCFD, available at https://www.cdp.net/en/guidance/how-cdp-is-aligned-to-the-tdcf (explaining how the CDP has aligned its questions to elicit disclosures aligned with the TCFD’s recommendations).

Support for the TCFD’s recommendations by companies and other reporting frameworks has grown steadily since the TCFD’s formation.\textsuperscript{103} As of October 2021 more than 2,600 organizations globally, with a total market capitalization of $25 trillion have expressed support for the TCFD.\textsuperscript{104} Further, 1,069 financial institutions, managing assets of $194 trillion, also support the TCFD.\textsuperscript{105} In recognition of the widespread adoption by companies of TCFD reporting, a number of countries, including the United Kingdom, New Zealand, and Switzerland have encouraged or mandated the European Union that have proposed mandatory climate-risk disclosure requirements have indicated an intention to base disclosure requirements on the TCFD framework.\textsuperscript{106} Further, the TCFD’s recommendations have been adopted by, and incorporated into, other voluntary climate disclosure frameworks such as the CDP, GRI, CDSB, and SASB frameworks. The TCFD also forms the framework for the Prototype that the IFRS Foundation provided to the ISSB as a potential starting point for its standard setting initiative.\textsuperscript{107} 7 The G7 Finance Ministers and Central Bank Governors have also endorsed the TCFD.\textsuperscript{108} As a result, although the reporting landscape is crowded with voluntary standards that seek different information in different formats, the TCFD framework has been widely endorsed by U.S. companies and regulators and standard-setters around the world.

2. The Greenhouse Gas Protocol

Quantitative greenhouse gas (“GHG”) emissions data can enable investors to assess a registrant’s exposure to climate-related risks, including regulatory, technological, and market risks driven by a transition to a lower-GHG intensive economy.\textsuperscript{109} This data also could help investors to assess the progress of registrants with public commitments to reduce GHG emissions, which would be important in assessing potential future capital outlays that might be required to meet such commitments. For these reasons, many investors and other commenters recommended that we require disclosure of a registrant’s GHG emissions.\textsuperscript{110} Many commenters also recommended that we base any GHG emissions disclosure requirement on the GHG Protocol.\textsuperscript{111} These commenters indicated that the GHG Protocol has become the most widely-used global greenhouse gas accounting standard.\textsuperscript{112} For example, the Environmental Protection Agency (“EPA”) Center for Corporate Climate Leadership references the GHG Protocol’s standards and guidance as resources for companies that seek to calculate their GHG emissions.\textsuperscript{113}

\begin{footnotesize}
\textsuperscript{103}See TCFD, 2021 Status Report. A recent survey by Moody’s of over 3,800 companies worldwide indicated that the global average disclosure rate of companies that reported across all 11 TCFD’s recommendations increased to 22% in 2021 from 16% in 2019. Moody’s, State of TCFD Disclosures 2021, available at https://www.moodys.com/research/reports/2021/moodys-state-of-TCFD-disclosures-2021.pdf. In addition, according to a recent report by the Governance & Accountablility Institute, Inc., 70% of companies in the Russell 1000 Index published sustainability reports in 2020, and of those reporters, 30% mentioned or aligned their disclosures with the TCFD framework, and 40% responded to the CDP questionnaires, which are aligned with the TCFD. See Governance & Accountablility Institute, Sustainability Reporting in Focused 2021, available at https://www.ga-institute.com/fileadmin/ga-institute_images/FlashReports2021-Russell-1000/G-A-Russell-Report-2021-Final.pdf?v=src
\end{footnotesize}
company. These might include emissions associated with the production and transportation of goods a registrant purchases from third parties, employee commuting or business travel, and the processing or use of the registrant’s products by third parties.

We have based our proposed GHG emissions disclosure requirement primarily on the GHG Protocol’s concept of scopes and related methodology. By basing this requirement on an established GHG emissions reporting framework, we believe the compliance burden would be mitigated, especially for those registrants that are already disclosing or estimating their GHG emissions pursuant to the GHG Protocol.

E. Summary of the Proposed Rules

We are proposing to add a new subpart to Regulation S–K, 17 CFR 229.1500–1507 (“Subpart 1500 of Regulation S–K”) that would require a registrant to disclose certain climate-related information, including information about its climate-related risks that are reasonably likely to have material impacts on its business or consolidated financial statements, and GHG emissions metrics that could help investors assess those risks. A registrant may also include disclosure about its climate-related opportunities. The proposed new subpart to Regulation S–K would include an attestation requirement for accelerated filers and large accelerated filers regarding certain proposed GHG emissions metrics disclosures.

We are also proposing to add a new article to Regulation S–X, 17 CFR 210.14–01 and 02 (“Article 14 of Regulation S–X”) that would require certain climate-related financial statement metrics and related disclosure to be included in a note to a registrant’s audited financial statements. The proposed financial statement metrics would consist of disaggregated climate-related impacts on existing financial statement line items. As part of the registrant’s financial statements, the financial statement metrics would be subject to audit by an independent registered public accounting firm, and come within the scope of the registrant’s internal control over financial reporting (“ICFR”).

1. Content of the Proposed Disclosures

The proposed climate-related disclosure framework is modeled in part on the TCFD’s recommendations, and also draws upon the GHG Protocol. In particular, the proposed rules would require a registrant to disclose information about:

• The oversight and governance of climate-related risks by the registrant’s board and management;

• How any climate-related risks identified by the registrant have had or are likely to have a material impact on its business and consolidated financial statements, which may manifest over the short-, medium-, or long-term;

• How any identified climate-related risks have affected or are likely to affect the registrant’s strategy, business model, and outlook;

• The registrant’s processes for identifying, assessing, and managing climate-related risks and whether any such processes are integrated into the registrant’s overall risk management system or processes;

• The impact of climate-related events (severe weather events and other natural conditions as well as physical risks identified by the registrant) and transition activities (including transition risks identified by the registrant) on the line items of a registrant’s consolidated financial statements and related expenditures, and disclosure of financial estimates and assumptions impact on such climate-related events and transition activities.

2. Presentation of the Proposed Disclosures

The proposed rules would require a registrant (both domestic and foreign private issuers) to provide the climate-related disclosure in its registration statements and Exchange Act annual reports.

118 The Scope 3 emissions standard was developed over a three-year period with participation by businesses, government agencies, academics, and NGOs to help companies understand and manage their climate-related risks and opportunities in their upstream and downstream value chains. See Greenhouse Gas Protocol, Corporate Value Chain (Scope 3) Accounting and Reporting Standard, Supplement to the GHG Protocol Corporate Accounting and Reporting Standard (Sept. 2011), available at https://ghgprotocol.org/sites/default/files/standards/Corporate-Value-Chain-Accounting-Reporting-Standard_041613_2.pdf. This standard identified eight upstream and seven downstream emission categories that can give rise to Scope 3 emissions. The GHG Protocol is developing additional guidance that may impact Scope 3 emissions related to land use and land sector activities. See Greenhouse Gas Protocol, Update on Greenhouse Gas Protocol Carbon Removals and Land Sector Initiative (July 8, 2021), available at https://ghgprotocol.org/blog/update-greenhouse-gas-protocol-carbon-removals-and-land-sector-initiative.

119 See Section II.G.1 below, for a more extensive discussion of Scope 3 categories and emissions.

120 See id.

121 See infra Sections II.B through II.G and I.I.

122 See 17 CFR 240.12b–2 (defining “accelerated filer” as an issuer after it first meets the following conditions as of the end of its fiscal year: (i) The issuer had an aggregate worldwide market value of the voting and non-voting common equity held by its non-affiliates of $750 million or more, but less than $700 million, as of the last business day of the issuer’s most recently completed second fiscal quarter; (ii) The issuer has been subject to the requirements of Section 13(a) or 15(d) of the Exchange Act for a period of at least twelve calendar months; (iii) The issuer has filed at least one annual report pursuant to Section 13(a) or 15(d) of the Exchange Act; and (iv) The issuer is not eligible to use the requirements for SRCS under the SRC revenue test).

123 See 17 CFR 240.12b–2 (defining “large accelerated filer” as an issuer after it first meets the following conditions as of the end of its fiscal year: (i) The issuer had an aggregate worldwide market value of the voting and non-voting common equity held by its non-affiliates of $700 million or more, as of the last business day of the issuer’s most recently completed second fiscal quarter; (ii) The issuer has been subject to the requirements of Section 13(a) or 15(d) of the Exchange Act for a period of at least twelve calendar months; (iii) The issuer has filed at least one annual report pursuant to Section 13(a) or 15(d) of the Exchange Act; and (iv) The issuer is not eligible to use the requirements for SRCS under the SRC revenue test).

124 See infra Section II.H.

125 See infra Section II.F.

126 See infra Sections II.F.2 and 3.

127 See infra Section II.D.

128 See infra Sections II.B and C.
To provide the Regulation S–K mandated climate-related disclosure in a separate, appropriately captioned section of its registration statement or annual report, or alternatively to incorporate that information in the separate, appropriately captioned section by reference from another section, such as Risk Factors, Description of Business, or Management’s Discussion and Analysis (“MD&A”); 137

To provide the Regulation S–X mandated climate-related financial statement metrics and related disclosure in a note to the registrant’s audited financial statements; 138

To electronically tag both narrative and quantitative climate-related disclosures in Inline XBRL; 139 and

To file rather than furnish the climate-related disclosure. 140

3. Attestation for Scope 1 and Scope 2 Emissions Disclosure

The proposed rules would require an accelerated filer or a large accelerated filer to include, in the relevant filing, an attestation report covering, at a minimum, the disclosure of its Scope 1 and Scope 2 emissions and to provide certain related disclosures about the service provider. 141 As proposed, both accelerated filers and large accelerated filers would have time to transition to the minimum attestation requirements. The proposed transition periods would provide existing accelerated filers and large accelerated filers one fiscal year to transition to providing limited assurance and two additional fiscal years to transition to providing reasonable assurance, starting with the respective compliance dates for Scopes 1 and 2 disclosure described below. 142

The proposed rules would provide minimum attestation report requirements, minimum standards for acceptable attestation frameworks, and would require an attestation service provider to meet certain minimum qualifications. The proposed rules would not require an attestation service provider to be a registered public accounting firm.

4. Phase-In Periods and Accommodations for the Proposed Disclosures

The proposed rules would include:

- A phase-in for all registrants, with the compliance date dependent on the registrant’s filer status;
- An additional phase-in period for Scope 3 emissions disclosure;
- A safe harbor for Scope 3 emissions disclosure;
- An exemption from the Scope 3 emissions disclosure requirement for a registrant meeting the definition of a smaller reporting company (“SRC”); 143 and
- A provision permitting a registrant, if actual reported data is not reasonably available, to use a reasonable estimate of its GHG emissions for its fourth fiscal quarter, together with actual, determined GHG emissions data for the first three fiscal quarters, as long as the registrant promptly discloses in a subsequent filing any material difference between the estimate used and the actual, determined GHG emissions data for the fourth fiscal quarter.

The proposed rules would be phased in for all registrants, with the compliance date dependent upon the status of the registrant as a large accelerated filer, accelerated or non-accelerated filer, or SRC, and the content of the item of disclosure. For example, assuming that the effective date of the proposed rules occurs in December 2022 and that the registrant has a December 31st fiscal year-end, the compliance date for the proposed disclosures in annual reports, other than the Scope 3 disclosure, would be:

- For large accelerated filers, fiscal year 2023 (filed in 2024);
- For accelerated and non-accelerated filers, fiscal year 2024 (filed in 2025); and
- For SRCs, fiscal year 2025 (filed in 2026). 144

Registrants subject to the proposed Scope 3 disclosure requirements would have one additional year to comply with those disclosure requirements.

We welcome feedback and encourage interested parties to submit comments on any or all aspects of the proposed rules. When commenting, it would be most helpful if you include the reasoning behind your position or recommendation.

II. Discussion

A. Overview of the Climate-Related Disclosure Framework

1. Proposed TCFD-Based Disclosure Framework

We have modeled the proposed disclosure rules in part on the TCFD disclosure framework. Building on the TCFD framework should enable companies to leverage the framework with which many investors and issuers are already familiar, which should help to mitigate both the compliance burden for issuers and any burdens faced by investors in analyzing and comparing the new proposed disclosures.

Many commenters that supported climate disclosure reform recommended that we consider the TCFD framework in developing those rules. Numerous commenters stated that the Commission should base its climate-related disclosure rules on the TCFD framework either as a standalone framework, 145 or in conjunction with industry-specific metrics drawn from the SASB 146 or

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137 See id.
138 See infra Section I.F.
139 See infra Section I.K.
140 See infra Section I.L.
141 See infra Section I.H.
142 See infra Section I.H.1 (providing further details on the proposed timing of the minimum attestation requirements).
143 See infra Section II.G.3. The Commission’s rules define a smaller reporting company to mean an issuer that is not an investment company, an asset-backed issuer, or a majority-owned subsidiary of a parent that is not a smaller reporting company and that: (1) Had a public float of less than $250 million; or (2) had annual revenues of less than $100 million and either: (i) No public float; or (ii) a public float of less than $700 million. See 17 CFR 229.10(f)(1), 230.405, and 17 CFR 240.12b–2.
144 See infra Section I.M.
145 See, e.g., letters from Adobe Inc., Amazon.com Inc., Autodesk, Inc., eBay Inc., Facebook, Inc., Intel Corporation, and Salesforce.com, Inc. (June 11, 2021) (“Alphabet Inc. et al.”); the Aluminum Association (June 11, 2021); Amalgamated Bank; Apple, Inc.; Bank of Finland; BNP Paribas; Boston Common Asset Management; Ceres and other signatories representing NGOs, academics, and investors (Ceres et al.) (June 11, 2021); Certified B Corporations (June 11, 2021); Chevron; Clean Yield Asset Management; Climate Advisers (June 13, 2021); Climate Governance Initiative (June 12, 2021); Committee on Financial and Capital Markets (Keidenren) (June 13, 2021); Commonwealth Climate and Law Initiative; Crones LLP (June 11, 2021); EZ (June 14, 2021); ERN CVS; Eumedion (June 11, 2021); Fossil Fuel Divest Harvard (June 14, 2021); Impact Investors; Impax Asset Management; Information Technology Industry Council (June 11, 2021); Institutional Limited Partners Association (June 11, 2021); Japanese Bankers Association (June 11, 2021); Keramida (June 11, 2021); Carolyn Kohoot (June 11, 2021); Legal and General Investment Management America (June 11, 2021); Christopher Lish (June 12, 2021); Manifest Climate (June 13, 2021); Mercy Investment Services, Inc.; Miller/Howard Investments; Mirvou US LLC (June 14, 2021); M.J. Bradley & Associates, on behalf of Energy Strategy Coalition (June 13, 2021); Morningstar, Inc. (June 9, 2021); MSCI, Inc.; National Resources Defense Council (June 11, 2021); Persefoni (June 14, 2021); PRI; S&P Global; Maria Stoica (June 11, 2021); Trillium Asset Management; United Nations Environment Programme (UNEP) (June 9, 2021); Walmart, Inc. (June 11, 2021); and World Business Council for Development (June 11, 2021) (WBSCSD).
146 See, e.g., letters from Adobe Inc. (June 11, 2021); Alberta Investment Management Corporation (June 11, 2021); AllianceBernstein; American Chemistry Council (June 11, 2021); American Society of Adaptation Professionals (June 11, 2021); Baillie Gifford (June 11, 2021); Bank Policy Institute (June 9, 2021); BlackRock; Bloomberg, LP (June 3, 2021); bp; BSR (June 11, 2021); Canadian Bankers Association (June 11, 2021); Canadian Coalition of Good Governance; Capital Group (June 11, 2021); Catavento Consultancy (Apr. 30, 2021); Center for Climate and Energy Solutions; Confluence Philanthropy (June 14, 2021); ConocoPhillips, Inc.
other third-party frameworks. A broad range of commenters, including both issuers and investors, supported basing new climate-related disclosure rules on the TCFD framework.

Commenters provided several reasons for their support of the TCFD framework. First, commenters indicated that, because of the widespread adoption of the framework, issuers and investors have experience making and using TCFD disclosures. As a result, according to commenters, aligning SEC rules with the TCFD could reduce the burden on issuers and increase the consistency and comparability of climate disclosures. Second, commenters stated that the information that the TCFD disclosures elicit is useful for investors to understand companies’ exposure to and management of climate-related risks. Third, various jurisdictions around the world have announced their intention to align their domestic disclosure rules with the TCFD. Commenters stated that by aligning with the TCFD framework, the Commission could potentially facilitate higher levels of consistency and comparability of disclosures globally. The consistency and breadth of these comments comport with our understanding that the TCFD framework has been widely accepted by issuers, investors, and other market participants and reinforce our view that the framework would provide an appropriate foundation for the proposed amendments. Basing the Commission’s climate-related disclosure rules on a globally recognized framework should help elicit climate disclosures that are consistent, comparable, and reliable while also limiting the compliance burden for registrants that are already providing climate-related disclosures based on this framework.

Similar to the TCFD framework, the proposed climate-related provisions under Regulation S–K would require disclosure of a registrant’s governance of climate-related risks; any material climate-related impacts on its strategy, business model, and outlook; climate-related risk management; GHG emissions metrics; and climate-related targets and goals, if any.

The proposed climate-related provisions under Regulation S–K would require a registrant to disclose in a note to its financial statements certain disaggregated climate-related financial statement metrics that are mainly derived from existing financial statement line items. The proposed rules would require disclosure falling under the following three categories of information: Financial impact metrics; expenditure metrics; and financial estimates and assumptions. Similar to the TCFD’s recommendation regarding financial impacts, the proposed financial statement metrics have the objective of increasing transparency about how climate-related risks impact a registrant’s financial statements. The TCFD framework identifies two broad categories of actual and potential financial impacts driven by climate-related risks and opportunities: Financial performance (income statement focused) and financial position (balance sheet focused), and includes suggested metrics such as the amount of capital expenditure deployed toward climate-related risks and opportunities, which is similar to our proposed financial statement metrics.

2. Location of the Climate-Related Disclosure

Many commenters stated that the Commission should amend Regulation S–K or Regulation S–X to include climate-related disclosure requirements. Other commenters

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147 See, e.g., letters from AllianceBernstein; CALSTRS; Investment Company Institute; and NY State Comptroller.

148 See supra note 95 and accompanying text.

149 See, e.g., letters from BNP Paribas; bp; and Chevron.

150 Proponents of the TCFD framework include academics (see, e.g., letters from Jill Fisch et al.; Robert Gibson [May 26, 2021], and Gina-Gail S Fletcher [June 13, 2021]); accounting firms (see, e.g., letters from AICPA [June 11, 2021], Center for Audit Quality ("CAQ") [June 11, 2021], and KPMG LLP [June 12, 2021]); foreign firms (see, e.g., letters from Bank of Finland, BNP Paribas, bp, and Deutsche Bank); industry groups (see, e.g., letters from American Chemistry Council, Association of American Railroads [June 11, 2021], and Information Technology Industry Council [June 11, 2021]); investor groups (see, e.g., letters from CalPERS; CALSTRS; and San Francisco Employees Retirement System (see, e.g., letters from Emmanuelle Haack, Christopher Lish, and Maria Stoica); issuers (see, e.g., letters from Adobe, Alphabet Inc. et al.; Apple, and Chevron); NGOs (see, e.g., letters from Ceres et al.; Climate Governance Initiative, Natural Resources Defense Council, and UNEP): professional climate advisors (see, e.g., letters from Catavento Consultancy, Douglas Hileman Consulting, ERM CVS, and Ethic Inc.): and professional investment advisors/ investment management companies (see, e.g., letters from AllianceBernstein, Miller & Howard Investments, and Neuberger Berman).

151 See proposed 17 CFR 210.14–02(e) and (f).

152 See Ceres, Recommendations of the Task Force on Climate-related Financial Disclosures (June 2017), Section B.3 (Financial Impacts).

153 See, e.g., letters from AllianceBernstein; American Society of Adaptation Professionals; Seema Arora (June 22, 2021); Associated General Contractors of America (June 11, 2021); Baillie Gifford; CalPERS; Cardano Risk Management Ltd. (Apr. 19, 2021); Center for America Progress; Ceres et al.; Eni SpA; Jll Fisch (June 3, 2021); George S. Georgiev (June 22, 2021); Hannon Armstrong (June 15, 2021); Henry Schein, Inc.; Herbieto Equity Ownership Services Limited; Virginia Harper Ho; Institute for Governance and Sustainable Development (June 9, 2021), Institute for Market Transformation (June 12, 2021); Interfaith Center on Corporate Responsibility; International Corporate Governance Network (June 11, 2021); Japanese Business Association; Montecito & Forester LLP; National Investor Relations Institute (June 11, 2021); National Resources Defense Council; Newmont Corporation (June 13, 2021); New York
recommended that the Commission adopt a new stand-alone regulation for climate-related disclosure.167 We are proposing to include the climate-related disclosure rules in Regulation S–K and Regulation S–X because the required disclosure is fundamental to investors’ understanding of the nature of a registrant’s business and its operating prospects and financial performance, and therefore, should be presented together with other disclosure about the registrant’s business and its financial condition.

Specifically, we are proposing to require a registrant to include climate-related disclosure in Securities Act or Exchange Act registration statements and Exchange Act annual reports in a separately captioned “Climate-Related Disclosure” section and in the financial statements.168 Requiring climate-related disclosure to be presented in this manner would facilitate review of the climate-related disclosure by investors alongside other relevant company financial and non-financial information. A registrant would be able to incorporate by reference disclosure from other parts of the registration statement or annual report (e.g., Risk Factors, MD&A, or the financial statements) or, in most cases, from other filed or submitted reports into the Climate-Related Disclosure item if it is responsive to the topics specified in Items 1500–1506 of Regulation S–K and if the registrant satisfies the incorporation by reference requirements under the Commission’s rules and forms.169 By allowing incorporation by reference for the Regulation S–K climate-related disclosure, the registrant would be able to incorporate the desired information from other parts of the registrant’s MD&A, or the financial statements) or, in most cases, from other filed or submitted reports into the Climate-Related Disclosure item if it is responsive to the topics specified in Items 1500–1506 of Regulation S–K and if the registrant satisfies the incorporation by reference requirements under the Commission’s rules and forms.169 By allowing incorporation by reference for the Regulation S–K climate-related disclosure, the registrant would be consistent with the treatment of other types of business disclosure under our rules and would provide some flexibility for registrants while reducing redundancy in disclosure.170

Many commenters stated that the Commission should require registrants to discuss and analyze their quantitative climate data in a manner similar to that required for MD&A.171 These commenters stressed the importance of placing climate-related metrics in the context of other company financial and non-financial information to enable investors to see how those metrics intersect with business operations and industrial processes.172 Other commenters supported a requirement to discuss and analyze the climate-related metrics, but stated that such discussion should be part of the existing MD&A disclosures.173 We agree with the commenters supporting a narrative discussion and analysis of the climate-related metrics as means to present these disclosures in context and explain how they relate to the registrant’s strategy and management of its climate-related risks. In this way, such a discussion will serve a similar function to the MD&A but will focus on climate-related risk specifically. Our proposed approach, which requires the climate-related disclosure to be included in a specific section but allows registrants to incorporate from disclosure elsewhere (consistent with applicable incorporation by reference requirements), provides some flexibility to the proposed climate-related disclosure scheme while ensuring the disclosure is consistent and comparable across registrants.

metrics or narrative disclosure appears in full. We discuss the XBRL tagging requirement in Section II.K.

173 See, e.g., letters from Acadian Asset Management LLC [June 14, 2021]; Actual Systems, Inc. [June 11, 2021]; Baillie Gifford; Biotechnology Innovation Organization; CDP; ClientEarth US [June 14, 2021]; FAIRR Initiative [June 15, 2021]; Jill Fisch [June 3, 2021]; Hermes Equity Ownership Services Limited; International Corporate Governance Network; Japanese Bankers Association; Majedie Asset Management; Morningstar, Inc.; NEI Investments; NY State Comptroller; Paradise Investment Management; Pre-Distribution Initiative [June 14, 2021]; PricewaterhouseCoopers LLP; Matthew Roling and Samantha Tirakian [June 11, 2021]; Terra Alpha Investments; Vert Asset Management; and WBSCD.

172 See, e.g., letters from PricewaterhouseCoopers Ltd.; Vert Asset Management; and WBSCD.

171 See, e.g., letters from Canadian Coalition for Good Governance; Clean Production Action and Environmental Health Network [June 11, 2021]; Decatur Capital Management; Dimensional Fund Advisors [June 11, 2021]; Environmental Industry Group [June 9, 2021]; Institute for Governance and Sustainable Development; PRI [Consultation Response]; Business Intelligence Group; and Maria Stoica. But see letter from Sarah Ladin [June 14, 2021] (dubbing that a “sustainability discussion and analysis” requirement would achieve the desired results and stating that it would be difficult to enforce); and David Marriage (indicating that a discussion and analysis requirement for climate-related data would make the data difficult for the market to absorb).
climate-related disclosure from other parts of the registration statement or annual report, as proposed? Should we permit a registrant to incorporate by reference climate-related disclosure that appears in a sustainability report if the registrant includes the incorporated by referenced disclosure as an exhibit to the registration statement or annual report? Are there some climate-related disclosure items, such as GHG emissions data, that we should not permit a registrant to incorporate by reference? Would requiring a registrant to include all of the proposed climate-related disclosures in a separate, appropriately captioned section, while precluding a registrant from incorporating by reference some or all of the climate-related disclosures, promote comparability and ease of use of the climate-related information for investors?

7. Should we permit a registrant to provide certain of the proposed climate-related disclosures in Commission filings other than the annual report or registration statement? For example, should we permit a registrant to provide information about board and management oversight of climate-related risks in its proxy statement?

B. Disclosure of Climate-Related Risks

As many commenters have noted when seeking more detailed climate-related disclosures, climate events and contingencies can pose financial risks to issuers across industrial sectors. Physical risks may include harm to businesses and their assets arising from acute climate-related disasters such as wildfires, hurricanes, tornadoes, floods, and heatwaves. Companies and their investors may also face chronic risks and more gradual impacts from long-term temperature increases, drought, and sea level rise. In addition to the physical risks associated with the climate, issuers and investors may also face risks associated with a potential transition to a less carbon intensive economy. These risks may arise from potential adoption of climate-related regulatory policies including those that may be necessary to achieve the national climate goals that may be or have been adopted in the United States and other countries; climate-related litigation; changing consumer, investor, and employee behavior and choices; changing demands of business partners; long-term shifts in market prices; technological challenges and opportunities, and other transitional impacts. Disclosure about a registrant’s exposure to transition risks, as well as how the registrant is assessing and managing those risks, would help investors assess and plan for how the registrant would be financially impacted by a transition to a lower-carbon economy.

1. Definitions of Climate-Related Risks and Climate-Related Opportunities

A central focus of the Commission’s proposed rules is the identification and disclosure of a registrant’s material climate-related risks. The proposed rules would require a registrant to disclose any climate-related risks reasonably likely to have a material impact on the registrant’s business or consolidated financial statements. A registrant may also disclose, as applicable, the actual and potential impacts of any climate-related opportunities it is pursuing. The proposed definitions are substantially similar to the TCFD’s definitions of climate-related risks and climate-related opportunities. We have based our definitions on the TCFD’s definitions because they provide a common terminology that allows registrants to disclose climate-related risks and opportunities in a consistent and comparable way. Grounding our definitions in a framework that is already widely accepted also could help limit the burden on issuers to identify and describe climate-related risks and improve the comparability and usefulness of the disclosures for investors.

As proposed, “climate-related risks” means the actual or potential negative impacts of climate-related conditions and events on a registrant’s consolidated financial statements, business operations, or value chains, as a whole. “Value chain” would mean the upstream and downstream activities related to a registrant’s operations.

Under the proposed definition, upstream activities are activities by a party other than the registrant that relate to the initial stages of a registrant’s production of a good or service (e.g., materials sourcing, materials processing, and supplier activities). Downstream activities would be defined to include activities by a party other than the registrant that relate to processing materials into a finished product and delivering it or providing a service to the end user (e.g., transportation and distribution, processing of sold products, use of sold products, end of life treatment of sold products, and investments). We have proposed including a registrant’s value chain within the definition of climate-related risks to capture the full extent of a registrant’s potential exposure to climate-related risks, which can extend beyond its own operations to those of its suppliers, distributors, and others engaged in upstream or downstream activities.

Climate-related conditions and events can present risks related to the physical impacts of the climate (“physical risks”) and risks related to a potential transition to a lower carbon economy (“transition risks”). As proposed, “physical risks” is defined to include both acute and chronic risks to a registrant’s business operations or the operations of those with whom it does business. “Acute risks” is defined as event-driven risks related to shorter-term extreme weather events, such as hurricanes, floods, and tornadoes. “Chronic risks” is defined as those risks that the business may face as a result of longer term weather conditions.

174 See supra note 40.
175 The 2020 CFTC Advisory Subcommittee Report found that climate change currently impacts or is expected to affect every part of the U.S. economy, including agriculture, real estate, infrastructure, and the financial sectors. See infra note 361.
176 A National Climate Taskforce created by the president established commitments to reduce economy-wide net greenhouse gas emissions by 50–
patterns and related effects, such as sustained higher temperatures, sea level rise, drought, and increased wildfires, as well as related effects such as decreased arability of farmland, decreased habitability of land, and decreased availability of fresh water. Many of these physical risks have already impacted and may continue to impact registrants across a wide range of economic sectors. The proposed rules would define transition risks to mean the actual or potential negative impacts on a registrant’s consolidated financial statements, business operations, or value chains attributable to regulatory, technological, and market changes to address the mitigation of, or adaptation to, climate-related risks. Transition risks would include, but are not limited to, increased costs attributable to climate-related changes in law or policy, reduced market demand for carbon-intensive products leading to decreased sales, prices, or profits for such products, the devaluation or abandonment of assets, risk of legal liability and litigation defense costs, competitive pressures associated with the adoption of new technologies, reputational impacts (including those stemming from a registrant’s customers or business counterparties) that might trigger changes to market behavior, changes in consumer preferences or behavior, or changes in a registrant’s behavior. A registrant that has significant operations in a jurisdiction that has made a GHG emissions reduction commitment would likely be exposed to transition risks related to the implementation of the commitment.

The proposed rules would require a registrant to specify whether an identified climate-related risk is a physical or transition risk so that investors can better understand the nature of the risk and the registrant’s actions or plan to mitigate or adapt to the risk. If a physical risk, the proposed rules would require a registrant to describe the nature of the risk, including whether it may be categorized as an acute or chronic risk.

The proposed rules would require a registrant to include in its description of an identified physical risk the location of the properties, processes, or operations subject to the physical risk. The proposed location disclosure would only be required for a physical risk that a registrant has determined has had or is likely to have a material impact on its business or consolidated financial statements. In such instances, a registrant would be required to provide the ZIP code for the location or, if the location is in a jurisdiction that does not use ZIP codes, a similar subnational postal zone or geographic location. Because physical risks can be concentrated in particular geographic areas, the proposed disclosure would allow investors to better assess the risk exposure of one or more registrants with properties or operations in a particular area. One commenter cited location information as a key component of how it, as an investor, assesses the climate risk facing a company, particularly for companies with fixed assets that may be disproportionately exposed to climate-related physical risks. Several other commenters recommended that we require the disclosure of certain climate data to be disaggregated by location using a point source’s zip code for risk assessment. Disclosing the zip codes of its identified material climate-related risks, rather than a broader location designation, could help investors more accurately assess a registrant’s specific risk exposure.

Some registrants might be exposed to water-related acute physical risks, such as flooding, which could impair a registrant’s operations or devalue its property. If flooding presents a material physical risk, the proposed rules would require a registrant to disclose the percentage of buildings, plants, or properties (square meters or acres) that are located in flood hazard areas in addition to their location. This information could help investors evaluate the magnitude of a registrant’s exposure to flooding, which, for example, could cause a registrant in the real estate sector to lose revenues from the rental or sale of coastal property or incur higher costs or a diminished ability to obtain property insurance, or a manufacturing registrant to incur increased expenses due to the need to replace water-damaged equipment or move an entire plant.

Additional disclosure would be required if a material risk concerns the location of assets in regions of high or extremely high water stress. For example, some registrants might be impacted by water-related chronic physical risks, such as increased temperatures and changes in weather patterns that result in water scarcity. Registrants that are heavily reliant on water for their operations, such as registrants in the energy sector, materials and buildings sector, or agriculture sector, could face regulatory restrictions on water use, increased expenses related to the acquisition and purchase of alternative sources of water, or curtailment of its operations due to a reduced water supply that diminishes its earning capacity. If the location of assets in regions of high or extremely high water stress presents a material risk, the proposed rules would require a registrant to disclose the amount of assets (e.g., book value and as a percentage of total assets) located in such regions in addition to their location. The registrant would also be required to disclose the percentage of its total water usage from water withdrawn in those regions. These disclosures could help investors understand the magnitude of a registrant’s material water-stress risks with a degree of specificity that might not be elicited under our current risk factor disclosure standards. Any increased temperatures could also materially impact a registrant in other ways. For example, a registrant in the construction industry might be required to disclose the physical risk of increased heat waves that affect the...
ability of its personnel to safely work outdoors, which could result in a cessation or delay of operations, and a reduction in its current or future earnings. A registrant operating in wildfire-prone areas could be exposed to potential disruption of operations, destruction of property, and relocation of personnel in the event of heat-induced wildfires. A registrant in the real estate sector might similarly be required to disclose the likelihood that sea levels could rise faster than expected and reduce the value of its coastal properties.

The proposed rules would require a registrant to describe the nature of transition risks, including whether they relate to regulatory, technological, market (including changing consumer, business counterparty, and investor preferences), liability, reputational, or other transition-related factors, and how those factors impact the registrant. For example, an automobile manufacturer might describe how market factors, such as changing consumer and investor preferences for low-emission vehicles, have impacted or will likely impact its production choices, operational capabilities, and future expenditures. An energy producer might describe how regulatory and reputational factors have impacted or are likely to impact its operational activities, reserve valuations, and investments in renewable energy. An industrial manufacturer might describe how investments in innovative technologies, such as carbon capture and storage, have impacted or are likely to impact its consolidated financial statements, such as by increasing its capital expenditures.

Climate related conditions and any transition to a lower carbon economy may also present opportunities for companies and investors. The proposed rules would define “climate-related opportunities” to mean the actual or potential positive impacts of climate-related conditions and events on a registrant’s consolidated financial statements, business operations, or value chains, as a whole. Efforts to mitigate or adapt to the effects of climate-related conditions and events can produce opportunities, such as cost savings associated with the increased use of renewable energy, increased resource efficiency, the development of new products, services, and methods, access to new markets caused by the transition to a lower carbon economy, and increased resilience along a registrant’s supply or distribution network related to potential climate-related regulatory or market constraints. A registrant, at its option, may disclose information about any climate-related opportunities it may be pursuing when responding to the proposed disclosure requirements concerning governance, strategy, and risk management in connection with climate-related risks.

We are proposing to treat this disclosure as optional to allay any anti-competitive concerns that might arise from a requirement to disclose a particular business opportunity. By defining “climate-related opportunities,” the proposed rules would promote consistency when such opportunities are disclosed, even if such disclosure is not required.

2. Proposed Time Horizons and the Materiality Determination

The proposed rules would require a registrant to disclose whether any climate-related risk is reasonably likely to have a material impact on a registrant, including its business or consolidated financial statements, which may manifest over the short, medium, and long term. Several commenters made a similar recommendation, stating that disclosure of climate-related risks and impacts across short, medium, and long-term time horizons is necessary to fully understand a registrant’s susceptibility to material climate-related risks.

As proposed, a registrant would be required to describe how it defines short-, medium-, and long-term time horizons, including how it takes into account or reassesses the expected useful life of the registrant’s assets and the time horizons for the registrant’s planning processes and goals. We have not proposed a specific range of years to define short-, medium-, and long-term time horizons in order to allow flexibility for a registrant to select the time horizons that are most appropriate to its particular circumstances.

As defined by the Commission and consistent with Supreme Court precedent, a matter is material if there is a substantial likelihood that a reasonable investor would consider the information imparted in deciding how to vote or make an investment decision; and quoting TSC Industries, Inc. v. Northway, Inc., 426 U.S. 438, 449 (1977) to further explain that omitted fact is material if there is "a substantial likelihood that the disclosure of the omitted fact would have been viewed by the reasonable investor as having significantly altered the 'total mix' of information made available.").

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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 not to be necessarily indicative of future operating results or of future financial condition.\(^{212}\) 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 material impact on future operations.\(^{213}\)

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 wine producers, farmers, and other property owners.\(^{214}\) Some insurance companies have withdrawn from certain wildfire prone areas after concluding the risk is no longer insurable.\(^{215}\) 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.

To help ensure that management considers the dynamic nature of climate-related risks, we are proposing to require a registrant to discuss its assessment of the overall materiality of climate-related risks over the short, medium, and long term. We recognize that determining the likely future impacts on a registrant’s business may be difficult for some registrants. Commenters have noted that the science of climate modelling has progressed in recent years and enabled the development of various software tools and that climate consulting firms are available to assist registrants in making this determination.\(^{216}\) We also note that, under our existing rules, registrants long have had to disclose forward-looking information, including pursuant to MD&A requirements. To the extent that the proposed climate-related disclosures constitute forward-looking statements, as discussed below, the forward-looking statement safe harbors pursuant to the Private Securities Litigation Reform Act (“PSLRA”)\(^{218}\) would apply, assuming the conditions specified in those safe harbor provisions are met.\(^{219}\) We note, however, that there are important limitations to the PSLRA safe harbor. For example, we are proposing that climate-related disclosures would be required in registration statements, including those for initial public offerings, and forward-looking statements made in connection with an initial public offering are excluded from the protections afforded by the PSLRA.

In addition, the PSLRA does not limit the Commission’s ability to bring enforcement actions.

**Request for Comment**

8. Should we require a registrant to disclose any climate-related risks that are reasonably likely to have a material impact on the registrant, including on its business or consolidated financial statements, which may manifest over the short, medium, and long term, as proposed? If so, should we specify a particular time period, or minimum or maximum range of years, for “short,” “medium,” and “long term?” For example, should we define short term as 1 year, 1–3 years, or 1–5 years? Should we define medium term as 5–10 years, 5–15 years, or 5–20 years? Should we define long-term as 10–20 years, 20–30 years, or 30–50 years? Are there other possible years or ranges of years that we should consider as the definitions of short, medium, and long term? What, if any, are the benefits to leaving those terms undefined? What, if any, are the concerns to leaving those terms undefined? Would the proposed provision requiring a registrant to specify what it means by the short, medium, and long term mitigate any such concerns?

9. Should we define “climate-related risks” to mean the actual or potential negative impacts of climate-related conditions and events on a registrant’s consolidated financial statements, business operations, or value chains, as proposed? Should we define climate-related risks to include both physical and transition risks, as proposed? Should we define physical risks to include both acute and chronic risks and define each of those risks, as proposed? Should we define transition risks, as proposed? Are there any other distinctions among types of climate-related risks that we should use in our definitions? Are there any risks that we should add to the definition of transition risk? How should we address risks that may involve both physical and transition risks?

10. We define transition risks to include legal liability, litigation, or reputational risks. Should we provide more examples about these types of risks? Should we require more specific disclosures about how a registrant assesses and manages material legal liability, litigation, or reputational risks that may arise from a registrant’s business operations, climate mitigation efforts, or transition activities?

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\(^{212}\) See 17 CFR 229.303(c).

\(^{213}\) See Release No. 33–10890, Management’s Discussion and Analysis, Selected Financial Data, and Supplementary Financial Information (Nov. 19, 2020), [86 FR 2080, 2089 (Jan. 11, 2021)].

\(^{214}\) See, e.g., Daoping Wang, Dabo Guan, Shupeng Zhu, et al., Economic footprint of California wildfires in 2018, Nature Sustainability (Dec. 2020) (stating that the frequency and size of wildfires in the western United States has been increasing for several decades, driven by decreases in precipitation and related changes in the moisture in vegetation, which, together with land use and fire management practices, has dramatically increased wildfire risk); in a series of enormously damaging fires in California in 2017, 2018 and 2020; Andrew Freedman, California wildfires prompt new record heat, erratic winds, the Washington Post (Oct. 1, 2020) (reporting that the “Glass Fire” forced about 80,000 to evacuate from Napa and Sonoma Counties and took a heavy toll on the wine industry).

11. Some chronic risks might give rise to acute risks, e.g., drought (a chronic risk) that increases acute risks, such as wildfires, or increased temperatures (a chronic risk) that increases acute risks, such as severe storms. Should we require a registrant to discuss how the acute and chronic risks they face may affect one another?

12. For the location of its business operations, properties or processes subject to an identified material physical risk, should we require a registrant to provide the ZIP code of the location or, if located in a jurisdiction that does not use ZIP codes, a similar subnational postal zone or geographic location, as proposed? Is there another location identifier that we should use for all registrants, such as the county, province, municipality or other subnational jurisdiction? Would requiring granular location information, such as ZIP codes, present concerns about competitive harm or the physical security of assets? If so, how can we mitigate those concerns? Are there exceptions or exemptions to a granular location disclosure requirement that we should consider?

13. If a registrant determines that the flooding of its buildings, plants, or properties is a material risk, should we require it to disclose the percentage of those assets that are in flood hazard areas in addition to their location, as proposed? Would such disclosure help investors evaluate the registrant’s exposure to physical risks related to floods? Should we require this disclosure for all registrants, including those that do not currently consider exposure to flooding to be a material physical risk? Should we require this disclosure from all registrants operating in certain industrial sectors and, if so, which sectors? Should we define “flood hazard area” or provide examples of such areas? If we should define the term, should we define it similar to a related definition by the Federal Emergency Management Agency (“FEMA”) as an area having flood, mudflow or flood-related erosion hazards, as depicted on a flood hazard boundary map or a flood insurance rate map? Should we require a registrant to disclose how it has defined “flood hazard area” or whether it has used particular maps or software tools when determining whether its buildings, plants, or properties are located in flood hazard areas? Should we recommend that certain maps be used to promote comparability? Should we require disclosure of whether a registrant’s assets are located in zones that are subject to other physical risks, such as in locations subject to wildfire risk?

14. If a material risk concerns the location of assets in regions of high or extremely high water stress, should we require a registrant to quantify the assets (e.g., book value and as a percentage of total assets) in those regions in addition to their location, as proposed? Should we also require such a registrant to disclose the percentage of its total water usage from water withdrawn in high or extremely high water stressed regions, as proposed? If so, should we include a definition of a “high water stressed region” similar to the definition provided by the World Resource Institute as a region where 40–80 percent of the water available to agricultural, domestic, and industrial users is withdrawn annually? Should we similarly define an “extremely high water stressed area” as a region where more than 80 percent of the water available to agricultural, domestic, and industrial users is withdrawn annually? Are there other definitions of high or extremely high water stressed areas we should use for purposes of this disclosure? Would these items of information help investors assess a registrant’s exposure to climate-related risks impacting water availability?

15. Are there other specific metrics that would provide investors with a better understanding of the physical and transition risks facing registrants? How would investors benefit from the disclosure of any additional metrics that would not necessarily be disclosed or disclosed in a consistent manner by the proposed climate risk disclosures? What, if any, additional burdens would registrants face if they were required to disclose additional climate risk metrics? Are there other areas that should be included as examples in the definitions of acute or chronic risks? If so, for each example, please explain how the particular climate-related risk could materially impact a registrant’s operations or financial condition.

16. Are there other areas that should be included as examples in the definitions of acute or chronic risks? If so, for each example, please explain how the particular climate-related risk could materially impact a registrant’s operations or financial condition.

17. Should we include the negative impacts on a registrant’s value chain in the definition of climate-related risks, as proposed? Should we define “value chain” to mean the upstream and downstream activities related to a registrant’s operations, as proposed? Are there any upstream or downstream activities included in the proposed definition of value chain that we should exclude or revise? Are there any upstream or downstream activities that we should add to the definition of value chain? Are there any upstream or downstream activities currently proposed that should not be included?

18. Should we define climate-related opportunities as proposed? Should we permit a registrant, at its option, to disclose information about any climate-related opportunities that it is pursuing, such as the actual or potential impacts of those opportunities on the registrant, including its business or consolidated financial statements, as proposed? Should we specifically require a registrant to provide disclosure about any climate-related opportunities that have materially impacted or are reasonably likely to impact materially the registrant, including its business or consolidated financial statements? Is there a risk that the disclosure of climate-related opportunities could be misleading and lead to “greenwashing”? If so, how should this risk be addressed?

C. Disclosure Regarding Climate-Related Impacts on Strategy, Business Model, and Outlook

1. Disclosure of Material Impacts

Once a registrant has described the climate-related risks reasonably likely to have a material impact on the registrant’s business or consolidated financial statements as manifested over the short, medium, and long term as required by proposed Item 1502(a), proposed Item 1502(b) would require the registrant to describe the actual and potential impacts of those risks on its strategy, business model, and outlook. Several commentators stated that many registrants have included largely boilerplate discussions about climate-related risks and failed to provide a meaningful analysis of the impacts of those risks on their businesses. The TCFD’s most recent assessment of public companies’ voluntary climate reports also noted that a minority of companies disclosed the impacts of climate-related risks and opportunities on their businesses in alignment with the TCFD framework. Because information about how climate-related risks have impacted or are likely to impact a registrant’s strategy,
business model, and outlook can be important for purposes of making an investment or voting decision about the registrant, we are proposing the provisions below to elicit robust and company-specific disclosure on this topic.

As proposed, a registrant would be required to disclose impacts on its:
- Business operations, including the types and locations of its operations;
- Products or services;
- Suppliers and other parties in its value chain;
- Activities to mitigate or adapt to climate-related risks, including adoption of new technologies or processes;
- Expenditure for research and development; and
- Any other significant changes or impacts.

A registrant would also be required to disclose the time horizon for each described impact (i.e., as manifested in the short, medium, or long term, as defined by the registrant when determining its material climate-related risks).

The proposed rules would require a registrant to discuss how it has considered the identified impacts as part of its business strategy, financial planning, and capital allocation. A registrant would be required to provide both current and forward-looking disclosures that facilitate an understanding of whether the implications of the identified climate-related risks have been integrated into the registrant’s business model or strategy, including how resources are being used to mitigate climate-related risks. The discussion must also include any of the metrics referenced in proposed Rule 14–02 of Regulation S–X and Item 1504 of Regulation S–K or any of the targets referenced in proposed Item 1506 relate to the registrant’s business model or business strategy.

For example, a registrant that operates in a jurisdiction that has imposed or is likely to impose limits on GHG emissions in support of the Paris Agreement might set a long-term target of net zero GHG emissions from its operations in 2050, a medium-term target of reducing its emissions by 30 percent by 2030, and a short-term target of maintaining its emissions at its 2020 rate through 2023. This registrant could face material transition risks due to the estimated costs of the operational changes expected to be implemented to achieve these targets. The registrant would be required to disclose these transition risks and their impacts on its strategy, business model, and outlook.

Some of the described impacts would likely be common across industries and may involve reducing a registrant’s Scopes 1 and 2 GHG emissions and incurring increased expenses in the short term related to, for example, acquiring new technologies to curb its operational emissions and increasing the amount of electricity purchased from renewable sources. Other described impacts of material transition risks, however, would likely vary by industry. For example, an oil company might determine that a likely change in demand for fossil fuel-based products would require it to modify its business model or alter its product mix to emphasize gas and biofuels in order to maintain or increase its energy capacity, thereby requiring disclosure under the proposed rules. An electric utilities company might disclose an increase in the amount of electricity generated from less carbon-intensive sources, such as wind turbines, nuclear, hydroelectric, or solar power to meet current or likely regulatory constraints.

A registrant would also be required to disclose the material impacts of physical risks on its strategy, business model, and outlook. For example, an agricultural producer or distributor might disclose the likely impacts of drought on its own product mix or that of its suppliers, including increased expenses for additional water or due to the procurement of alternative product sources. Similarly, a mining company that operates in areas susceptible to extreme rise in temperatures might disclose the likely impacts that this temperature rise has on its workforce and on its production schedule, including a reduction in output and future earning capacity. A real estate company that owns coastal property might disclose the likely impacts of rising sea levels on such property, including the potential diminution in value of, and a potential change in its strategy and outlook regarding, such properties.

The proposed rules would require a registrant to provide a narrative discussion of whether and how any of its identified climate-related risks described in response to proposed Item 1502(a) have affected or are reasonably likely to affect the registrant’s consolidated financial statements. The discussion should include any of the financial statement metrics disclosed pursuant to proposed Regulation S–X Rule 14–02. As previously noted, many commenters recommended that we require registrants to discuss and analyze their quantitative climate data in a manner similar to that required for MD&A. Proposed 17 CFR 229.1502(d) (Item 1502(d) of Regulation S–K) is intended to provide climate-related disclosure that is similar to MD&A, although, as previously noted, a registrant may provide such disclosure as part of its MD&A.

For example, an automobile manufacturer might discuss an increase in operating costs or capital expenditures due to the need to revamp its assembly lines to build lower emission vehicles to comply with new regulatory guidelines or to meet changing consumer demand. An oil company might discuss a change in the valuation of its proven reserves because of an anticipated reduced demand for fossil fuels. A freight company might discuss impairment charges or early write-offs for older equipment it might need to replace due to anticipated changes in regulation or policy favoring lower emissions equipment. While a registrant may currently have an obligation to make some of these disclosures pursuant to Regulation S–X, the disclosed impacts in the financial statements may not be in disaggregated form and may lack explanation. Proposed Item 1502(d) would require the disclosure in the form of a narrative analysis akin to MD&A that would be more easily accessible for investors.

Moreover, it is likely that any disclosed impacts in the financial statements would be assessed for the fiscal years presented in the financial statements with a focus on near short-term impacts. Because proposed Item 1502 would require a registrant to identify material climate-related impacts that may manifest in the short, medium, and long term, a registrant’s narrative discussion of the likely climate-related impacts on its consolidated financial statements

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223 See proposed 17 CFR 229.1502(b)(1).
224 See proposed 17 CFR 229.1502(b)(2).
225 See proposed 17 CFR 229.1502(c).
226 See infra Sections I.C.3 and 4, I.E, II.G.1, and I.I regarding the application to forward-looking climate disclosures of the PSLRA safe harbor for forward-looking statements.
227 See id.
228 See infra Sections II.F and II.G for a discussion of the proposed metrics and targets.
229 See supra Section I.D.2 and infra Section II.G for a discussion of Scopes 1 and 2 emissions.
230 See proposed 17 CFR 229.1502(d).
231 See infra Section II.F.
232 See supra note 171.
should cover more than just short-term impacts. For example, if a registrant has a transition plan that includes the development of lower carbon products and processes, that registrant might disclose that it expects to incur higher initial capital costs to implement its strategy, but anticipates increased revenues or reduced expenses over the longer term. An automobile manufacturer that transitions from the production of internal combustion engine vehicles to the production of electric vehicles might disclose that it expects to incur costs in the short term to change its manufacturing processes, but over the longer term, it expects to realize increased sales, protect its market share against transition risks, including reputational risks, and potentially avoid regulatory fines or other costs as consumer and regulatory demands change.

2. Disclosure of Carbon Offsets or Renewable Energy Credits if Used

If, as part of its net emissions reduction strategy, a registrant uses carbon offsets or renewable energy credits or certificates ("RECs"), the proposed rules would require it to disclose the role that carbon offsets or RECs play in the registrant’s climate-related business strategy. Under the proposed rules, carbon offsets represent an emissions reduction or removal of greenhouse gases in a manner calculated and traced for the purpose of offsetting an entity’s GHG emissions. We are proposing to define a REC, consistent with the EPA’s commonly used definition, to mean a credit or certificate representing the right to the attributes of one megawatt-hour (1 MWh or 1000 kilowatt-hours) of renewable electricity generated and delivered to a registrant’s power grid. While both carbon offsets and RECs represent commonly used GHG emissions mitigation options for companies, they are used for somewhat different purposes.

233 See infra Section I.E for proposed disclosure requirements regarding the use of a transition plan.
234 See proposed 17 CFR 229.1502(c).
235 See proposed 17 CFR 229.1500(a).
236 See proposed 17 CFR 229.1500(n).
237 A company may purchase carbon offsets to address its direct and indirect GHG emissions (i.e., its Scopes 1, 2, and 3 emissions) by verifying global emissions reductions at additional, external projects. The reduction in GHG emissions from one place ("offset project") can be used to "offset" the emissions taking place somewhere else (at the company’s operations). See, e.g., EPA, Offsets and RECs: What’s the Difference?, available at https://www.epa.gov/sites/default/files/2018-03/documents/gpp_guide_recs_offsets.pdf.
238 A company might purchase a REC in renewable electricity markets solely to address its indirect GHG emissions associated with purchased electricity (i.e., Scope 2 emissions) by verifying the use of zero- or low-emissions renewable sources of electricity. Each REC provides its owner exclusive rights to the attributes of one megawatt-hour of renewable electricity whether that renewable electricity has been installed on the company’s facilities or produced elsewhere. See id.
239 Science Based Targets Initiative ("SBTi") is a partnership between CDP, the United Nations Global Compact, World Resources Institute (WRI) and the World Wide Fund for Nature (WWF), which defines and promotes best practices in emissions reductions and net-zero targets in line with the latest climate science. SBTi provides technical assistance and its expertise to companies who voluntarily set science-based targets in line with the latest climate science. See SBTi, Who We Are (#WhoWeAre), available at https://sciencebasedtargets.org/about-us#who-we-are. The SBTi does not permit offsets to be counted toward a company’s emission reduction targets to meet its science-based targets but does permit offsets purchased by companies that wish to finance additional emission reductions beyond their science-based targets. See SBTi Criteria and Recommendations (Apr. 2020), available at https://sciencebasedtargets.org/resources/legacy/2019/03/SBTi-criteria.pdf.

Some registrants might plan to use carbon offsets or RECs as their primary means of meeting their GHG reduction goals, including those formulated in response to government law or policy or customer or investor demands. Other registrants, including those that set Science Based Targets pursuant to the Science Based Targets Initiative, might develop strategies to reduce their emissions to the extent possible through operational changes—such as modifications to their product offerings or the development of solar or other renewable energy sources. They then might plan to use carbon offsets or RECs to offset the remainder of their emissions that they cannot reduce through operational changes or to meet their GHG reduction goals while they transition to lower carbon operations. Understanding the role that carbon offsets or RECs play in a registrant’s climate-related business strategy can help investors gain useful information about the registrant’s strategy, including the potential risks and financial impacts. A registrant that relies on carbon offsets or RECs to meet its goals might incur lower expenses in the short term but could expect to continue to incur the expense of purchasing offsets or RECs over the long term. It also could bear the risk of increased costs of offsets or RECs if increased demand for offsets or RECs creates scarcity and higher costs to acquire them over time. Alternatively, the value of an offset may decrease substantially and suddenly if, for example, the offset represents protected forest land that burns in a wildfire and no longer represents a reduction in GHG emissions. In that case, the registrant may need to write off the offset and purchase a replacement. In other cases, increased demand for, or scarcity of, offsets and RECs may benefit a registrant that produces or generates offsets or RECs to the extent their prices increase. Accordingly, under the proposed rules, a registrant that purchases offsets or RECs to meet its goals as it makes the transition to lower carbon products would need to reflect this additional set of short and long-term costs and risks in its Item 1502 disclosure, including the risk that the availability or value of offsets or RECs might be curtailed by regulation or changes in the market.

3. Disclosure of a Maintained Internal Carbon Price

Some registrants may use an internal carbon price when assessing climate-related factors. Under the proposed definition, an internal carbon price is an estimated cost of carbon emissions used internally within an organization.

239 Internal carbon pricing may be used by a registrant, among other purposes, as a planning tool to help identify climate-related risks and opportunities, as an incentive to drive energy efficiencies to reduce costs, to quantify the potential costs the company would incur should a carbon price be put into effect, and to guide capital investment decisions. If a registrant uses an internal carbon price, the proposed rules would require it to disclose:

- The price in units of the registrant’s reporting currency per metric ton of carbon dioxide equivalent ("CO2e");
- The total price, including how the total price is estimated to change over time, if applicable;

The boundaries for measurement of overall CO2e on which the total price is based (if different from the GHG emission organizational boundary required pursuant to 17 CFR 229.1504(a)(2)) and

The rationale for selecting the internal carbon price applied.

These proposed items of disclosure would help investors understand the rationale and underlying assumptions for a registrant’s internal carbon price and help them assess whether the registrant’s use of an internal carbon price as a planning tool is reasonable and effective.

A registrant would also be required to describe how it uses its disclosed internal carbon price to evaluate and
manage climate-related risks.\textsuperscript{243} If a registrant uses more than one internal carbon price, the proposed rules would require it to provide disclosures for each internal carbon price, and to disclose its reasons for using different prices.\textsuperscript{244} For example, a registrant might disclose that it uses different internal carbon prices when considering different climate-related scenarios to help it develop an appropriate business strategy over the short-, medium-, and long-term.\textsuperscript{245}

Commenters that addressed the topic of carbon price generally supported requiring its disclosure in some form, such as: (i) Establishing a broad-based carbon price; (ii) requiring companies to maintain and disclose an internal carbon price; (iii) requiring disclosure of any internal carbon price already used by a company; or (iv) requiring disclosure of carbon prices used in the context of scenario analysis.\textsuperscript{246} One commenter referred to disclosure of a company’s use of internal carbon pricing as one of several “foundational climate disclosures” that should be required by the Commission rule.\textsuperscript{247} Another commenter also underscored the importance of this information, stating “the thorough quantification of climate risk has been hampered by the lack of carbon pricing.”\textsuperscript{248} We agree with commenters that supported the disclosure of carbon pricing as a key data point for evaluating how a registrant is planning for and managing climate-related risks. However, the proposed rules would not require registrants to maintain an internal carbon price or to mandate a particular carbon pricing methodology. We are aware that many registrants may not currently track this information and recognize that a robust carbon market on which to base such a price may not exist in many contexts.\textsuperscript{249} Accordingly, the proposed disclosures would be required only if the registrant otherwise maintains an internal carbon price. For similar reasons, we have not proposed requiring a specific methodology for setting an internal carbon price.

Registrants may choose to use an internal carbon price when quantifying, analyzing, and assessing the financial impacts of climate-related risks and climate-related opportunities. For example, an internal carbon price helps monetize emissions by converting emissions data from CO₂ into a value in the registrant’s reporting currency. A registrant may determine that monetization is useful when assessing the costs and benefits of its possible climate-related strategies, as it effectively puts a price on the emission impacts. Disclosure of an internal carbon price, when used by a registrant, would provide investors with material information regarding how the registrant developed a particular business strategy to mitigate or adapt to identified climate-related risks and would help quantify for investors at least part of the transition risks faced by a registrant. We believe that this proposed disclosure requirement would help investors assess whether a registrant’s internal carbon pricing practice is reasonable and whether its overall evaluation and planning regarding climate-related factors is sound.\textsuperscript{250}

A registrant’s disclosure of any internal carbon price necessarily would include assumptions about future events. The carbon price applied should not be viewed as a promise or guarantee with regard to the future costs to the registrant of GHG emissions. Moreover, to the extent that certain information regarding a registrant’s internal carbon pricing would constitute forward-looking statements, the PSLRA safe harbors would apply to such statements, assuming all other statutory requirements for those safe harbors are satisfied.

4. Disclosure of Scenario Analysis, if Used

We are proposing to require a registrant to describe the resilience of its business strategy in light of potential future changes in climate-related risks. A registrant also would be required to describe any analytical tools, such as scenario analysis, that the registrant uses to assess the impact of climate-related risks on its business and consolidated financial statements, or to support the resilience of its strategy and business model in light of foreseeable climate-related risks.\textsuperscript{251} Scenario analysis is a process for identifying and assessing a potential range of outcomes of future events under conditions of uncertainty.\textsuperscript{252} The proposed definition of scenario analysis both states that (i) when applied to climate-related assessments, scenario analysis is a tool used to consider how, under various possible future climate scenarios, climate-related risks may impact a registrant’s operations, business strategy, and consolidated financial statements over time; and that (ii) registrants might use scenario analysis to test the resilience of their strategies under future climate scenarios, including scenarios that assume different global temperature increases, such as, for example, 3 °C, 2 °C, and 1.5 °C above pre-industrial levels.\textsuperscript{253}

Many commenters recommended that we require a registrant to conduct scenario analysis and disclose the results of such analysis.\textsuperscript{254} One commenter stated that scenario analysis was useful because it allows companies to test their business strategy against a spectrum of hypothetical future climate scenarios and develop a better informed view of implications for their enterprise value and value chains. The same commenter further indicated that disclosure of the scenarios used by a company was necessary to inform investors about the reliability, reasonableness, and resiliency of the company’s plans to address climate-related risks and opportunities.\textsuperscript{255}

Another commenter stated that the Commission should require disclosure of a registrant’s climate scenario analysis by no later than 2025, and recommended that companies engage in scenario analysis involving a base case, worse case, better case, and “Black

\textsuperscript{243} See proposed 17 CFR 229.1502(e)(2).
\textsuperscript{244} See proposed 17 CFR 229.1502(e)(3).
\textsuperscript{245} See infra Section I.C.4 for the proposed disclosure required if a registrant uses scenario analysis.
\textsuperscript{246} See, e.g., letters from Rob Bonta, California Attorney General, on behalf of several state attorney generals [June 14, 2021]; Catalvento; Center for Climate and Energy Solutions; Ceres; Climate Risk Disclosure Lab; Hermes Equity Ownership Services Limited; Majedie Asset Management; Managed Funds Association; Norges Bank Investment Management; Open Source Climate; PRI (Consultation Response); Regenerative Crisis Response Committee; Total Energies (June 13, 2021); and Trillium Asset Management. But see Edison Electric Institute (stating that a “robust carbon market [does not exist today]” and disclosures based on that market would be “fraught with risk”).
\textsuperscript{247} Letter from Ceres.
\textsuperscript{248} Letter from PRI.
\textsuperscript{249} See Edison Electric Institute.
\textsuperscript{249} We also note, based on current voluntary reporting, an increasing trend among public companies to use internal carbon pricing. See CDP, \textit{Putting a Price on Carbon} (2021), available at https://cdn.cdp.net/cdp-production/cms/reports/documents/000/005/651/original/CDP_Global_Carbon_Price_report_2021.pdf?1618938446.
Swan” scenarios related to possible climate transition pathways.\textsuperscript{256} Alternatively, the commenter suggested that a company take into account three scenarios: A smooth economic transition to +1.5 °C, which would form the basis of the company’s net-zero strategy; a disorderly and, therefore, more costly and disruptive transition to +1.5 °C; and a higher temperature scenario outcome of +3 °C of warming, which would be associated with extreme physical effects and unprecedented economic costs and disruption. This commenter further stated that robust disclosure of a company’s scenario analysis was necessary so that investors can understand how longer-term “climate drivers” have been incorporated into its corporate strategy and financial disclosures.\textsuperscript{257}

Another commenter expressed the view that, although many companies purport to use scenario analysis in the context that, their reporting regarding such use has been generally deficient. That commenter stated that the assumptions underlying the selected scenarios often are undisclosed and that the analysis tends to be limited and not usefully comparable.\textsuperscript{258} The TCFD’s most recent assessment of public companies’ voluntary climate reporting similarly found that only a small percentage of the surveyed companies disclosed the resilience of their strategies using scenario analysis as recommended by the TCFD.\textsuperscript{259}

Some commenters recommended providing certain accommodations in connection with a scenario analysis requirement, such as creating a safe harbor for scenario analysis disclosure or permitting scenario analysis to be furnished in a separate report that would not be subject to the same liability as Commission filings.\textsuperscript{260} Other commenters stated that they opposed a scenario analysis requirement because of the lack of a common methodology for scenario analysis;\textsuperscript{262} a belief that the underlying methodology would be too difficult for investors to understand;\textsuperscript{263} the need for further development of scenario analysis as a discipline;\textsuperscript{264} or a belief that the focus of climate-related disclosure should be on historical data, and not on forward-looking information.\textsuperscript{265}

We agree with those commenters who stated that information concerning scenario analysis could help investors evaluate the resilience of the registrant’s business strategy in the face of various climate scenarios that could impose potentially different climate-related risks. We are not, however, proposing to mandate that registrants conduct scenario analysis. We recognize that not every registrant conducts scenario analysis and that, in certain instances, it may be costly or difficult for some registrants to conduct such scenario analysis. Instead, the proposed rules would require that if a registrant uses scenario analysis or any analytical tools to assess the impact of climate-related risks on its business and consolidated financial statements, and to support the resilience of its strategy and business model, the registrant must disclose certain information about such analysis.\textsuperscript{266} We believe this approach strikes an appropriate balance between the various positions expressed by commenters by requiring registrants to share any scenario analysis that they are otherwise conducting for their business operations while avoiding imposing a potentially difficult or burdensome requirement on those registrants that have not yet undertaken to conduct such analysis.

If a registrant uses scenario analysis, the proposed amendments would require disclosure of the scenarios considered (e.g., an increase of no greater than 3°, 2°, or 1.5 °C above pre-industrial levels), including parameters, assumptions, and analytical choices, and the projected principal financial impacts on the registrant’s business strategy under each scenario. The disclosure should include both quantitative and qualitative information. Disclosure of the parameters, assumptions, and analytical choices involved in the described scenarios would help investors better understand the various considered scenarios and how the registrant has a plan to manage the climate-related risks posed by each scenario.
any resulting significant changes made to, its products or services, supply chain or value chain, activities to mitigate or adapt to climate-related risks, including adoption of new technologies or processes, expenditure for research and development, and any other significant changes or impacts, as proposed? Are there any other aspects of a registrant’s business operations, strategy, or business model that we should specify as being subject to this disclosure requirement to the extent they may be impacted by climate-related factors?

21. Should we require a registrant to specify the time horizon applied when assessing its climate-related impacts (i.e., in the short, medium, or long term), as proposed?

22. Should we require a registrant to discuss whether and how it considers any of the described impacts as part of its business strategy, financial planning, and capital allocation, as proposed? Should we require a registrant to provide both current and forward-looking disclosures to facilitate an understanding of whether the implications of the identified climate-related risks have been integrated into the registrant’s business model or strategy, as proposed? Would any of the proposed disclosures present competitive concerns for registrants? If so, how can we mitigate such concerns?

23. Should we require the disclosures to include how the registrant is using resources to mitigate climate-related risks, as proposed? Should the required discussion also include how any of the metrics or targets referenced in the proposed climate-related disclosure subpart of Regulation S–K or Article 14 of Regulation S–X relate to the registrant’s business model or business strategy, as proposed? Should we require additional disclosures if a registrant leverages climate-related financing instruments, such as green bonds or other forms of “sustainable finance” such as “sustainability-linked bonds,” “transition bonds,” or other financial instruments linked to climate change as part of its strategy to address climate-related risks and opportunities? For example, should we require disclosure of the climate-related projects that the registrant plans to use the green bond proceeds to fund? Should we require disclosure of key performance metrics tied to such financing instruments?

24. If a registrant has used carbon offsets or RECs, should we require the registrant to disclose the role that the offsets or RECs play in its overall strategy to reduce its net carbon emissions, as proposed? Should the proposed definitions of carbon offsets and RECs be clarified or expanded in any way? Are there specific considerations about the use of carbon offsets or RECs that we should require to be disclosed in a registrant’s discussion regarding how climate-related factors have impacted its strategy, business model, and outlook?

25. Should we require a registrant to provide a narrative discussion of whether and how any of its identified climate-related risks have affected or are reasonably likely to affect its consolidated financial statements, as proposed? Should the discussion include any of the financial statement metrics in proposed 17 CFR 210.14–02 (14–02 of Regulation S–X) that demonstrate that the identified climate-related risks have had a material impact on reported operations, as proposed? Should the discussion include a tabular representation of such metrics?

26. Should we require registrants to disclose information about an internal carbon price if they maintain one, as proposed? If so, should we require that the registrant disclose:

- The price in units of the registrant’s reporting currency per metric ton of CO2e;
- The total price;
- The boundaries for measurement of overall CO2e on which the total price is based if different from the GHG emission organizational boundary required pursuant to 17 CFR 210.14–03(d)(4); and
- The rationale for selecting the internal or shadow carbon price applied, as proposed?

Should we also require registrants to describe the methodology used to calculate its internal carbon price?

27. Should we also require a registrant to disclose how it uses the described internal carbon price to evaluate and manage climate-related risks, as proposed? Should we further require a registrant that uses more than one internal carbon price to provide the above disclosures for each internal carbon price, and disclose its reasons for using different prices, as proposed? Are there other aspects regarding the use of an internal carbon price that we should require to be disclosed? Would disclosure regarding any internal carbon price maintained by a registrant elicit important or material information for investors? Would requiring the disclosure of the registrant’s use of an internal carbon price raise competitive harm concerns that would act as a disincentive from the use of an internal carbon price? If so, should the Commission provide an accommodation that would mitigate those concerns? For example, are there exceptions or exemptions to an internal carbon price disclosure requirement that we should consider?

28. To the extent that disclosure that incorporates or is based on an internal carbon price constitutes forward-looking information, the PSLRA safe harbors would apply. Should we adopt a separate safe harbor for internal carbon price disclosure? If so, what disclosures should such a safe harbor cover and what should the conditions be for such a safe harbor?

29. Should we require all registrants to disclose an internal carbon price and prescribe a methodology for determining that price? If so, what corresponding disclosure requirements should we include in connection with such mandated carbon price? What methodology, if any, should we prescribe for calculating a mandatory internal or shadow carbon price? Would a different metric better elicit disclosure that would monetize emissions?

30. Should we require a registrant to disclose analytical tools, such as scenario analysis, that it uses to assess the impact of climate-related risks on its business and consolidated financial statements, and to support the resilience of its strategy and business model, as proposed? What other analytical tools do registrants use for these purposes, and should we require disclosure of these other tools? Are there other situations in which some registrants should be required to conduct and provide disclosure of scenario analysis? Alternatively, should we require all registrants to provide scenario analysis disclosure? If a registrant does provide scenario analysis disclosure, should we require it to follow certain publicly available scenario models, such as those published by the IPCC, the IEA, or NGFS and, if so, which scenarios? Should we require a registrant providing scenario analysis disclosure to include the scenarios considered (e.g., an increase of global temperature of no greater than 3°, 2°, or 1.5 °C above pre-industrial levels), the parameters, assumptions, and analytical choices, and the projected principal financial impacts on the registrant’s business strategy under each scenario, as proposed? Are there any other aspects of scenario analysis that we should require registrants to disclose? For example, should we require a registrant using scenario analysis to consider a scenario that assumes a disorderly transition? Is there a need for us to provide additional guidance regarding scenario analysis? Are there any aspects of scenario analysis in our proposed disclosure that we should exclude? Should we also require a registrant that...
does not use scenario analysis to disclose that it has not used this analytical tool? Should we also require a registrant to disclose its reasons for not using scenario analysis? Will requiring disclosure of scenario analysis if and when a registrant performs scenario analysis discourage registrants from conducting scenario analysis? If so, and to the extent scenario analysis is a useful tool for building strategic resilience, how could our regulations prevent such consequences?

31. Would the PSLRA forward-looking statement safe harbor provide adequate protection for the proposed scenario analysis disclosure? Should we instead adopt a separate safe harbor for scenario analysis disclosure? If so, what disclosures should such a safe harbor cover that would not be covered by the PSLRA safe harbors and what should the conditions be for such a safe harbor?

32. Should we adopt a provision similar to 17 CFR 229.305(d) that would apply the PSLRA forward-looking statement safe harbor to forward-looking statements made in response to specified climate-related disclosure items, such as proposed Item 1502 and Item 1505 (concerning targets and goals) of Regulation S–K? If so, which proposed items should we specifically include in the safe harbor?

33. As proposed, a registrant may provide disclosure regarding any climate-related opportunities when responding to any of the provisions under proposed 17 CFR 229.1502 (Item 1502). Should we require disclosure of climate-related opportunities under any or all of the proposed Item 1502 provisions?

D. Governance Disclosure

Similar to the TCFD framework, the proposed rules would require a registrant to disclose, as applicable, certain information concerning the board’s oversight of climate-related risks, and management’s role in assessing and managing those risks.

Many commenters asserted that climate-related issues should be subject to the same level of board oversight as other financially material matters. Most of these commenters supported robust disclosure of a board’s and management’s governance of climate-related risks and opportunities, consistent with the TCFD framework. Our proposed disclosure requirements are based on specific recommendations of the TCFD. We agree with commenters that a comprehensive understanding of a board’s oversight, and management’s governance of climate-related risks is necessary to aid investors in evaluating the extent to which a registrant is adequately addressing the material climate-related risks it faces, and whether those risks could reasonably affect the value of their investment.

We also note that, despite the importance of governance disclosure, according to the TCFD, only a small percentage of issuers that voluntarily provided climate-related information presented governance disclosure aligned with the TCFD’s recommendations.

While the proposed rules are intended to provide investors with additional insight into a board’s and management’s governance of climate-related risks, they are similar to the Commission’s existing rules under Regulation S–K that call for disclosure about corporate governance in that they are intended to provide investors with relevant information about a registrant’s board, management, and principal committees.


270 See proposed 17 CFR 229.1501.
271 See, e.g., letters from Americans for Financial Reform Education Fund; Baillie Gifford; Andrew Behar; Bloomberg, LP; Canadian Coalition for Good Governance; Cardano Risk Management Ltd.; CDIP NA [June 11, 2021]; Center for American Progress; CAQ; Ceres et al.; Climate Disclosure Standards Board [June 14, 2021]; Climate Governance Initiative; Climate Risk Disclosure Lab; Eni SpA; ERG Climate Action; Evertoth, Amazon Watch, and Rainforest Action Network [June 11, 2021]; Regenerative Crisis Response Committee; Hermes Equity Ownership Limited; William and Flora Hewlett Foundation [June 9, 2021]; Impax Asset Management; Institute of Internal Auditors [May 23, 2021]; Institutional Shareholder Services [June 14, 2021]; Interfaith Center on Corporate Responsibility; International Corporate Governance Network; Morningstar, Inc.; International Organization for Standardization [June 11, 2021]; Natural Resources Defense Council; NEI Investments; NY City Comptroller [June 14, 2021]; NY State Comptroller; NY State Department of Financial Services [June 4, 2021]; Oregon State Treasury [June 4, 2021]; PRI (Consultation Response); Pricewaterhouse Coopers; Revolving Door Project [June 11, 2021]; George Serafeim [June 9, 2021]; Maria Stoica; TotalEnergies [June 13, 2021]; Value Balancing Alliance; WBSCD; and World Benchmarking Alliance.
272 See, e.g., letters from Baillie Gifford; Bloomberg, LP; Ceres et al.; Climate Disclosure Standards Board; Climate Governance Initiative; Climate Risk Disclosure Lab; Eni SpA; William and Flora Hewlett Foundation; Impax Asset Management; Institute of Internal Auditors and Sustainable Development; International Corporate Governance Network; Richard Love; Morningstar, Inc.; Natural Resources Defense Council; NEI Investments; NY State Comptroller; Maria Stoica; TotalEnergies; and WBSCD. But see letter from Amanda Rose (stating that federalizing aspects of the TCFD, including climate-related governance, would not be covered by the proposed scenario analysis disclosure).
273 See, e.g., letters from Bloomberg, LP; and Natural Resources Defense Council.
274 See TCFD, 2021 Status Report (Oct. 2021) (finding that 9% of surveyed companies provided TCFD-recommended board disclosure in 2018, which increased to 25% in 2020; and 9% provided TCFD-recommended management disclosure in 2018, which increased to 18% in 2020).
275 See, e.g., 17 CFR 229.401 and 229.407.
276 See proposed 17 CFR 229.1501(a)(1)(i).
277 See proposed 17 CFR 229.1501(a)(1)(ii).
278 See proposed 17 CFR 229.1501(a)(1)(iii).
279 See, e.g., letters from Bloomberg, LP; NY State Comptroller; and Vanguard Group, Inc.
280 See proposed 17 CFR 229.1501(a)(1)(iv).
progress against those targets or goals, including the establishment of any interim targets or goals. Such a target might be, for example, to achieve net-zero carbon emissions for all or a large percentage of its operations by 2050 or to reduce the carbon intensity of its products by a certain percentage by 2030 in order to mitigate transition risk. This proposed requirement would help investors evaluate whether and how a board is preparing to mitigate or adapt to any material transition risks, and whether it is providing oversight for the registrant’s potential transition to a lower carbon economy. If applicable, a registrant can elect also to disclose the board’s oversight of climate-related opportunities.

2. Management Oversight

Similar to the proposed required disclosures on board oversight, the proposed rules would require a registrant to disclose a number of items, as applicable, about management’s role in assessing and managing any climate-related risks. For example, a registrant would be required to disclose, as applicable, whether certain management positions or committees are responsible for assessing and managing climate-related risks and, if so, to identify such positions or committees and disclose the relevant expertise of the position holders or members in such detail as necessary to fully describe the nature of the expertise. This proposed requirement would give investors additional information to assess the extent to which management addresses climate-related risks, which could help them to make better informed investment or voting decisions.

Similar to the proposed board oversight provision described above, another proposed item would require disclosure about the processes by which the responsible managers or management committees are informed about and monitor climate-related risks. Such a discussion might include, for example, whether there are specific positions or committees responsible for monitoring and assessing specific climate-related risks, the extent to which management relies on in-house staff with the relevant expertise to evaluate climate-related risks and implement related plans of action, and the extent to which management relies on third-party climate consultants for these same purposes.

The final proposed management governance item would require disclosure about whether the responsible positions or committees report to the board or board committee on climate-related risks and how frequently this occurs. These proposed disclosure items could help investors evaluate whether management has adequately implemented processes to identify, assess, and manage climate-related risks. If applicable, a registrant may elect also to describe management’s role in assessing and managing climate-related opportunities.

Several commenters recommended that we require a registrant to disclose whether it has connected a portion of its executive remuneration with the achievement of climate-related targets or goals. Other commenters expressed the view that such a requirement is unnecessary, because a registrant could implement other measures to motivate progress towards climate-related targets or connect executive remuneration with climate-related achievements as a discretionary matter for the registrant. We are not proposing a compensation-related disclosure requirement at this time, because we believe that our existing rules requiring a compensation discussion and analysis should already provide a framework for disclosure of any connection between executive remuneration and achieving progress in addressing climate-related risks.

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34. Should we require a registrant to describe, as applicable, the board’s oversight of climate-related risks, as proposed? Should the required disclosure include the processes by which management addresses climate-related risks, as proposed? Do our current rules, which require a registrant to provide the business experience of its board members, elicit adequate disclosure about a board member’s or executive officer’s experience relevant to the oversight of climate-related risks?

35. Should we require a registrant to disclose the processes and frequency by which the board or board committee discusses climate-related risks, as proposed?

36. Should we require a registrant to disclose whether and how the board or board committee considers climate-related risks as part of its business strategy, risk management, and financial oversight, as proposed? Would the proposed disclosure raise competitive harm concerns? If so, how could we address those concerns while requiring additional information for investors about how a registrant’s board oversees climate-related risks?

37. Should we require a registrant to disclose whether and how the board sets climate-related targets or goals, as proposed? Should the required disclosure include how the board oversees progress against those targets or goals, including whether it establishes any interim targets or goals, as proposed? Would the proposed disclosure raise competitive harm concerns? If so, how could we address those concerns while requiring additional information for investors about how a registrant’s board oversees the setting of any climate-related targets or goals?

38. Should we require a registrant to describe, as applicable, management’s role in assessing and managing climate-related risks, as proposed? Should the required disclosure include whether certain management positions or committees are responsible for assessing and managing climate-related risks and, if so, the identity of such positions or committees, and the relevant expertise of the position holders or members in such detail as necessary to fully describe the nature of the expertise, as proposed? Should we also require a registrant to identify the board members or board committee responsible for the oversight of climate-related risks, as proposed? Do our current rules, which require a registrant to provide the business experience of its board members, elicit adequate disclosure about a board member’s or executive officer’s expertise relevant to the oversight of climate-related risks?

39. Should we require a registrant to describe the processes by which the management positions or committees responsible for climate-related risks are
inform about and monitor climate-related risks, as proposed? Should we also require a registrant to disclose whether and how frequently such positions or committees report to the board or a committee of the board on climate-related risks, as proposed?

40. Should we specifically require a registrant to disclose any connection between executive remuneration and the achievement of climate-related targets and goals? Is there a need for such a requirement in addition to the executive compensation disclosure required by 17 CFR 229.402(b)?

41. As proposed, a registrant may disclose the board’s oversight of, and management’s role in assessing and managing, climate-related opportunities. Should we require a registrant to disclose these items?

E. Risk Management Disclosure

1. Disclosure of Processes for Identifying, Assessing, and Managing Climate-Related Risks

The proposed rules would require a registrant to describe any processes the registrant has for identifying, assessing, and managing climate-related risks. Risk disclosure is a long-standing disclosure concept under our regulations. Several commenters recommended that we adopt decision-useful disclosure requirements concerning a registrant’s climate-related risk management practices. More granular information regarding any climate-related risk management could allow investors to better understand how a registrant identifies, evaluates, and addresses climate-related risks that may materially impact its business. Such information could also permit investors to ascertain whether a registrant has made the assessment of climate-related risks part of its regular risk management processes. Despite the importance of climate-related risk management information, only a minority of registrants currently include such information in their voluntary climate reports.

When describing the processes for identifying and assessing climate-related risks, the registrant would be required to disclose, as applicable:
- How it determines the relative significance of climate-related risks compared to other risks;
- How it considers existing or likely regulatory requirements or policies, such as GHG emissions limits, when identifying climate-related risks;
- How it considers shifts in customer or counterparty preferences, technological changes, or changes in market prices in assessing potential transition risks; and
- How it determines the materiality of climate-related risks, including how it assesses the potential size and scope of any identified climate-related risk.

When describing any processes for managing climate-related risks, a registrant would be required to disclose, as applicable:
- How it decides whether to mitigate, accept, or adapt to a particular risk;
- How it prioritizes addressing climate-related risks; and
- How it determines how to mitigate a high priority risk.

Together, these proposed disclosures would help investors evaluate whether a registrant has implemented adequate processes for identifying, assessing, and managing climate-related risks so that they may make better informed investment or voting decisions. As part of this risk management description, if a registrant uses insurance or other financial products to manage its exposure to climate-related risks, it may need to describe its use of these products.

The proposed rules would also require a registrant to disclose whether and how climate-related risks are integrated into the registrant’s overall risk management system or processes. If a separate board or management committee is responsible for assessing and managing climate-related risks, a registrant would be required to disclose how that committee interacts with the registrant’s board or management committee governing risks. These proposed disclosures would help investors assess whether the registrant has centralized the processes for managing climate-related risks, which may indicate to investors how the board and management may respond to such risks as they unfold.

2. Transition Plan Disclosure

Adoption of a transition plan to mitigate or adapt to climate-related risks may be an important part of a registrant’s climate-related risk management strategy, particularly if it operates in a jurisdiction that has made commitments under the Paris Agreement to reduce its GHG emissions. Many commenters recommended that we require disclosure regarding a registrant’s transition plan, stating that such disclosure would help investors evaluate whether a registrant has an effective strategy to achieve its short-, medium-, or long-term climate-related targets or goals.

The proposed rules would define a “transition plan” to mean a registrant’s strategy and implementation plan to reduce climate-related risks. A transition plan may include a plan to reduce its GHG emissions in line with a registrant’s commitments or commitments of jurisdictions within which it has significant operations. Transition plans may also be important to registrants and their shareholders to the extent transition risk arises from changes in customer or business counterparty preferences, technological change, or changes in market prices. If a registrant has adopted a transition plan, the proposed rules would require it to describe its plan, including the relevant metrics and targets used to identify and manage physical and transition risks. This information could help investors understand how a registrant intends to address identified climate-related risks and any transition to a lower carbon economy while managing and assessing its business operations and financial condition.
Because transition planning inherently requires judgments and predictions about the future, forward-looking statements made as part of a registrant’s discussion of its transition plan would be eligible for the PSLRA forward-looking statement safe harbors provided all applicable conditions are met.\textsuperscript{302} If a registrant has adopted a transition plan as part of its climate-related risk management strategy, the proposed rules would require the registrant to discuss, as applicable, how it plans to mitigate or adapt to any physical risks identified in the filing, including but not limited to those concerning exposure to sea level rise, extreme weather events, wildfires, drought, and severe heat.\textsuperscript{303} For example, a company with significant operations in areas vulnerable to sea level rise might plan to relocate its vulnerable operations as part of any transition plan. A company operating in areas subject to severe storms might have a transition plan that includes reinforcing its physical facilities to better withstand such weather events, or a plan to relocate those facilities. An agricultural producer that operates in areas subject to increasing water stress might discuss its plans to adjust its business strategy or operations, for example by developing or switching to drought-resistant crops, developing technologies to optimize the use of available water, or acquiring land in other areas.\textsuperscript{304}

The proposed rules would also require a registrant that has adopted a transition plan as part of its climate-related risk management strategy to discuss, as applicable, how it plans to mitigate or adapt to any identified transition risks, including the following:

- Laws, regulations, or policies that:
  - Restrict GHG emissions or products with high GHG footprints, including emissions caps;\textsuperscript{305}
  - Require the protection of high conservation value land or natural assets;\textsuperscript{306}
- Imposition of a carbon price;\textsuperscript{307}
- Changing demands or preferences of consumers, investors, employees, and business counterparties.\textsuperscript{308}

While each of these transition risks may not be applicable to each registrant and its particular transition plan, the above examples are intended to guide registrants in providing meaningful disclosure about its risk management strategies that is not generic or boilerplate. In this regard, it is important for investors to understand how a registrant plans to mitigate or adapt to any identified transition risks in its transition plan given the potential associated costs and burdens and their impact on the registrant’s business. The proposed rules would require a registrant that has adopted a transition plan as part of its climate-related management strategy to update its disclosure about its transition plan each fiscal year by describing the actions taken during the year to achieve the plan’s targets or goals.\textsuperscript{309} This is intended to provide investors with information that can help them better understand the registrant’s effectiveness in implementing any transition plan and the potential risks and costs associated with what it still needs to accomplish.

A registrant that has adopted a transition plan as part of its climate-related risk management strategy may also describe how it plans to achieve any identified climate-related opportunities, such as:

- The production of products that facilitate the transition to a lower carbon economy, such as low emission modes of transportation and supporting infrastructure;
- The generation or use of renewable power;
- The production or use of low waste, recycled, or other consumer products that require less carbon intensive production methods;
- The setting of conservation goals and targets that would help reduce GHG emissions; and
- The provision of goods or services related to any transition to a lower carbon economy.\textsuperscript{310}

For example, an energy company might discuss how, due to actual or potential regulatory constraints, it intends to take advantage of climate-related opportunities by increasing the amount of electricity purchased that is produced using renewable energy sources, reducing its medium and long-range fossil fuel exploration and production, increasing the percentage of its products consisting of biofuels and other lower emissions fuels, or investing in carbon capture and storage technologies. A transportation company might discuss how, to mitigate reputational risk, it plans to realize any climate-related opportunities presented by switching its existing fleet to one composed of low- or no-emission vehicles by a certain date.\textsuperscript{311}

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42. Should we require a registrant to describe its processes for identifying, assessing, and managing climate-related risks, as proposed?

43. When describing the processes for identifying and assessing climate-related risks, should we require a registrant to disclose, as applicable, as proposed:

- How the registrant determines the relative significance of climate-related risks compared to other risks?
- How it considers existing or likely regulatory requirements or policies, such as emissions limits, when identifying climate-related risks?
- How it considers shifts in customer or counterparty preferences, technological changes, or changes in market prices in assessing potential transition risks?
- How the registrant determines the materiality of climate-related risks, including how it assesses the potential size and scope of an identified climate-related risk? Are there other items relevant to a registrant’s identification and assessment of climate-related risks that we should require it to disclose instead of or in addition to the proposed disclosure items?

44. When describing the processes for managing climate-related risks, should we require a registrant to disclose, as applicable, as proposed:

- How it decides whether to mitigate, accept, or adapt to a particular risk?
- How it prioritizes climate-related risks?
- How it determines to mitigate a high priority risk?

Are there other items relevant to a registrant’s management of climate-related risks that we should require it to disclose instead of or in addition to the proposed disclosure items?

45. Should we require a registrant to disclose whether and how the processes described in response to proposed 17 CFR 229.1503(a) are integrated into the registrant’s overall risk management system or processes, as proposed?

Should we specify any particular aspect of this arrangement that a registrant would be required to disclose the expected impact of any transition opportunity on its results of operations or financial condition, e.g., increased costs or expenditures, pursuant to proposed 17 CFR 229.1502 to the extent it believes they would be reasonably likely to have a material impact.

\textsuperscript{302} See supra note 219.

\textsuperscript{303} See proposed 17 CFR 229.1503(c)(2)(i).

\textsuperscript{304} A registrant would be required to disclose the expected impact of any potential reduction on its results of operations or financial condition pursuant to proposed 17 CFR 229.1502 to the extent it believes the likely impact would be material. Such quantified disclosure may be eligible for the PSLRA safe harbors if the conditions of the safe harbors are met.

\textsuperscript{305} See proposed 17 CFR 229.1503(c)(2)(ii)(A)(i).

\textsuperscript{306} See proposed 17 CFR 229.1503(c)(2)(ii)(A)(i).\textsuperscript{307}


\textsuperscript{308} See proposed 17 CFR 229.1503(c)(2)(ii)(B).

\textsuperscript{309} See proposed 17 CFR 229.1503(c)(2)(ii)(C).

\textsuperscript{310} See proposed 17 CFR 229.1503(c)(3)(i) through (v).

\textsuperscript{311} A registrant would be required to disclose the expected impact of any transition opportunity on its results of operations or financial condition, e.g., increased costs or expenditures, pursuant to proposed 17 CFR 229.1502 to the extent it believes they would be reasonably likely to have a material impact.
should disclose, such as any interaction between, and corresponding roles of, the board or any management committee responsible for assessing climate-related risks, if there is a separate and distinct committee of the board or management, and the registrant’s committee in charge, generally, of risk assessment and management?  

46. If a registrant has adopted a transition plan, should we require the registrant to describe the plan, including the relevant metrics and targets used to identify and manage physical and transition risks, as proposed? Would this proposed disclosure requirement raise any competitive harm concerns and, if so, how can we mitigate such concerns? Would any of the proposed disclosure requirements for a registrant’s transition plan act as a disincentive to the adoption of such a plan by the registrant?  

47. If a registrant has adopted a transition plan, should we require it, when describing the plan, to disclose, as applicable, how the registrant plans to mitigate or adapt to any identified physical risks, including but not limited to those concerning energy, land, or water use and management, as proposed? Are there any other aspects or considerations related to the mitigation or adaption to physical risks that we should specifically require to be disclosed in the description of a registrant’s transition plan?  

48. If a registrant has adopted a transition plan, should we require it to disclose, if applicable, how it plans to mitigate or adapt to any identified transition risks, including the following, as proposed:  

• Laws, regulations, or policies that:  
  o Restrict GHG emissions or products with high GHG footprints, including emissions caps; or  
  o Require the protection of high conservation value land or natural assets?  
• Imposition of a carbon price?  
• Changing demands or preferences of consumers, investors, employees, and business counterparts?  
• Any other transition risks that we should specifically identify for disclosure, if applicable, in the transition plan description? Are there any identified transition risks that we should exclude from the plan description?  

49. If a registrant has adopted a transition plan, when describing the plan, should we permit the registrant also to discuss how it plans to achieve any identified climate-related opportunities, including, as proposed:  

• The production of products that facilitate the transition to a lower carbon economy, such as low emission modes of transportation and supporting infrastructure?  
• The generation or use of renewable power?  
• The production or use of low waste, recycled, or environmentally friendly consumer products that require less carbon intensive production methods?  
• The setting of conservation goals and targets that would help reduce GHG emissions?  
• The provision of services related to any transition to a lower carbon economy?  

Should we require a registrant to discuss how it plans to achieve any of the above, or any other, climate-related opportunities when describing its transition plan?  

50. If a registrant has disclosed its transition plan in a Commission filing, should we require it to update its transition plan disclosure each fiscal year by describing the actions taken planning the year to achieve the plan’s targets or goals, as proposed? Should we require a registrant to provide such an update more frequently, and if so, how frequently? Would the proposed updating requirement act as a disincentive to the adoption of a transition plan by the registrant?  

51. To the extent that disclosure about a registrant’s transition plan constitutes forward-looking information, the PSLRA safe harbors would apply. Should we adopt a separate safe harbor for transition plan disclosure? If so, what disclosures should such a safe harbor cover and what should the conditions be for such a safe harbor?  

F. Financial Statement Metrics  

1. Overview  

If a registrant is required to file the disclosure required by subparagraph 229.1500 in a form that also requires audited financial statements, under our proposal it would be required to disclose in a note to its financial statements certain disaggregated climate-related financial statement metrics that are mainly derived from existing financial statement line items. In particular, the proposed rules would require disclosure falling under the following three categories of information:  

• Financial Impact Metrics;  
• Expenditure Metrics; and  
• Financial Estimates and Assumptions.  

The proposed financial statement metrics disclosures would involve estimation uncertainties that are driven by the application of judgments and assumptions, similar to other financial statement disclosures (e.g., estimated loss contingencies, fair value measurement of certain assets, etc.). Accordingly, for each type of financial statement metric, the proposed rules would require the registrant to disclose contextual information to enable a reader to understand how it derived the metric, including a description of significant inputs and assumptions used, and if applicable, policy decisions made by the registrant to calculate the specified metrics.  

A number of existing accounting standards could elicit climate-related disclosure in the financial statements, as highlighted by the FASB in a Staff Educational Paper and by the IFRS in a similar document. Nevertheless, we believe the proposed rules would benefit registrants by specifying when to provide such disclosures. Furthermore, the proposed rules may increase the consistency and comparability of such disclosures by prescribing accounting principles for preparing the proposed climate-related financial statement metrics disclosures, including, among other things, provisions that would specify the basis of calculation for such metrics and their presentation.  

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For example, the climate-related note to the financial statements would not be required in a Form 10–Q filing. See proposed 17 CFR 210.14–01(a). See infra note 690 and accompanying text, which discusses the applicability of the proposed rules to foreign private issuers.  

See SASB Concepts Statement No. 8, Chapter 8, par. DII (“The primary purpose of notes to financial statements is to supplement or further explain the information on the face of financial statements by providing financial information relevant to existing and potential investors, lenders, and other creditors for making decisions about providing resources to an entity.”).
To avoid potential confusion, maintain consistency with the rest of the financial statements, and aid comparability, registrants would be required to calculate the proposed financial statement metrics using financial information that is consistent with the scope of the rest of the registrant’s consolidated financial statements included in the filing.317 Therefore, registrants would have to include in any such calculation financial information from consolidated subsidiaries.318

For the avoidance of doubt, and to further promote consistency in the preparation of the financial statements, the proposed basis of calculation requirements would also specify that a registrant would be required to apply the same set of accounting principles that it is required to apply in preparation of the rest of its consolidated financial statements included in the filing, whenever applicable.319 Although 17 CFR 210.4–01(a)(1) already states that financial statements filed with the Commission that are not prepared in accordance with GAAP will be presumed misleading or inaccurate unless the Commission has otherwise provided, clarifying the application of this concept in the proposed rules may be helpful, given the possible confusion that may arise between the current body of GAAP and the proposed requirements.320

The proposed rules would also require disclosure to be provided for the registrant’s most recently completed fiscal year and for the historical fiscal year(s) included in the registrant’s consolidated financial statements in the applicable filing.321 For example, a registrant that is required to include balance sheets as of the end of its two most recent fiscal years and income statements and cash flow statements at the end of its three most recent fiscal years would be required to disclose two years of the climate-related financial statement metrics that correspond to balance sheet line items and three years of the climate-related financial statement metrics that correspond to income statement or cash flow statement line items. If the registrant is an emerging growth company (“EGC”)322 or SRC, only two years would be required.323

A registrant, however, would not need to provide a corresponding historical metric for a fiscal year preceding its current reporting fiscal year if it is eligible to take advantage of the accommodation in 17 CFR 230.409 (“Rule 409”) or 17 CFR 240.12b–21 (“Rule 12b–21”). For example, if a registrant has not previously presented such metric for such fiscal year and the historical information necessary to calculate or estimate such metric is not reasonably available to the registrant without unreasonable effort or expense, the registrant may be able to rely on Rule 409 or Rule 12b–21 to exclude a corresponding historical metric. 

Requiring disclosure of current and, when known or reasonably available, historical periods, should allow investors to analyze trends in the climate-related financial statement metrics, as proposed? Instead, should we require registrants to report these metrics with reference to its consolidated financial statements, as proposed? If not, how should registrants report these metrics? If we were to establish accounting principles (e.g., the basis for reporting these metrics) in a manner that differs from the principles applicable to the rest of the consolidated financial statements, would the application of those principles to the proposed metrics make climate-related disclosures less clear, helpful, or comparable for investors? 334

54. Should we also require such metrics to be calculated at a reportable segment level when a registrant has more than one reportable segment (as defined by the FASB ASC Topic 280 Segment Reporting)? In addition, should we require such metrics to be presented by geographic areas that are consistent with the registrant’s reporting pursuant to FASB ASC Topic 280–10–50–41? How would investors use such information?

55. The proposed rules would require disclosure for the registrant’s most recently completed fiscal year and for the corresponding historical fiscal years included in the registrant’s consolidated financial statements in the filing. Should disclosure of the climate-related financial statement metrics be required for the fiscal years presented in the registrant’s financial statements, as proposed? Instead, should we require the financial statement metrics to be calculated only for the most recently relevant periods?

[Apr. 25, 2003] 68 FR 23333 [May 1, 2003], at 23334 (“While the Commission consistently has looked to the private sector in the past to set accounting standards, the securities laws, including the Sarbanes-Oxley Act, clearly provide the Commission the authority to set accounting standards for public companies and other entities that file financial statements with the Commission.”). See also FASB Accounting Standards Codification (“FASB ASC”) Topic 105–10–10–1 (“Rules and interpretive releases of the Securities and Exchange Commission . . . are also sources of authoritative GAAP for SEC registrants.”). 317 See proposed 17 CFR 210.14–01(c)(1).

318 See, e.g., 17 CFR 210.3–01(a) (“There shall be filed, for the registrant and its subsidiaries consolidated, audited balance sheets as of the end of each of the two most recent fiscal years.”).

319 See proposed 17 CFR 210.14–01(c)(2). Foreign private issuers that file consolidated financial statements under home country GAAP and reconcile the proposed climate-related financial statement metrics private issuers that file consolidated financial statements under IFRS as issued by the IASB, would apply IFRS and the proposed rules as the basis for calculating and disclosing the proposed climate-related financial statement metrics private issuers applying those standards. See also infra note 690 which discusses proposed amendments to Form 20–F.

320 See also 17 CFR 210.4–01(a)(2) (discussing the application of U.S. GAAP, IFRS, and the use of other comprehensive sets of accounting principles (with reconciliation to U.S. GAAP)).

321 See proposed 17 CFR 210.14–01(d).

322 An EGC is a registrant that had total annual gross revenues of less than $1.07 billion during its most recently completed fiscal year and has not met the specified conditions for no longer being considered an EGC. See 17 CFR 230.405; 17 CFR 240.12b–2; 15 U.S.C. 77b(a)(19); 15 U.S.C. 78c(a)(80); and Inflation Adjustments and Other Technical Amendments under Titles I and III of the JOBS Act, Release No. 33–10332 (Mar. 31, 2017) [82 FR 17545 (Apr. 12, 2017)].

323 An EGC is only required to provide audited statements of comprehensive income and cash flows for each of the two fiscal years preceding the date of the most recently filed balance sheet (or such shorter period as the registrant has been in existence). See 17 CFR 210.3–02(a). A similar accommodation is provided to SRCs. See 17 CFR 210.8–02.

324 See supra Section II.C.
completed fiscal year presented in the relevant filing? Would requiring historical disclosure provide important or material information to investors, such as information allowing them to analyze trends? Are there other approaches we should consider?  

56. Should information for all periods in the consolidated financial statements be required for registrants that are filing an initial registration statement or providing climate-related financial statement metrics disclosure for historical periods prior to the effective date or compliance date of the rules? Would the existing accommodation in Rules 409 and 12b–21 be sufficient to address any potential difficulties in providing the proposed disclosures in such situations?  

57. Should we provide additional guidance as to when a registrant may exclude a historical metric for a fiscal year preceding the current fiscal year?  

58. In several instances, the proposed rules specifically point to existing GAAP and, in this release, we provide guidance with respect to the application of existing GAAP. Are there other existing GAAP requirements that we should reference? Are there instances where it would be preferable to require an approach based on TCFD guidance or some other framework, rather than requiring the application of existing GAAP?  

2. Financial Impact Metrics  

As discussed above, proposed Item 1502(d) of Regulation S–K would require a registrant to provide a narrative discussion of whether and how any of its identified climate-related risks have affected or are reasonably likely to affect the registrant’s consolidated financial statements. The term “climate-related risks” would be defined, in part, as the actual or potential negative impacts of climate-related conditions and events on a registrant’s consolidated financial statements. “Climate-related risks” would also be defined to include physical risks, such as extreme weather events, and transition risks. To complement this proposed requirement in Regulation S–K to provide narrative disclosure about impacts on a registrant’s consolidated financial statements, we are proposing to amend Regulation S–X to require a registrant to include disaggregated information about the impact of climate-related conditions

and events, and transition activities, on the consolidated financial statements included in the relevant filing, unless such impact is below a specified threshold.  

We are proposing to require disclosure of the impacts from severe weather events and other natural conditions and transition activities, which should capture a broad spectrum of these two types of climate-related risks (physical risks and transition risks). In addition, the proposed rules would require disclosure of the impacts of any climate-related risks identified pursuant to proposed Item 1502(a)—both physical risks (“identified physical risks”) and transition risks (“identified transition risks”)—on any of the financial statement metrics. Among the examples of severe weather events and other natural conditions that we have highlighted in the proposed rule are those that the Commission identified more than a decade ago in the 2010 Guidance as potentially affecting a registrant’s operations and results. In addition, although not specifically mentioned in the 2010 Guidance, we are including wildfires as an example because it is well recognized as another type of natural event that can have significant impacts on a registrant’s financial statements. Providing examples of severe weather events, other natural conditions, and transition activities in the proposed rule would aid in the comparability of the resulting disclosure while assisting issuers in making the disclosures.  

Specifically, we are proposing that impacts on any relevant line item in the registrant’s consolidated financial statements during the fiscal years presented arising from severe weather events and natural conditions, and the identified physical risks (collectively, “climate-related events”), would trigger the proposed disclosure requirement discussed below. Specific examples of such severe weather events and natural conditions may include the following:  

• Flooding;  
• Drought;  
• Wildfires;  
• Extreme temperatures; and  
• Sea level rise.  

As discussed, above, there has been increased recognition of the current and potential effects, both positive and negative, of these events and the associated physical risks on a registrant’s business as well as its financial performance and position. For example, as mentioned above, the 2010 Guidance discusses the potential impacts on a registrant’s business and financial performance from climate-related events, including, for example, severe weather events that may negatively impact a registrant’s supply chain or distribution chain and lead to higher input costs or delayed product deliveries. The 2010 Guidance also points to credit risks for banks driven by borrowers with assets located in high risk coastal areas. More recently, the FSOC’s Report on Climate-Related Financial Risk 2021 discusses significant costs from the types of events included in proposed Rule 14–02(c). The TCFD, in a recent publication, also discusses the potential financial impacts of such climate-related events. Furthermore, the TCFD provides examples of disclosures already being made by some companies (including registrants) of the financial statement impact of the climate-related events discussed above in their standalone sustainability (or equivalent) reports. Generally, climate-related events such as severe weather events and other natural conditions, and climate-related risks more generally, are linked to negative impacts on a registrant’s financial performance and position.

For example, the impact on the income statement line items for the periods presented in the financial statements in a registrant’s Form 10–K.  

See proposed 17 CFR 210.14–02(i).  

See, e.g., 2010 Guidance, 26 (“Significant physical effects of climate change, such as effects on the severity of weather (for example, floods or hurricanes), [and] sea levels . . . have the potential to affect a registrant’s operations and results.”). Temperature extremes and drought are also discussed in the 2010 Guidance. See, e.g., id. at 6–7.  

See, e.g., Aurora A. Gutierrez et al., Wildfire response to changing daily temperature extremes in California’s Sierra Nevada, Science Advances, Vol. 7, Issue 47 (Nov. 17, 2021) (“Our work supports the conclusion that considerable potential exists for an increase in fire activity as a consequence of climate warming in the absence of changes in fire and ecosystem management.”). U.S. Geological Survey. Will global warming produce more frequent and more intense wildfires? (“Researchers have found strong correlations between warm summer temperatures and large fire years, so there is general consensus that fire occurrence will increase with climate change.”), available at https://www.usgs.gov/faqs/will-global-warming-produce-more-frequent-and-more-intense-wildfires.

See proposed 17 CFR 210.14–02(c).  

See 2010 Guidance, 6.  

See id.  

See, e.g., 2021 FSOC Report, Chapter 1: From Climate-Related Physical Risks to Financial Risks (discussing the listed events and other risks).  

See, e.g., TCFD, Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures (Oct. 2021), Section A.4 Assessing Financial Impacts of Climate-Related Risks and Opportunities.  

See, e.g., TCFD, Guidance on Metrics, Targets, and Transition Plans (Oct. 2021), 23 (Figure C6), Appendix 2, available at https://assets.bhbr.info/company/sites/60/2021/07/2021-Metrics_Targets_Guidance-1.pdf (providing examples, mostly from sustainability (or equivalent) reports, that illustrate the feasibility of some of the disclosures that would be required by the proposed rules).
There could be situations, however, where such events result in positive impacts. For example, if a registrant’s business is to conduct post-disaster cleanup and reconstruction, the occurrence of such severe weather events would generate additional revenues for the registrant.

In addition to the physical risks associated with climate change, registrants and investors also face climate-related transition risks. As government leaders across the globe have made public commitments to transition to a lower carbon economy, investors have sought information about the impact such a transition may have on registrants.338 In addition to public commitments, these impacts may be prompted by regulatory, technological, market (including changing consumer, business counterparty, and investor preferences), liability, reputational, or other transition-related factors.339 For example, significant shifts in modes of production may occur in GHG intensive economic sectors, such as the transportation, electricity generation, and heavy manufacturing sectors.340 A registrant that is engaged in transition activities may experience business losses or, conversely, may benefit from such transition activities.341 In response, some companies are already providing disclosure of the impact of transition-related activities on their financial statements and some have publicly made commitments related to this transition.342 In light of these transition risks, the proposed rules would also require a registrant to disclose the financial impact of the impact of any identified transition risks and any efforts to reduce GHG emissions or otherwise mitigate exposure to transition risks (collectively, “transition activities”) on any relevant line items in the registrant’s consolidated financial statements during the fiscal years presented.343 A registrant may also disclose the impact of any opportunities arising from severe weather events and other natural conditions, any impact of efforts to pursue climate-related opportunities associated with transition activities, and the impact of any other climate-related opportunities, including those identified by the registrant pursuant to proposed Item 1502(a), on any of the financial statement metrics.344 If a registrant makes a policy decision to disclose the impact of a climate-related opportunity on the proposed financial statement metrics, it must do so consistently (e.g., for each fiscal year presented in the consolidated financial statements, for each financial statement line item, for all relevant opportunities identified by the registrant) and must follow the same presentation and disclosure threshold requirements applicable to the required disclosures related to financial impact metrics and expenditure metrics, as discussed below.345

The financial impact metric disclosure requirements in proposed Rules 14–02(c), (d), and (i) would require a registrant to disclose the financial impacts of severe weather events, other natural conditions, transition activities, and identified climate-related risks on the consolidated financial statements included in the relevant filing unless the aggregated impact of the severe weather events, other natural conditions, transition activities, and identified climate-related risks is less than one percent of the total line item for the relevant fiscal year.346 The proposed threshold would provide a bright-line standard for registrants and should reduce the risk of underreporting such information. The proposed quantitative threshold could also promote comparability and consistency among a registrant’s filings over time and among different registrants compared to a principles-based approach. The Commission has used similar one percent thresholds in other contexts.347 More generally, in addition to the approach in Article 5 of Regulation S–X discussed below, other rules such as 17 CFR 229.103 and 17 CFR 229.404 use quantitative disclosure thresholds to facilitate comparability, consistency, and clarity in determining when information must be disclosed.348

A registrant would be required to determine the impacts of the severe weather events, other natural conditions, transition activities, and identified climate-related risks described above on each consolidated financial statement line item.349 Within each category (i.e., climate-related events or transition activities), impacts would, at a minimum, be required to be disclosed on an aggregated, line-by-line basis for all negative impacts and, separately, on an aggregated, line-by-line basis for all positive impacts.350

However, for purposes of determining whether the disclosure threshold has been met, a registrant would be required to aggregate the absolute value of the positive and negative impacts on a line-by-line basis, which we believe would better reflect the significance of the impact of the climate-related events and transition activities on a registrant’s financial performance and position.351 For example, when evaluating the line-by-line impact, a registrant may determine that its cost of revenue is impacted by Events A, B, and C, and Transition Activity D in the following manner:

- Cost of revenue was impacted negatively by Events A and B by $300,000, driven by increased input costs impacted by severe weather events that strained the registrant’s main supplier;
- Cost of revenue was impacted positively by Event C by $70,000, driven by technology that improved the registrant’s ability to manage the impact of severe heat on certain raw materials, which resulted in more efficient production; and
- Cost of revenue was impacted positively by Transition Activity D, which reduced production costs for certain products by $800,000 through advanced technology that improved energy efficiency during the production process.352

338 See supra Section I.C.1.
339 See supra Section I.B.
340 See, e.g., 2021 FSOC Report, Chapter 1, From Climate-related Transition Risks to Financial Risks.
341 See id.
343 See proposed 17 CFR 210.14–02(d).
344 See proposed 17 CFR 210.14–02(j).
345 See id.
346 See proposed 17 CFR 210.14–02(b). The registrant would be required to evaluate the impact on a line-by-line basis consistent with the line items presented in its consolidated financial statements. See proposed 17 CFR 210.14–02(c) and (d).
347 The Commission currently uses a 1% threshold in other contexts for disclosure of certain items within the financial statements and without. See, e.g., 17 CFR 210.5–03.1(a) (stating that if the total of sales and revenues reported under this caption includes excise taxes in an amount equal to 1% or more of such total, the amount of such excise taxes shall be shown on the face of the statement parenthetically or otherwise); 17 CFR 210.12–13 (requiring disclosure of certain contracts by management investment companies using a 1% of net asset value threshold, based on the notional amounts of the contracts); and 17 CFR 229.404(d) (requiring disclosure of transactions between a SRC and related persons in which the amount involved exceeds the lesser of $120,000 or 1% of the average of the SRC’s total assets at year-end for the last two completed fiscal years).
348 See 17 CFR 229.103(b)(2), (c)(3)(iii) and 17 CFR 229.404(g).
349 Examples of such line items include revenue, cost of revenue, selling, general and administrative expenses, sale of property, plant, and equipment (in statement of cash flows), inventories, intangible assets, long-term debt, or contingent liabilities.
350 See proposed 17 CFR 210.14–02(c) and (d).
351 See proposed 17 CFR 210.14–02(b).
352 This example illustrates a situation where the registrant has elected to include impacts from transition opportunities.
For purposes of determining whether the impacts from the example above would trigger the disclosure threshold requirements, the registrant would perform the analysis illustrated in the following table:

<table>
<thead>
<tr>
<th>F/S line-item</th>
<th>F/S balance (from consolidated financial statements)</th>
<th>Impact of events A and B</th>
<th>Impact of event C</th>
<th>Impact of transition activity D</th>
<th>Absolute value of impacts</th>
<th>Percentage impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of revenue</td>
<td>$10,000,000</td>
<td>$-300,000</td>
<td>$+70,000</td>
<td>$+90,000</td>
<td>$460,000</td>
<td>4.6%</td>
</tr>
</tbody>
</table>

Although some of the impacts (e.g., impact of Event C, impact of Transition Activity D) do not individually meet the one percent threshold, the absolute value of the aggregated impacts from the events and transition activities on the line item in the above example is $460,000 and thus exceeds one percent of the corresponding line-item threshold; therefore, disclosure for that specific line item would be required. The registrant’s disclosure of such impacts may be provided, for example, as illustrated in the following table (excluding disclosure of contextual information):

Note X. Climate-related financial metrics:

<table>
<thead>
<tr>
<th>F/S line-item</th>
<th>Total negative impact from climate-related events</th>
<th>Total positive impact from climate-related events</th>
<th>Total negative impact from climate-related transition activities</th>
<th>Total positive impact from climate-related transition activities and climate-related opportunities *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of revenue</td>
<td>*(Debit) $300,000 .......... (Credit) $70,000 ..........</td>
<td>*(Credit) $90,000 ..........</td>
<td>*(Debit) $460,000 ..........</td>
<td>*(Credit) $90,000 ..........</td>
</tr>
</tbody>
</table>

* As discussed earlier, a registrant may elect to include the impact of climate-related opportunities when calculating its climate-related financial impact metrics. This example illustrates a situation where the registrant has elected to include impacts from transition opportunities.

In this example, contextual information may include disclosure such as the registrant’s election to include the impact from opportunities in its disclosure analysis and calculation, the specific events that were aggregated for purposes of determining the impact on the cost of revenue and, if applicable, a discussion of the estimation methodology used to disaggregate the amount of impact on the cost of revenue between the climate-related events, transition activities, and other factors.

To provide additional clarity, the proposed rule would include the following examples of disclosures that may be required to reflect the impact of the severe weather events and other natural conditions on each line item of the registrant’s consolidated financial statements (e.g., line items of the consolidated income statement, balance sheet, or cash flow statement): 353

- Changes to revenue or costs from disruptions to business operations or supply chains;
- Impairment charges and changes to the carrying amount of assets (such as inventory, intangibles, and property, plant and equipment) due to the assets being exposed to severe weather, flooding, drought, wildfires, extreme temperatures, and sea level rise;
- Changes to loss contingencies or reserves (such as environmental reserves or loan loss allowances) due to impact from severe weather events;
- Changes to total expected insured losses due to flooding or wildfire patterns. 354

With respect to the financial impacts of transition activities, the proposed rule would include the following examples of potential impacts:

- Changes to revenue or cost due to new emissions pricing or regulations resulting in the loss of a sales contract;
- Changes to operating, investing, or financing cash flow from changes in upstream costs, such as transportation of raw materials;
- Changes to the carrying amount of assets (such as intangibles and property, plant, and equipment), for example, due to a reduction of the asset’s useful life or a change in the asset’s salvage value by being exposed to transition activities; and
- Changes to interest expense driven by financing instruments such as climate-linked bonds issued where the interest rate increases if certain climate-related targets are not met. 355

Many commenters stated that climate-related financial disclosure is material and should be reflected separately in the financial statements. 356 For example, one commenter stated that it is critical to investors and others in assessing a company’s risk profile, estimating its risk-adjusted returns, and completing other relevant financial analyses to include information on how climate-related risks and climate-related opportunities may affect companies’ income statements, cash flow statements, and balance sheets. 357

Other commenters, however, generally expressed the view that if such disclosures are material, they would already be required by existing financial statement disclosure requirements. 358 For example, some of these commenters stated that they opposed new climate-specific disclosure rules because, in their view, the traditional concept of materiality already requires the disclosure of climate-related impacts that materially

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353 The examples below, like all of the examples in this release (including examples in the text of the proposed rules), are non-exclusive and should not be interpreted as a checklist for compliance with any proposed rule.

354 See proposed 17 CFR 210.14-02(c)(1) through (4).

355 See proposed 17 CFR 210.14-02(d)(1) through (4).

356 See, e.g., letters from Americans for Financial Reform Education Fund et al.; BlackRock; CalPERS; Corec: Climate Accounting Project; Climate Governance Initiative; EAI Spa; Friends of the Earth; Amazon Watch and RainForest Coalition; Initiative on Climate Risk and Resilience Law; International Corporate Governance Network; Investment Company Institute; Natural Resources Defense Council; Policy Working Group; Sens. Brian Schatz and Sheldon Whitehouse (June 10, 2021); Ted Atwood: The Forum for Sustainable and Responsible Investment; The Revolving Door Project; The Washington State Investment Board; UNEP—Fi; Union of Concerned Scientists; and WB/USD.

357 See letter from Bloomberg.

358 See, e.g., letters from the American Fuel Petrochemical Manufacturers (June 13, 2021); Environmental Bankers Association; Heritage Foundation; National Mining Association (June 11, 2021); Society for Mining, Metallurgy, & Exploration (June 13, 2021); and The Associated General Contractors of America.
affect the issuer’s financial condition and results of operations.\textsuperscript{359} Although we agree that registrants are currently required to disclose material financial impacts on the financial statements, the proposed climate-related financial statement metrics should provide additional transparency into the impact of climate-related events on information reported in the financial statements that would be relevant to investors when making investment or voting decisions.\textsuperscript{360} Such disclosure would also provide investors with additional insights into the nature of a registrant’s business, the implementation of the registrant’s targets and goals, and material trends in climate-related impacts. Furthermore, separately stating the financial statement impacts from the climate-related events and transition activities could improve comparability across both the registrant’s year-to-year disclosures and the disclosures of different registrants.

We further note that the proposed requirement to separately disclose the financial impacts of the climate-related events and transition activities may be necessary not only because climate-related risks may have significant impacts on individual registrants, but also because the risks presented by the climate-related events and transition activities may be correlated across different, similarly situated registrants.\textsuperscript{361} Climate-related risks present the potential for a high correlation and therefore concentration of risk, particularly in certain industries. Separate disclosure of climate-related risks could help to provide investors with information to help them more effectively evaluate their portfolio risk. In this regard, we note that an analogous approach to disaggregated, or separately stated, disclosure has been taken in other contexts within the financial statements and elsewhere.\textsuperscript{362} For example, in segment reporting, a registrant must present within its consolidated financial statements a separate presentation of certain financial statement line items for each segment.\textsuperscript{363} The Commission has noted the importance of disaggregated disclosure in the segment reporting context, stating that it “has long been aware of the importance of meaningful segment information to reasoned investment decision-making.”

The importance of disaggregated disclosure in a registrant’s financial statements is also supported by the concepts set forth in FASB ASC Topic 280: Reporting and Disclosing Segment Information.\textsuperscript{364} The analogies are also not intended to imply that the determination of when disclosure may be required and how that determination is made is the same across all of these concepts. See, e.g., note 363 (discussing management’s evaluation under FASB ASC Topic 280 Segment Reporting and IFRS 8 Operating Segments) and the discussion below of FASB ASC Topic 606, IFRS 15, and Article 5 of Regulation S-X.

The analogies presented are not intended to imply that FASB ASC Topic 280, IFRS 8 or other concepts would have to be applied when accounting for and disclosing the climate-related financial statement metrics. The analogies are also not intended to imply that the determination of when disclosure may be required and how that determination is made is the same across all of these concepts. See, e.g., note 363 (discussing management’s evaluation under FASB ASC Topic 280 Segment Reporting and IFRS 8 Operating Segments) and the discussion below of FASB ASC Topic 606, IFRS 15, and Article 5 of Regulation S-X.

\textsuperscript{359}See letters from American Fuel Petrochemical Manufacturers; Environmental Bankers Association; and The Associated General Contractors of America.

\textsuperscript{360}Certain commenters, in response to FASB’s 2021 Agenda Consultation, were also supportive of more disaggregated disclosures within the financial statements. See, e.g., letters from CalPERS (Sept. 22, 2021); CFA Institute (Oct. 7, 2021); and CII (Sept. 16, 2021). Comment letters in response to FASB’s invitation to comment are available at https://www.fasb.org/jsp/FASB/CommentLetter_C/CommentLetterPage?docId=1218220151790#project_id=2021-0049-page_numbers=1.

\textsuperscript{361}See, e.g., Madison Condon, Market Myopia’s Climate Bubble, 2022 Utah L. Rev. 63 (2021). See also 2020 CFTC Advisory Subcommittee Report (“Climate change is expected to affect multiple sectors, geographies, and assets in the United States, sometimes simultaneously and within a relatively short timeframe. As mentioned earlier, transition and physical risks—as well as climate and non-climate risks—could interact with each other, amplifying shocks and stresses. This raises the prospect of spillovers that could disrupt multiple parts of the financial system simultaneously.”).

\textsuperscript{362}See note 363 (discussing management’s evaluation under FASB ASC Topic 280 Segment Reporting and IFRS 8 Operating Segments) and the discussion below of FASB ASC Topic 606, IFRS 15, and Article 5 of Regulation S-X.


\textsuperscript{364}See Industry and Homogenous Geographic Segment Reporting, Release No. 33-6514 (Feb. 15, 1984) [49 FR 6737–01 (Feb. 23, 1984)], at 6738. Robust segment reporting disclosures are important as they can provide crucial transparency to investors that are analyzing financial statement metrics. See also Gary Bueser, For the Investor: Segment Reporting, FASB OUTLOOK (Apr. 2019) (“[I]nvestors normally model a company at the segment level rather than at the consolidated level. More segments and greater information about an operating segment improve an analyst’s ability to forecast a company’s revenue, margins and assets—which serves as the basis for valuing a company.”).
severe weather events and other natural conditions? Should we require a registrant to disclose the impact on its consolidated financial statements of only certain examples of severe weather events and other natural conditions? If so, should we specify which severe weather events and other natural conditions the registrant must include? Would requiring disclosure of the impact of a smaller subset of climate-related risks be easier for a registrant to quantify without sacrificing information that would be material to investors? Should impact from climate-related opportunities be required, instead of optional, as proposed? We are proposing to require a registrant that elects to disclose the impact of an opportunity to do so consistently (e.g., for each fiscal year presented in the consolidated financial statements, for each financial statement line item, and for all relevant opportunities identified by the registrant). Are there any other requirements that we should include to enhance consistency? Should we only require consistency between the first fiscal period in which opportunities were disclosed and subsequent periods? Is it clear which climate-related events would be covered by “severe weather events and other natural conditions”? If not, should we provide additional guidance or examples about what events would be covered? Should we clarify what is considered “severe weather” in one region may differ from another region? For example, high levels of rainfall may be considered “severe weather” in a typically arid region.

Are the proposed requirements for calculating and presenting the financial impact metrics clear? Should the analysis be performed and disclosed in a manner other than on a line-by-line basis referring to the line items of the registrant’s consolidated financial statements?

We are proposing to allow a registrant to aggregate the absolute value of negative and positive impacts of all climate-related events and, separately, transition activities on a financial statement line item. Should we instead require separate quantitative disclosure of the impact of each climate-related event or transition activity? Should we require separate disclosure of the impact of climate-related opportunities that a registrant chooses to disclose?

The proposed financial impact metrics would not require disclosure if the absolute value of the total impact is less than one percent of the total line item’s revenue for the fiscal year. Is the proposed threshold appropriate? Should we use a different percentage threshold (e.g., three percent, five percent) or use a dollar threshold (e.g., less than or greater than $1 million)? Should we use a combination of a percentage threshold and a dollar threshold? Should we only require disclosure when the financial impact exceeds the threshold, as proposed, or should we also require a determination of whether or not to offset (netting of positive and negative impacts), instead of aggregating on an absolute value basis as proposed?

Do we require the threshold to be separately determined for each line item from climate-related events and transition activities? Should the disclosure threshold have a combination of a percentage threshold and a dollar threshold? Should we use a dollar threshold that would be material to investors?

For purposes of determining whether or not to offset as a policy decision (netting of the positive and negative impact within an event or activity) and provide relevant contextual information? Should we require the disclosure threshold to be calculated separately for the climate-related events and transition activities, rather than requiring all of the impacts to be aggregated as proposed?

Instead of including a quantitative threshold, as proposed, should we require disaggregated disclosure of any impact of climate-related risks on a particular line item of the registrant’s consolidated financial statements? Alternatively, should we just use a materiality standard?

Should we require a registrant to disclose changes to the cost of capital resulting from the climate-related events? If so, should we require a registrant to disclose its weighted average cost of capital or any internal cost of capital metrics? Would such disclosure elicit decision-useful or material information for investors?

We have not proposed defining the term “upstream costs” as used in the proposed examples for the financial impact metrics, and elsewhere. Should we define that term or any others? If so, how should we define them?

The proposed expenditure metrics would refer to the positive and negative impacts associated with the same climate-related events, transition activities, and identified climate-related risks as the proposed financial impact metrics. As proposed, the expenditure metrics would require a registrant to separately aggregate amounts of (i) expenditure expensed and (ii) capitalized costs incurred during the fiscal years presented.

For each of those categories, a registrant would be required to disclose separately the amount incurred during the fiscal years presented (i) toward positive and negative impacts associated with the climate-related events (i.e., severe weather events and other natural conditions and identified physical risks) and (ii) toward transition activities, specifically, to reduce GHG emissions or otherwise mitigate exposure to transition risks (including identified transition risks).

The registrant may also choose to disclose the impact of efforts to pursue climate-related opportunities associated with transition activities. As discussed above, if a registrant elects to disclose the impact of an opportunity, it must do so consistently and follow the same presentation and disclosure threshold requirements applicable to the required disclosures of expenditure metrics associated with transition risks. The amount of expenditure disclosed pursuant to the proposed metrics would be a portion, if not all, of the registrant’s total recorded expenditure (expensed or capitalized), as calculated pursuant to the accounting principles applicable to the registrant’s financial statements.

The proposed expenditure metrics would be subject to the same disclosure threshold as the financial impact metrics, which we believe would promote comparability, consistency, and clarity in determining when information must be disclosed. For purposes of calculating the disclosure threshold, a registrant would be required to separately determine the amount of expenditure expensed and the amount of expenditure capitalized; however, a registrant would be required to...

\[366\] See proposed 17 CFR 210.14–02(e), (f), and (i).
\[367\] See id. These metrics are focused on expenditures (spending) incurred in each reported fiscal year(s). We therefore believe the number of periods of the expenditure metrics should correspond to the number of years of income statement or cash flow statement presented in the consolidated financial statements.
\[368\] See id.
\[369\] See proposed 17 CFR 210.14–02(j).
\[370\] See 17 CFR 210.4–01(a)(1) and (2).
aggregate expenditure related to climate-related events and transition activities within the categories of expenditure (i.e., amount capitalized and amount expensed). This approach should better reflect the significance of climate-related expenditure compared to a calculation approach that would allow for a disclosure threshold to be measured at the individual event or activity level, which may result in more limited disclosures.

For example, assume a registrant capitalized $200,000 of expenditure incurred related to Event D and capitalized another $100,000 of expenditure incurred related to Activity E. The registrant also expensed $25,000 of expenditure incurred related to Event F (which is an identified transition risk disclosed by the registrant). The registrant would determine whether the impacts would trigger the disclosure requirements based on the proposed thresholds, as illustrated below:

<table>
<thead>
<tr>
<th>Expenditure category</th>
<th>Event D</th>
<th>Event E</th>
<th>Event F</th>
<th>Percentage impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capitalized costs (total expenditure incurred during the year that was capitalized)</td>
<td>$8,000,000</td>
<td>$200,000</td>
<td>$100,000</td>
<td>** 3.85%</td>
</tr>
<tr>
<td>Expense (total expenditure incurred during the year that was expensed)</td>
<td>$3,000,000</td>
<td></td>
<td></td>
<td>0.8%</td>
</tr>
</tbody>
</table>

* As expenditures capitalized and expensed are recorded in various financial statement line items, we expect the ‘‘total’’ to be used for disclosure threshold calculation purposes for each category to represent the aggregated expenditures capitalized during the fiscal year and aggregated expenditures expensed during the fiscal year. See below for additional discussion regarding associated contextual information that may be required.

** Calculated based on total impact on capitalized costs from Event D ($200,000), Activity E ($100,000), and Event F ($0): $300,000/$8,000,000.

In the above example, the expenditure incurred toward Event D was $200,000 (capitalized) and the expenditure incurred toward Activity E and Event F were $100,000 (capitalized) and $25,000 (expensed). The amount of capitalized costs equaled the proposed one percent threshold, and thus the disclosure would be required for that category of expenditure. No disclosure would be required for the expenditure incurred that was expensed (related to Event F in this example), because it was below the one percent threshold. The registrant’s resulting disclosure of such expenditure (capitalized or expensed) may be provided, for example, as illustrated in the following table (excluding disclosure of contextual information):

<table>
<thead>
<tr>
<th>Expenditure incurred for climate-related events</th>
<th>Expenditure incurred for climate-related transition activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capitalized costs .....................................</td>
<td>$200,000</td>
</tr>
</tbody>
</table>

In this example, contextual information may include disclosure such as the specific climate-related events and transition activities that were aggregated for purposes of determining the impacts on the capitalized or expensed expenditure amounts and, if applicable, policy decisions made by a registrant to determine the amount of climate-related events or transition activities that are categorized as expenditure capitalized versus expenditure expensed or whether impact from pursuing any climate-related opportunities are included in the analysis. Contextual information may also include a discussion of the composition of the total expenditure expensed and total expenditure capitalized, which were used to calculate whether the disclosure threshold was met, and, if applicable, a discussion of the estimation methodology used to disaggregate the amount of impact between the climate-related events, transition activities, and other factors, including if an event or an activity impacted both capitalized and expensed costs.

The proposed rules would clarify that a registrant may be required to disclose the amount of expenditure expensed or capitalized costs, as applicable, incurred for the climate-related events to increase the resilience of assets or operations, retire or shorten the estimated useful lives of impacted assets, relocate assets or operations at risk, or otherwise reduce the future impact of severe weather events and other natural conditions on business operations. The proposed rules would also clarify that a registrant may be required to disclose the amount of expenditure expensed or capitalized costs, as applicable, incurred for climate-related transition activities related to research and development of new technologies, purchase of assets, infrastructure, or products that are intended to reduce GHG emissions, increase energy efficiency, offset emissions (purchase of energy credits), or improve other resource efficiency.

Several commenters recommended taking a similar approach, stating that we should require disclosure of climate-related capital expenditure (i.e., capitalized assets), or both climate-related expenses and capitalized assets. Consistent with these comments, and for similar reasons to those stated above with respect to the financial impact metrics, separate disclosure of total expense and total capitalized costs incurred toward the climate-related events and transition activities should provide important

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372 See proposed 17 CFR 210.14–02(f).
373 See, e.g., letters from Amalgamated Bank: Interfaith Center on Corporate Responsibility; and Natural Resources Defense Council.
374 See, e.g., letters from Calvert: Climate Risk Disclosure Lab; and World Benchmarking Alliance.
information to help investors make better informed investment or voting decisions. Moreover, the financial impacts of expenditure typically appear in different places within the financial statements (e.g., in an asset line item(s) on the balance sheet or in an expense line item(s) in the income statement). The proposed approach is intended to address this dispersed presentation by requiring registrants to first identify the relevant climate-related expenditures and then compile those impacts in one location. Similar to the proposed financial impact metrics, such an approach should provide insight into, and context for understanding, the nature of a registrant’s business, including any disclosed strategy for addressing and managing the specified risks—particularly in the context of transition planning.375

Request for Comment

72. Should we require registrants to disclose the expenditure metrics, as proposed? Would presenting the expenditure metrics separately in one location provide decision-useful information to investors? Is there a different type of metric that would result in more useful disclosure of the expense or capitalized costs incurred toward climate-related events and transition activities or toward climate-related risks more generally?

73. Would the disclosure required by the expenditure metrics overlap with the disclosure required by the financial impact metrics? If so, should we require the disclosure to be provided pursuant to only one of these types of metrics?

74. Should the same climate-related events (including severe weather events and other natural conditions and identified physical risks) and transition activities (including identified transition risks) that we are proposing to use for the financial impact metrics apply to the expenditure metrics, as proposed? Alternatively, should we not require a registrant to disclose expenditure incurred towards identified climate-related risks and only require disclosure of expenditure relating to severe weather events and other natural conditions? Should we require a registrant to disclose the expenditure incurred toward only certain examples of severe weather events and other natural conditions? If so, should we specify which severe weather events and other natural conditions the registrant must include? Would requiring disclosure of the expenditure relating to a smaller subset of climate-related risks be easier for a registrant to quantify without sacrificing information that would be material to investors?

75. Should the proposed rules instead require a registrant to disclose the aggregate amounts of expensed and capitalized costs incurred toward any climate-related risks? Should expenditures incurred towards climate-related opportunities be optional based on a registrant’s election to disclose such opportunities, as proposed?

76. Should we apply the same disclosure threshold to the expenditure metrics and the financial impact metrics? Is the proposed threshold for expenditure metrics appropriate? Should we use a different percentage threshold (e.g., three percent, five percent) or use a dollar threshold (e.g., less than or equal to $1 million)? Should we use a combination of a percentage threshold and a dollar threshold? Should we only require disclosure when the amount of climate-related expenditure exceeds the threshold, as proposed, or should we also require a determination of whether an amount of expenditure that falls below the proposed quantitative threshold would be material and should be disclosed? Should we require separate aggregation of the amount of expense and capitalized costs for purposes of the threshold, as proposed? Should we require separate aggregation of expenditure relating to the climate-related events and transition activities, as proposed?

77. Instead of including a quantitative threshold, as proposed, should we require disaggregated disclosure of any amount of expense and capitalized costs incurred toward the climate-related events and transition activities, during the periods presented? Alternatively, should we just use a materiality standard?

78. Are the proposed requirements for calculating and presenting the expenditure metrics clear? Should the analysis be performed and disclosed in a different manner, other than separately based on capitalized costs and amount of expenditure expensed and separately based on the climate-related events and transition activities? Should disclosure of expenditure incurred be required for both the amount of capitalized costs and the amount of expensed if only one of the two types of expenditure meets the disclosure threshold? Should we require separate disclosure of expenditure incurred toward each climate-related event and transition activity?

79. The proposed rule does not specifically address expensed or capitalized costs that are partially incurred towards the climate-related events and transition activities (e.g., the expenditure relates to research and development expenses that are meant to address both the risks associated with the climate-related events and other risks). Should we prescribe a particular approach to disclosure in such situations? Should we require a registrant to provide a reasonable estimate of the amount of expense or capitalized costs incurred toward the climate-related events and transition activities and to provide disclosure about the assumptions and information that resulted in the estimate?

80. Are the proposed terms and examples used in the expenditure metrics helpful for understanding the types of disclosures that would be required? Should we provide different or additional examples?

4. Financial Estimates and Assumptions

The proposed rules would require a registrant to disclose whether the estimates and assumptions used to produce the consolidated financial statements were impacted by exposures to risks and uncertainties associated with, or known impacts from, climate-related events (including identified physical risks and severe weather events and other natural conditions), such as flooding, drought, wildfires, extreme temperatures, sea level rise.376 If so, the registrant would be required to provide a qualitative description of how such events have impacted the development of the estimates and assumptions used by the registrant in the preparation of such financial statements. Similar to the other proposed financial statement metrics, the proposed rules would include a provision that would require separate disclosure focused on transition activities (including identified transition risks).377 Further, if a registrant elects to disclose the impact of an opportunity on its financial estimates and assumptions, it must do so consistently and must follow the same presentation and disclosure requirements applicable to the required disclosures herein.378

If the estimates and assumptions a registrant used to produce the consolidated financial statements were

375 See supra Section II.C, which discusses our proposals to require the registrant to describe the actual and potential impacts of the identified climate-related risks (and climate-related opportunities if the registrant elects to do so) on its strategy, business model, and outlook. Further, such disclosure could also provide additional context to other narrative disclosures such as the discussion of risk factors required by 17 CFR 229.105.

376 See proposed 17 CFR 210.14–02(g) and (l).

377 See proposed 17 CFR 210.14–02(h) and (l).

378 See proposed 17 CFR 210.14–02(l).
impacted by risks and uncertainties associated with, or known impacts from, a potential transition to a lower carbon economy or any climate-related targets it has disclosed, the registrant would be required to provide a qualitative description of how the development of the estimates and assumptions were impacted by such a potential transition or the registrant’s disclosed climate-related targets.

Estimates and assumptions are currently required for accounting and financial reporting purposes (e.g., projected financial information used in impairment calculations, estimated loss contingencies, estimated credit risks, commodity price assumptions, etc.). The proposed disclosures could provide decision-useful information and transparency to investors about the impact of the climate-related events and transition activities, including disclosed targets and goals, on such estimates and assumptions. Moreover, in addition to providing insights into impacts on the registrant’s financial statements, such disclosure could allow investors to evaluate the reasonableness of the registrant’s estimates and assumptions, which are used to prepare the registrant’s financial statements. Although accounting standards require registrants to consider how climate-related matters may intersect with and affect the financial statements, including their impact on estimates and assumptions, the nature of the climate-related events and transition activities discussed in the proposed rules, which may manifest over a longer time horizon, necessitate targeted disclosure requirements to elicit decision-useful information for investors in a consistent manner. We also note that some registrants have already provided disclosure along the lines of the proposed requirements, which lends support to the feasibility of making such disclosures.

By way of example, the proposed climate-related events and impacts relating to a transition away from greenhouse gas producing products and activities could affect a registrant’s asset values and may result in asset impairments. The effect on asset values and the resulting impairments could, in turn, affect a registrant’s assumptions when calculating depreciation expenses or asset retirement obligations associated with the retirement of tangible, long-lived assets. Providing related disclosure could help an investor understand if a registrant would be responsible for removing equipment or cleaning up hazardous materials sooner than originally planned due to a severe weather event. Similarly, a registrant’s climate-related targets and related commitments, such as a commitment to achieve net-zero emissions by 2040, may impact certain accounting estimates and assumptions. For example, if a registrant announced a commitment that would require decommissioning an asset by a target year, then the registrant’s depreciation expense should reflect alignment with that commitment. If the registrant believes it can execute a strategy that would allow it to meet the commitment and continue to operate the asset past the target date, then the proposed disclosure requirement could facilitate an investor’s understanding and own assessment of the feasibility of that strategy. Other financial statement estimates and assumptions that may require disclosure pursuant to the proposed rules may include those related to the estimated salvage value of certain assets, estimated useful life of certain assets, projected financial information used in impairment calculations, estimated loss contingencies, estimated reserves (such as environmental reserves or loan loss allowances), estimated credit risks, fair value measurement of certain assets, and commodity price assumptions.

Several commenters stated that it was important to provide investors with an understanding of how climate-related events and activities are considered when a registrant develops the assumptions and estimates used to prepare its financial statements.

381 See letter from Carbon Tracker (stating that some companies in the European Union and United Kingdom (several of which are registrants) are already providing this information and providing examples).

In particular, one commenter stated that investors may face “substantial risk” if disclosure on the impact of “decarbonization” on the estimates and assumptions underlying asset valuations is not disclosed. Another commenter stated that “current corporate disclosure is not sufficient, is not readily available in existing financial disclosures, and does not allow investors to make comparable assessments of how companies are evaluating and responding to climate-related risks and opportunities.”

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81. Should we require disclosure of financial estimates and assumptions impacted by the climate-related events and transition activities (including disclosed targets), as proposed? How would investors use this information?

82. Should we instead require disclosure of only significant or material estimates and assumptions that were impacted by the climate-related events and transition activities? Alternatively, should we require disclosure of only estimates and assumptions that were materially impacted by the climate-related events and transition activities?

83. Should we instead require disclosure of financial estimates and assumptions impacted by a subset of climate-related events and transition activities, such as not requiring disclosure related to identified climate-related risks or only requiring disclosure with respect to a subset of severe weather events and natural conditions? If so, how should the subset be defined?

84. Should we instead utilize terminology and thresholds consistent with the critical accounting estimate disclosure requirement in 17 CFR 229.303(b)(3), such as “estimates made in accordance with generally accepted accounting principles that involve a significant level of estimation uncertainty and have had or are reasonably likely to have a material impact on the financial condition or results of operations of the registrant”? If so, should we only require disclosures of whether and how the climate-related events and transition activities impacted such critical accounting estimates? Should we require only a qualitative description of how the estimates and assumptions were impacted by the climate-related events and transition activities, as proposed? Should we require quantitative disclosures as well? If so, should we require such disclosure...
only if practicable or subject to another qualifier?

85. Should the disclosure of financial estimates and assumptions impacted by climate-related opportunities be optional, as proposed?

86. For the proposed financial statement metrics, should we require a registrant to disclose material changes in estimates, assumptions, or methodology among fiscal years and the reasons for those changes? If so, should we require the material changes disclosure to occur on a quarterly, or some other, basis? Should we require disclosure beyond a discussion of the material changes in assumptions or methodology and the reasons for those changes? Do existing required disclosures already elicit such information? What other approaches should we consider?

5. Inclusion of Climate-Related Metrics in the Financial Statements

The proposed financial statement metrics would be required in the financial statements, and therefore would be (i) included in the scope of any required audit of the financial statements in the relevant disclosure filing, (ii) subject to audit by an independent registered public accounting firm, and (iii) within the scope of the registrant’s ICFR.

As discussed above, the proposed disclosures share many characteristics with other complex financial statement disclosures. The financial statement metrics present financial data that is derived from the registrant’s consolidated balance sheets, income statements, and statements of cash flows, and would be presented in a similar way to existing financial statement disclosures.385 Requiring certain climate-related information to be included in a note to the financial statements, and therefore subject to audit and within the scope of ICFR, should enhance the reliability of the proposed financial statement metrics.

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87. We are proposing to require the financial statement metrics to be disclosed in a note to the registrant’s audited financial statements. Should we require or permit the proposed financial statement metrics to be disclosed in a schedule to the financial statements? If so, should the metrics be disclosed in a schedule to the financial statements, similar to the schedules required under Article 12 of Regulation S–X, which would subject the disclosure to audit and ICFR requirements? Should we instead require the metrics to be disclosed as supplemental financial information, similar to the disclosure requirements under FASB ASC Topic 932–235–50–2 for registrants that have significant oil- and gas-producing activities? If so, should such supplemental schedule be subject to assurance or ICFR requirements?

88. Instead of requiring the financial statement metrics to be disclosed in a note to the registrant’s audited financial statements, should we require a new financial statement for such metrics? For example, should a “consolidated climate statement” be created in addition to the consolidated balance sheets, statements of comprehensive income, cash flows, and other traditional financial statements? Would including the proposed metrics in a new financial statement provide more clarity to investors given that the metrics are intended to follow the structure of the existing financial statements (including the line items)? What complications or unintended consequences may arise in practice if such a climate statement is created?

89. Should we require the disclosure to be provided outside of the financial statements? Should we require all of the disclosure to be provided in the proposed separately captioned item in the specified forms?

90. Should we require any additional metrics or disclosure to be included in the financial statements and subject to the auditing and ICFR requirements as described above? For example, should any of the disclosures we are proposing to require outside of the financial statements (such as GHG emissions metrics) be included in the financial statements? If so, should such metrics be disclosed in a note or a schedule to the financial statements? If in a schedule, should such schedule be similar to the schedules required under Article 12 of Regulation S–X and subject to audit and ICFR requirements? Should we instead require the metrics to be disclosed as supplemental financial information in a supplemental schedule? If so, should such supplemental schedule be subject to assurance or ICFR requirements?

91. Under the proposed rules, PCAOB auditing standards would be applicable to the financial statement metrics that are included in the audited financial statements, consistent with the rest of the audited financial statements. What, if any, additional guidance or revisions to such standards would be needed in order to apply PCAOB auditing standards to the proposed financial statement metrics? For example, would guidance on how to apply existing requirements, such as materiality, risk assessment, or reporting, be needed? Would revisions to the auditing standards be necessary? What additional guidance or revisions would be helpful to auditors, preparers, audit committee members, investors, and other relevant participants in the audit and financial reporting process?

92. Would it be clear that the climate-related financial statement metrics would be included in the scope of the audit when the registrant files financial statements prepared in accordance with IFRS as issued by the IASB? Would it be clear that the proposed rules would not alter the basis of presentation of the financial statements as referred to in an auditor’s report? Should we amend Form 20–F, other forms, or our rules to clarify the scope of the audit or the basis of presentation in this context? For example, should we amend Form 20–F to state specifically that the scope of the audit must include any notes prepared pursuant to Article 14 of Regulation S–X? What are the costs for accounting firms to provide assurance with respect to the financial statement metrics? Would those costs decrease over time?

G. GHG Emissions Metrics Disclosure

1. GHG Emissions Disclosure Requirement

a. Overview

In addition to the other proposed climate-related disclosures, the proposed rules would require a registrant to disclose its GHG emissions for its most recently completed fiscal year.386 As institutional investors and other commenters have indicated, GHG emissions information is important to investment decisions for various reasons, including because GHG emissions data is quantifiable and comparable across industries and can be particularly useful in conducting a transition risk analysis;387 it can be used to evaluate the progress in meeting net-zero commitments and assessing any associated risks;388 and it may be relevant to investment or voting decisions because GHG emissions could impact the company’s access to financing, as well as its ability to reduce

385 See supra Section II.F.2 for additional discussion of shared characteristics that the financial statement metrics have with existing financial statement disclosures and commenters’ views.

386 See proposed 17 CFR 229.1504(a). As discussed below, the proposed rules would also require a registrant to disclose its GHG emissions for the historical fiscal years included in its consolidated financial statements.

387 See, e.g., infra note 432 and accompanying text.

388 See, e.g., infra, note 433 and accompanying text.
its carbon footprint in the face of regulatory, policy, and market constraints. Thus, while the justifications for the proposed GHG emissions disclosures overlap in some respects with the justifications for the other proposed climate-related disclosure rules, the GHG emissions requirements are intended to address separate challenges and are supported by the particular justifications discussed in detail in the following sections. The proposed rules would establish certain requirements regarding the measurement and reporting of GHG emissions that would promote the comparability of such disclosure. We have based the proposed GHG emissions disclosure rules on the concept of scopes, which are themselves based on the concepts of direct and indirect emissions, developed by the GHG Protocol. We also have proposed definitions of Scope 1, Scope 2, and Scope 3 emissions that are substantially similar to the corresponding definitions provided by the GHG Protocol. Commenters indicated that the GHG Protocol has become the leading accounting and reporting standard for GHG emissions. By sharing certain basic concepts and a common vocabulary with the GHG Protocol, the proposed rules should help limit the compliance burden for those registrants that are already disclosing their GHG emissions pursuant to the GHG Protocol. Similarly, to the extent that registrants elect to follow GHG Protocol standards and methodologies, investors already familiar with the GHG Protocol may also benefit.

The proposed rules would define “greenhouse gases” as carbon dioxide (“CO₂”); methane (“CH₄”); nitrous oxide (“N₂O”); nitrogen trifluoride (“NF₃”); hydrofluorocarbons (“HFCs”); perfluorocarbons (“PFCs”); and sulfur hexafluoride (“SF₆”). The greenhouse gases included in the proposed definition reflect the gases that are currently commonly referenced by international, scientific, and regulatory authorities as having significant climate impacts. In addition to being consistent with the GHG Protocol, the list of constituent greenhouse gases would be consistent with the gases identified by widely used frameworks, such as the Kyoto Protocol, the UN Framework Convention on Climate Change, the U.S. Energy Information Administration, and the EPA.

The proposed rules would define GHG emissions to mean direct and indirect emissions of greenhouse gases. Pursuant to the proposed definition 2 GHG emissions, direct emissions are GHG emissions from sources that are owned or controlled by a registrant, whereas indirect emissions are GHG emissions that result from the activities of the registrant, but occur at sources not owned or controlled by the registrant. Similar to the GHG Protocol, the proposed rules would define:

- Scope 1 emissions as direct GHG emissions from operations that are owned or controlled by a registrant.
- Scope 2 emissions as indirect GHG emissions from the generation of purchased or acquired electricity, steam, heat, or cooling that is consumed by operations owned or controlled by a registrant.
- Scope 3 emissions as all indirect GHG emissions not otherwise included in a registrant’s Scope 2 emissions, which occur in the upstream and downstream activities of a registrant’s value chain.

Upstream emissions include emissions attributable to goods and services that the registrant acquires, the transportation of goods (for example, to the registrant), and employee business travel and commuting. Downstream emissions include the use of the registrant’s products, transportation of products (for example, to the registrant’s customers), end of life treatment of sold products, and investments made by the registrant.

As previously noted, the EPA uses the concept of scopes, and refers to the GHG Protocol, when providing guidance to companies regarding their GHG emissions inventories. Because GHG emissions data compiled for the EPA’s own GHG emissions reporting program would be consistent with the GHG Protocol’s standards, and thus with the proposed rules, a registrant may use that data in partial fulfillment of its GHG emissions disclosure obligations pursuant to the proposed rules.

The proposed rules would require a registrant to disclose its total Scope 1 emissions separately from its total Scope 2 emissions after calculating them from all sources that are included in the registrant’s organizational and operational boundaries. A registrant would also be required to disclose separately its total Scope 3 emissions for the fiscal year if those emissions are material, or if it has set a GHG emissions reduction target or goal that includes its Scope 3 emissions. For each of its Scopes 1, 2, and 3 emissions, the proposed rules would require a registrant to disclose the emissions both disaggregated by each constituent greenhouse gas (e.g., by carbon dioxide...
(CO₂), methane (CH₄), nitrous oxide (N₂O), nitrogen trifluoride (NF₃), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆) and in the aggregate.405 By requiring the disclosure of GHG emissions both disaggregated by the constituent greenhouse gases and in the aggregate, investors could gain decision-useful information regarding the relative risks to the registrant posed by each constituent greenhouse gas in addition to the risks posed by its total GHG emissions by scope. For example, if a government targets reduction of a specific greenhouse gas, knowing that a registrant has significant emissions of such gas would provide insight into potential impacts on the registrant’s business.406 Because measuring the constituent greenhouse gases is a necessary step in calculating a registrant’s total GHG emissions per scope, the proposed disaggregation by each constituent greenhouse gas should not create significant additional burdens.

Consistent with the GHG Protocol, the proposed rules would require a registrant to express each scope of its GHG emissions in terms of carbon dioxide equivalent (“CO₂e”).407 CO₂e is the common unit of measurement used by the GHG Protocol to indicate the global warming potential (“GWP”)408 of each greenhouse gas, expressed in terms of the GWP of one unit of carbon dioxide (CO₂).409 Requiring a standard unit of measurement for GHG emissions, rather than different units of measurement for the different greenhouse gases, should simplify the disclosure for investors and enhance its comparability across registrants with different types of GHG emissions.

For all scopes of GHG emissions, the proposed rules would require a registrant to disclose GHG emissions data in gross terms, excluding any use of purchased or generated offsets.410 Because the value of offsets can vary depending on restrictions that are or may be imposed by regulation or market conditions, disclosing GHG emissions data in this manner would allow investors to assess the full magnitude of climate-related risk posed by a registrant’s GHG emissions and the registrant’s plans for managing such risk. This proposed approach also is consistent with the approach taken by the GHG Protocol.411 Commenters generally supported requiring disclosure of a registrant’s Scope 1 and Scope 2 emissions, with many also supporting disclosure of Scope 3 emissions.412 A common reason represented an emissions reduction or removal of greenhouse gases in a manner calculated and traced for the purpose of offsetting an entity’s GHG emissions. See proposed 17 CFR 229.1500(a).

411 See GHG Protocol, Corporate Accounting and Reporting Standard, Chapter 9.

412 See, e.g., letters from Actual Systems, Inc.; Adobe Inc.; ACM; Curt Albright (June 13, 2021); AllianceBernstein; Alphabet et al.; Amalgamated Bank; Americans for Financial Reform Education Fund; Andrew Behar; Apple; Ted Atwood; Baillie Gifford; Bank of America; BlackRock; Bloomberg, LP; Blueprint Financial; BNP Paribas; Rob Bonta, California Attorney General et al.; Boston Common Asset Management; BSR; CalPERS; CALSTRS; Calvert Research and Management; Carbon4 Finance (June 14, 2021); Carbon180 (June 13, 2021); Carbon Tracker Initiative; Caridano Risk Management Ltd.; Carolyn Kohoot; CDP NA; Center for American Progress; Corporate Accounting and Sustainable Development; Center for Law and Social Policy and a New Deal for Youth (June 15, 2021); Ceres et al.; Certified B Corporations; Chevron; Christopher Lish; Clean Yield Asset Management; Climate Advisers; Climate Governance Initiative; Climate Risk Disclosure Law and Policy Lab; Climate Policy Institute; Climate Policy International; Coalition on Material Emissions Transparency (COMET) (June 10, 2021); Confluence Philanthropy; Consumer Federation of America; Cramer Management (June 11, 2021); Daniel Cain; Katherine DiMatteo; Domini Impact Investments LLC; Douglas Hileman Consulting, LLC; Dow (June 4, 2021); Dynamico Inc.; Energy In Focus (June 14, 2014); Environmental Bankers Association; E2; EIG; ERM CVS; Etsi, Inc.; FAIRR Initiative; First Affirmative Financial Network; Regenerative Crisis Response Committee; the Forum for Sustainable and Responsible Investment; Friends of the Earth, Amazon Watch, and Rainforest Action Network; Generation Investment Management LLP (June 14, 2021); Georgetown Climate Center (June 14, 2021); George S. Georgiev; Emmanuelle Haack; Hannon Armstrong; Hermes Equity Ownership Services Limited; HP, Inc.; IHS Markit; Impact Investors, Inc.; Impax Asset Management; Impact Analytics; Innovations for a Sustainable World; International Corporate Governance and Sustainable Development; Institute for Market Transformation; Interfaith Center on Corporate Responsibility; International Corporate Governance Network; Invesco; Investment Consultants Sustainability Working Group-U.S.; Investor Advocates for Social Justice (June 14, 2021); Janice Shade (June 22, 2021); Japanese Bankers Association; Jubilee Asset Management; Manifest Climate; Mercy Investment Services, Inc.; Microsoft Corporation; Miller/ Howard Investments; Mirova US LLC; Morningstar, Inc.; Morningstar, Inc.; Natural Resources Defense Council; NEI Investments; Newground Social Investment (June 14, 2021); New York City Comptroller; New York State Society of Certified Public Accountants; Nia Impact Capital (June 14, 2021); Norges Bank

410 See proposed 17 CFR 229.1504(a)(1).


411 See id.

408 See The proposed rules would define global warming potential to mean a factor describing the global warming impacts of different greenhouse gases. It is a measure of how much energy will be absorbed in the atmosphere over a specified period of time as a result of the emission of one ton of a greenhouse gas, relative to the emissions of one ton of carbon dioxide (CO₂). See proposed 17 CFR 229.150(f).

412 See proposed 17 CFR 229.150(d).

409 See proposed 17 CFR 229.1504(a)(2). The proposed rules would define carbon offsets to...
Some of these commenters supported requiring disclosure of Scope 1 emissions at the individual greenhouse gas level.416 Although commenters noted an increase in the voluntary reporting of climate-related disclosure, several also stated that significant gaps remain in the disclosure, particularly regarding Scope 3 emissions, which, for certain industries, can comprise a majority of GHG emissions.417

Many commenters recommended basing any GHG emissions disclosure requirement on the GHG Protocol.418 Several of these commenters stated that the GHG Protocol’s framework for reporting GHG emissions, delineated as Scopes 1, 2, and 3 emissions, has become the globally-accepted standard used by numerous companies for reporting their GHG emissions.419 Commenters also indicated that a mandatory standard for reporting GHG emissions based on the GHG Protocol would help in producing consistent, comparable, and reliable climate-related information for investors.420 Some commenters also stated that mandating GHG emissions pursuant to a standardized approach, such as the GHG Protocol, would help mitigate instances of greenwashing.421

Some commenters indicated that the Commission should mandate disclosure of only Scopes 1 and 2 emissions.422 Other commenters suggested limiting the mandatory disclosure of Scope 3 emissions to registrants in certain industries,423 larger registrants, or when a registrant’s Scope 3 emissions comprise 40 percent of its total emissions.424 These commenters pointed to difficulties in obtaining the necessary data from third parties and methodological uncertainties as reasons for limiting or not requiring disclosure of Scope 3 emissions. Other commenters and research support a requirement for disclosure of Scope 3 emissions that is independent of an individual company’s materiality assessment.425 A few commenters stated that the Commission should require the disclosure of only Scope 1 emissions.426 One commenter stated that this approach would be consistent with the Greenhouse Gas Reporting Program overseen by the EPA, which they stated requires the tracking of facility-level Scope 1 emissions from “large greenhouse gas emitters.”427 Another commenter opposed a requirement to disclose any GHG emissions, asserting that GHG emissions do not serve as adequate indicators for the actual risks faced by a registrant.428

We agree with the many commenters that indicated that GHG emissions disclosure could provide important information for investors to help them evaluate the climate-related risks faced by registrants and to understand better how registrants are planning to mitigate or adapt to those risks.429 The proposed GHG emissions disclosures could be important to an investor’s understanding of other disclosures that would be required by the proposed rules, such as disclosure of the likely impacts of climate-related risks as well as any targets and goals disclosure.430

We propose requiring disclosure of registrants’ Scopes 1 and 2 emissions because, as several institutional investor commenters stated, investors need and many investors currently use this information to make investment or voting decisions.431 One of those commenters stated that GHG emissions information serves as the starting point for transition risk analysis because it is quantifiable and comparable across companies and industries.432 The commenter, an institutional investor, indicated that it uses GHG emissions data to rank companies within industries based on their GHG emissions intensity to better assess transition risk exposure of companies in its portfolio and make informed investment decisions. This commenter also indicated that Scopes 1 and 2 emissions information is more broadly available than Scope 3 emissions data because of the challenges of collecting the latter data.

As previously mentioned, several large institutional investors and financial institutions, which collectively have trillions of dollars in assets under management, have formed initiatives and made commitments to achieve a net-zero economy by 2050, with interim targets set for 2030.433 These initiatives further support the notion that investors currently need and use GHG emissions data to make informed investment decisions. These investors and financial institutions are working to reduce the GHG emissions of companies in their portfolios or of their counterparties and need GHG emissions data to evaluate the progress made regarding their net-zero commitments and to assess any.

416 See, e.g., letters from Amazon Watch and Rainforest Action Network; Dimensional: Friends of the Earth; and ICCR.

417 See, e.g., letters from Ceres (“in land-intensive sectors, deforestation, forest degradation, and land-use change are important financial risks associated with climate change. In these sectors—for example food and forest management—currently Scope 3 GHG emissions are not regularly disclosed, despite comprising upwards of 90% of emissions from companies.”); see also letters from Apple (stating that Scope 3 emissions “represent the overwhelming majority of most companies’ carbon footprint and are therefore critical to include”); Natural Resources Defense Council; NY State Comptroller; and Teachers Insurance and Annuity Association of America.

418 See, e.g., letters from Apple; bp; Carbon Tracker Initiative; Consumer Federation of America; ERM CVS; Ethic Inc.; First Affirmative Financial Network; Rainforest Action Network; ResponsAbility Committee; MSCRI, Inc.; Natural Resources Defense Council; New York State Society of Certified Public Accountants; Paradise Investment Management; Street Dog Capital; and Huw Thomas.

419 See, e.g., letters from ERM CVS; and Natural Resources Defense Council.

420 See, e.g., letters from BNP Paribas; Natural Resources Defense Council; and New York State Society of Certified Public Accountants.

421 See, e.g., letters from BNP Paribas; Center for Law and Social Policy (June 15, 2021); and Dimensional Fund Advisors. See also Section IV.C below for further discussion of the practice of greenwashing.

422 See, e.g., letters from Acadia Asset Management LLC; American Bankers Association; American Exploration Production Council (June 11, 2021); Seema Arora; Bank Policy Institute; Biotechnology Innovation Organization; Business Roundtable (June 11, 2021); Conning (June 11, 2021); CPP Investments; Decatur Capital Management; Dimensional Fund Advisors; Ethic Inc.; Freeport-McMoran (June 11, 2021); Harvard Management Company Information Technology Industry Council; Institute of International Bankers; Investment Adviser Association; Manulife Investment Management; PGIM, PIMCO; Real Estate Roundtable (June 9, 2021); Matthew Roling and Samantha Tirkania; SIFMA Asset Management Group; the Vanguard Group, Inc.; and Walmart, Inc.

423 See, e.g., letters from Teachers Insurance and Annuity Association of America (recommending requiring Scope 3 disclosure from issuers in the financial, energy, transportation, materials and buildings, and agriculture, food, and forest products sectors; and Sena, Schatz and Whitehouse (recommending requiring Scope 3 disclosure for financed emissions).

424 See letter from Catervold Consultancy.

425 See, e.g., letters from ERM CVS; and Natural Resources Defense Council.

426 See, e.g., letters from BNP Paribas; Natural Resources Defense Council; and New York State Society of Certified Public Accountants.

427 See letter from Richard Love.

428 See supra notes 412 and 413.

429 See supra Section II.C and infra Section II.I.

430 See, e.g., letters from PIMCO; State Street Global Advisors; Trillium Asset Management; and Wellington Management Co.

431 See Wellington Management Co.

432 See supra Section I.C.1 (discussing, in particular, Climate Action 100+ and GFANZ).
associated potential asset devaluation or loan default risks. A company’s GHG emissions footprint also may be relevant to investment or voting decisions because it could impact the company’s access to financing or signal potential changes in its financial planning as governments, financial institutions, and other investors make demands to reduce GHG emissions.

We also agree with commenters that basing the Commission’s proposed GHG emissions disclosure rules on concepts used in the GHG Protocol could help provide investors with consistent, comparable, and reliable information about a registrant’s GHG emissions. In this regard, we note that several studies have found that GHG emissions data prepared pursuant to the GHG Protocol have become the most commonly referenced measurements of a company’s exposure to climate-related risks.

However, we are not proposing to adopt all of the features of the GHG Protocol into the Commission’s proposed climate-related disclosure rules. As explained in greater detail below, in one significant respect the proposed rules differ from the approach taken by the GHG Protocol regarding the methodology that a registrant would be required to use when calculating its GHG emissions. This difference better suits the U.S. financial reporting regime and the needs of investors. We recognize that the methodologies pertaining to the measurement of GHG emissions, particularly Scope 3 emissions, are evolving. While we expect that many registrants would choose to follow the standards and guidance provided by the GHG Protocol when calculating their GHG emissions, the proposed rules would not require registrants to do so. Allowing for some flexibility in the choice of GHG emissions methodologies would permit registrants to adapt to new approaches, such as those pertaining to their specific industry, as they emerge.

b. The Treatment of Scopes 1 and 2 Emissions Compared to Scope 3 Emissions

We are proposing to require all registrants to disclose their Scopes 1 and 2 emissions. Those types of emissions result directly or indirectly from facilities owned or activities controlled by a registrant. The relevant data for calculating Scopes 1 and 2 emissions should be reasonably available to registrants, and the relevant methodologies are fairly well-developed. Registrants with large stationary sources of emissions already report Scope 1 emissions data to the EPA, and the EPA provides detailed methodologies for a range of industries with significant Scope 1 emissions. The EPA also provides detailed guidance for the calculation of Scope 2 emissions, which, although classified as “indirect emissions,” are generated by direct activities of the registrant in using purchased energy.

Unlike Scopes 1 and 2 emissions, Scope 3 emissions typically result from the activities of third parties in a registrant’s value chain and thus collecting the appropriate data and calculating these emissions would potentially be more difficult than for Scopes 1 and 2 emissions. At the same time, in many cases Scope 3 emissions disclosure may be necessary to present investors a complete picture of the climate-related risks—particularly transition risks—that a registrant faces and how GHG emissions from sources in its value chain, which are not included in its Scopes 1 and 2 emissions, may materially impact a registrant’s business operations and associated financial performance. Scope 3 emissions can augment the information provided in Scopes 1 and 2 emissions and help to reflect the total emissions associated with a registrant’s operations, including inputs from upstream activities, such as those of its suppliers, and outputs from downstream activities, such as those involving the distribution, use, and disposal of a registrant’s products or services.

Scope 3 emissions are indirect, but registrants can and do take steps to limit Scope 3 emissions and the attendant risks. Although a registrant may not own or control the operational activities in its value chain that produce Scope 3 emissions, it nevertheless may influence those activities, for example, by working with its suppliers and downstream distributors to take steps to reduce those entities’ Scopes 1 and 2 emissions (and thus help reduce the registrant’s Scope 3 emissions) and any attendant risks. As such, a registrant may be able to mitigate the challenges of collecting the data required for Scope 3 disclosure. Such data may reveal changes in a registrant’s Scope 3 emissions over time that could be informative for investors in discerning how the registrant is managing transition risks. For example, a registrant could seek to reduce the potential impacts on its business of its upstream emissions by choosing to purchase from more GHG emission-efficient suppliers or by working with existing suppliers to reduce emissions. A registrant could also seek to reduce the potential impacts on its business of downstream emissions by producing products that are more energy efficient or involve less GHG emissions when consumers use them, or by contracting with distributors that use shorter transportation routes. Being able to compare Scope 3 emissions over time could thus be a valuable tool for investors in tracking a registrant’s progress in mitigating transition and other climate-related risks.

To balance the importance of Scope 3 emissions with the potential relative difficulty in data collection and measurement, the proposed rules would require disclosure of Scope 3 emissions only if those emissions are material, or if the registrant has set a GHG emissions reduction target or goal that includes its

434 See, e.g., Climate Action 100+, The Three Asks.
435 See supra note 420.
437 See infra Section II.G.2 (discussing the proposed treatment for determining ownership or control for the purpose of setting a registrant’s organizational boundaries when measuring its Scopes 1 and 2 emissions).
440 As previously mentioned, the proposed rules would define a registrant’s value chain to mean the upstream and downstream activities related to a registrant’s operations. Upstream activities include activities that relate to the initial stages of producing a good or service (e.g., materials sourcing, materials processing, and supplier activities). Downstream activities include activities that relate to processing materials into a finished product and delivering it or providing a service to the end user (e.g., transportation and distribution, processing of sold products, use of sold products, end of life treatment of sold products, and investments). See proposed 17 CFR 229.1500(t).
441 See, e.g., letter from Wellington Management Co.
442 See, e.g., letter from Apple (referencing its 2021 Environmental Progress Report, available at https://www.apple.com/environment/pdf/Apple_Environmental_Progress_Report_2021.pdf), which states that 109 suppliers across 24 countries have committed to manufacturing Apple products with 100 percent renewable energy, and indicating Apple’s development of detailed life cycle assessment models, which help the company identify its top product component contributors of carbon emissions and facilitate its providing a comprehensive account of its relevant Scope 3 emissions).
Scope 3 emissions. As explained in greater detail below, this latter proposed disclosure requirement could assist investors in tracking the progress of the registrant toward reaching the target or goal so that investors can better understand potential associated costs.

Consistent with the Commission’s definition of “material” and Supreme Court precedent, a registrant would be required to disclose its Scope 3 emissions if there is a substantial likelihood that a reasonable investor would consider them important when making an investment or voting decision. In articulating this materiality standard, the Supreme Court recognized that “[d]oubts as to the critical nature” of the relevant information “will be commonplace.” But “particularly in view of the prophylactic purpose” of the securities laws, and “the fact that the content” of the disclosure “is within management’s control, it is appropriate that these doubts be resolved in favor of those the statute is designed to protect,” namely investors.

When recommending that the Commission require the disclosure of Scope 3 emissions, some commenters indicated that Scope 3 emissions represent the relatively large source of overall GHG emissions for many companies. Given their relative magnitude, we agree that, for many registrants, Scope 3 emissions may be material to help investors assess the registrants’ exposure to climate-related risks, particularly transition risks, and whether they have developed a strategy to reduce their carbon footprint in the face of regulatory, policy, and market constraints.

Scope 3 emissions information may be material in a number of situations to help investors gain a more complete picture of the transition risks to which a registrant may be exposed. In certain industries, a transition to lower-emission products or processes may already be underway, triggered by existing laws or regulations, changes in weather, policy initiatives, a shift in consumer preferences, technological changes, or other market forces, such that financial risks are reasonably foreseeable for registrants in those industries based on the emissions in their value chain. For example, some registrants may need to allocate capital to invest in lower emissions equipment. Investors thus need and use information about the full GHG emissions footprint and intensity of a registrant to determine and compare how exposed a registrant is to the financial risks associated with any transition to lower-emission products.

For example, in the automobile industry, the vast majority of car manufacturers’ GHG emissions footprint comes from tailpipe emissions of cars driven by consumers, as compared to the emissions from manufacturing the cars. There is already a transition underway to reduce tailpipe emissions through the adoption of stricter fuel efficiency regulations and by governmental initiatives that encourage the manufacture and demand for electric vehicles. Demand for electric vehicles is increasing in the United States and globally, and leading automobile manufacturers have announced plans to increase the manufacture of electric vehicles, with many setting commitments to manufacture all-electric fleets or achieve net-zero emissions. This transition raises financial risks for automobile manufacturers, which can be gauged, in part, by their Scope 3 emissions.

Investors can use Scope 3 emissions data concerning a car manufacturer’s suppliers and the use of its sold products to assess whether a particular manufacturer is taking steps to mitigate or adapt to the risks posed by a transition to lower-emission vehicles.

Changes in requirements by financial institutions and institutional investors can present similar financial risks for companies. As many financial institutions and investors begin to set their own GHG emissions reduction goals, they may consider the total GHG emissions footprint of companies that they finance or invest in to build portfolios to meet their goals. Financial institutions and investors may focus on Scopes 1 and 2 emissions for companies in some industries, particularly for industries in which Scopes 1 and 2 represent the majority of companies’ total GHG emissions footprint. For other industries, however, Scope 3 emissions represent a relatively significant portion of companies’ total GHG footprint, and therefore may reflect a more complete picture of companies’ exposure to transition risks than Scopes 1 and 2 emissions alone. For oil and gas product manufacturers, for example, Scope 3 emissions are likely to be material and thus necessary to an available at.

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443 See proposed 17 CFR 229.1504(c)(1). As explained below, we are also proposing a safe harbor for Scope 3 disclosures. See infra Section II.G.3.
444 See infra note 461 and accompanying text.
445 See supra note 209.
446 TSC Industries, Inc. v Northway, 426 U.S. at 448.
447 See, e.g., letters from Apple; and WK Associates.
448 See, e.g., letter from Wellington Management Co.
449 See Eric Rosenbaum, Climate experts are worried about the toughest carbon emissions for companies to capture (Aug. 18, 2021) (“Scope 3 carbon emissions, or those not part of operations or under direct control, represent the majority of the carbon footprint for most companies, in some cases as high as 85% to 95%.”), available at https://www.cnbc.com/2021/08/18/apple-amazon-exxon-and-the-toughest-carbon-emissions-to-capture.html#.2sLz1cCV70g; see also MSCl, Emissions: Seeing the Full Picture (Sept. 17, 2020). For some companies and industries, Scope 3 emissions dominate the overall carbon footprint. For example, the Scope 3 emissions represent a relatively complete picture of companies’ total GHG footprint.
450 See TCFD Guidance, supra note 209.
451 See supra Section I.C.1.
456 See, e.g., Tom Krisher and Aamer Madhani, US automakers pledge huge increase in electric vehicles, AP News, Aug. 5, 2021, available at https://apnews.com/article/technology-vehicle-environment-business-automotives-88feicale32335d60d6f2e86c652ce4 (reporting that General Motors expects to sell more than 3 million electric and fuel-cell passenger vehicles by 2035 and Ford and Stellantis (formerly Fiat Chrysler) each expect that 40% of global sales to be electric vehicles by 2030); see also https://www.caranddriver.com/news/g15562931/every-automaker-s-ev-plans-through-2035-and-beyond/ (reporting that General Motors expects to sell more than 3 million electric and fuel-cell passenger vehicles by 2035 and Ford and Stellantis (formerly Fiat Chrysler) each expect that 40% of global sales to be electric vehicles by 2030).
understanding of a registrant’s climate-related risks.

When assessing the materiality of Scope 3 emissions, registrants should consider whether Scope 3 emissions make up a relatively significant portion of their overall GHG emissions. While we are not proposing a quantitative threshold for determining materiality, we note that some companies rely on, or support reliance on, a quantitative threshold such as 40 percent when assessing the materiality of Scope 3 emissions.456 However, even when Scope 3 emissions do not represent a relatively significant portion of overall GHG emissions, a quantitative analysis alone would not suffice for purposes of determining whether Scope 3 emissions are material. Consistent with the concept of materiality in the securities laws, this determination would ultimately need to take into account the total mix of information available to investors, including an assessment of qualitative factors. Accordingly, Scope 3 emissions may make up a relatively small portion of a registrant’s overall GHG emissions but still be material where Scope 3 represents a significant risk, is subject to significant regulatory focus, or “if there is a substantial likelihood that a reasonable [investor] would consider it important.”457

Moreover, if a materiality analysis requires a determination of future impacts, i.e., a transition risk yet to be realized, then both the probability of an event occurring and its magnitude should be considered. Even if the probability of an adverse consequence is relatively low, if the magnitude of loss or liability is high, then the information in question may still be material.

If a registrant determines that its Scope 3 emissions are not material, and therefore not subject to disclosure, it may be useful to investors to understand the basis for that determination. Further, if a registrant determines that certain categories of Scope 3 emissions are material, registrants should consider disclosing why other categories are not material. If, however, Scope 3 emissions are material, registrants should consider understanding the extent of a registrant’s exposure to Scope 3 emissions, and the choices it makes regarding them, would be important for investors when making investment or voting decisions.

Several commenters stated that disclosure of a registrant’s Scope 3 emissions is essential to making an informed investment decision because Scope 3 emissions can indicate a registrant’s exposure to climate-related transition risks.458 For example, if policy changes lead to mandatory emissions reductions or carbon pricing, a registrant with high Scope 3 emissions could experience higher costs in sourcing key inputs. Similarly, if consumer preferences change to favor products that are less carbon intensive, a registrant could see a significant change in demand for its products. Registrants that do not account for these risks, or make suboptimal choices regarding them, could become less profitable in the future than registrants that acknowledge these risks and successfully mitigate them.459

Thus, Scope 3 emissions disclosure could help convey to investors the potential financial risks facing a company related to any transition to a lower carbon economy. With Scope 3 information disclosed, investors would be able to assess, in conjunction with reported financial information, how GHG emissions impact the registrant’s operations as well as its overall business strategy so that they can make more informed investment or voting decisions.460

Disclosure of Scope 3 emissions could also highlight instances where a registrant attempts to reduce its total Scopes 1 and 2 emissions by outsourcing carbon intensive activities. For example, a registrant could contract out certain high-emissions production activities so that its own Scope 1 or 2 emissions are lower than those of a similar company that has retained direct ownership and control over more of its production activities. Thus, Scope 3 emissions reporting could provide greater transparency and help preclude any efforts by registrants to obscure for investors the full magnitude of the climate-related risks associated with their GHG emissions.

The proposed rules would also require a registrant to disclose its Scope 3 emissions if it has set a GHG emissions reduction target or goal that includes Scope 3 emissions.461 This disclosure requirement would enable investors to understand the scale and scope of actions the registrant may need to take to fulfill its commitment to reduce its Scope 3 emissions and the potential financial impact of that commitment on the registrant. It would also enable an investor to assess the registrant’s strategy for meeting its Scope 3 emissions target or goal and its progress towards that target or goal, which may affect the registrant’s business.

Scope 3 emissions disclosures would help investors understand and assess the registrant’s strategy. For example, Scope 3 emissions disclosures would allow an investor to better understand how feasible it would be for the registrant to achieve its targets through its current strategy, to track the registrant’s progress over time, and to understand changes the registrant may make to its strategy, targets, or goals. Scope 3 emissions disclosures would thus be important to evaluating the financial effects of the registrant’s target or goal. In addition, this disclosure could help prevent instances of greenwashing or other misleading claims concerning the potential impact of Scope 3 emissions on a registrant’s business because investors, and the market would have access to a quantifiable, trackable metric.

A registrant’s Scope 3 emissions disclosure, together with the proposed financial statement metrics, would also enable an investor to assess the efficiency and efficacy of the registrant’s actions to achieve its target or goal (e.g., by comparing the registrant’s expenditures or other investments in lower carbon transition activities from year to year with any corresponding reduction in its Scope 3 emissions). If a registrant has a relatively ambitious Scope 3 emissions target, but discloses little investment in transition activities in its financial statements and little or no reduction in Scope 3 emissions from year to year, these disclosures could indicate to investors that the registrant may need to make a large expenditure or significant change to its business operations as it gets closer to its target date, or risk missing its target. Both potential outcomes could have financial ramifications for the registrant and, accordingly, investors.

The proposed disclosure requirement should also give investors the ability to evaluate whether a registrant’s target or goal and its plan for achieving that target or goal could have an adverse impact on the registrant. For example, an investor might conclude that the financial costs of a registrant’s plan would outweigh any benefits to the
business, and factor that into how the registrant’s securities fit into the investor’s own investment portfolio given the investor’s risk tolerance and other investment goals. Thus, the objective of this disclosure is not to drive targets, goals, plans, or conduct, but to provide investors with the tools to assess the implications of any targets, goals, or plans on the registrant in making investment or voting decisions.

This disclosure requirement could also enable investors to better compare firms. For example, two registrants may have the same total GHG emissions and have made the same commitments to reduce total GHG emissions from Scopes 1, 2, and 3 emissions combined. However, if the registrants have different proportions of emissions from Scope 1 and 2 versus Scope 3, investors might determine that there would be different costs and effects for these registrants from their disclosed plans to reduce their overall emissions.

Scope 3 emissions disclosures could also enable investors to better compare registrants’ plans to achieve their Scope 3 emissions targets or goals. For example, registrants in the retail industry may have a relatively large portion of their Scope 3 emissions derived from customer travel to the registrant’s stores and shipping products or goods to customers or stores. If a registrant in this industry has set Scope 3 emissions targets or goals, in order to meet those targets or goals it may choose to relocate its stores to be closer to public transportation. Another similarly situated registrant may elect to switch to using electric vehicles for shipping. A third similarly situated registrant might elect to take neither action, but instead assume Scope 3 emissions reductions based on customers’ change in behavior. Investors could assess the likelihood of each of these three registrants meeting their Scope 3 emissions target or goal— as well as the likely financial and operational impact—which could depend on the amount and type of their Scope 3 emissions. Investors could also compare the potential impacts of these plans on the three different registrants. Without disclosures of the amount and type of Scope 3 emissions, investors would face difficulty assessing the likely impacts of a target or goal that includes Scope 3 emissions on registrants and comparing the relative impacts across registrants.

If required to disclose Scope 3 emissions, a registrant would be required to identify the categories of upstream and downstream activities that have been included in the calculation of its Scope 3 emissions. Consistent with the GHG Protocol, the proposed rules identify several categories of activities that can give rise to Scope 3 emissions. Upstream activities from which Scope 3 emissions might result include:

- A registrant’s purchased services;
- A registrant’s capital goods;
- A registrant’s fuel and energy related activities not included in Scope 1 or Scope 2 emissions;
- Transportation and distribution of purchased goods, raw materials, and other inputs;
- Waste generated in a registrant’s operations;
- Business travel by a registrant’s employees;
- Employee commuting by a registrant’s employees; and
- A registrant’s leased assets related principally to purchased or acquired goods or services.

Downstream activities from which Scope 3 emissions might result include:

- Use by a third party of a registrant’s sold products;
- Use of a third party’s sold products;
- End-of-life treatment by a third party of a registrant’s sold products;
- A registrant’s leased assets related principally to the sale or disposition of goods or services;
- A registrant’s franchises; and
- Investments by a registrant.

The list of upstream and downstream activities set forth in proposed Item 1500(r) is non-exclusive. If any upstream or downstream activities were significant to the registrant when calculating its Scope 3 emissions, the proposed rules would require it to identify such categories and separately disclose Scope 3 emissions data for each of those categories together with a total of all Scope 3 emissions. For example, an energy company that produces oil and gas products may find that a significant category of activity resulting in Scope 3 emissions relates to the end use of its sold products. A manufacturer might find that a significant category of activities resulting in Scope 3 emissions relate to the emissions of its suppliers in the production of purchased goods or services, the processing of its sold products, or by the fuel consumed by its third-party transporters and distributors of those goods and services and of its sold products. In some cases, the category in which an emissions source belongs may be unclear, or the source might fit within more than one category. In those cases, registrants would need to use their best judgment as to the description of the emissions source and provide sufficient transparency as to the reasoning and methodology to facilitate investor understanding of the emissions category and source.

If required to disclose Scope 3 emissions, a registrant would also be required to describe the data sources used to calculate those emissions, including the use of any of the following:

- Emissions reported by parties in the registrant’s value chain, and whether such reports were verified by the registrant or a third party, or unverified;
- Data concerning specific activities, as reported by parties in the registrant’s value chain; and
- Data derived from economic studies, published databases, government statistics, industry associations, or other third-party sources outside of a registrant’s value chain, including industry averages of emissions, activities, or economic data.

This information is intended to assist investors in assessing the reliability and accuracy of the registrant’s Scope 3 emissions disclosure. For example, an investor might find emissions data related to the downstream transportation and distribution of a registrant’s sold products more reliable if based on specific distances traveled by the registrant’s transportation and distribution partners and company-specific emissions factors rather than estimates of distances traveled based on industry-average data.465 The registrant may sometimes need to use industry- and national-average data when calculating its Scope 3 emissions, information about the data sources for its Scope 3 emissions would help investors assess the reliability and accuracy of the disclosure. This disclosure requirement could also enable investors to better compare registrants’ plans to achieve their Scope 3 emissions targets or goals. For example, registrants in the retail industry may have a relatively large portion of their Scope 3 emissions derived from customer travel to the registrant’s stores and shipping products or goods to customers or stores. If a registrant in this industry has set Scope 3 emissions targets or goals, in order to meet those targets or goals it may choose to relocate its stores to be closer to public transportation. Another similarly situated registrant may elect to switch to using electric vehicles for shipping. A third similarly situated registrant might elect to take neither action, but instead assume Scope 3 emissions reductions based on customers’ change in behavior. Investors could assess the likelihood of each of these three registrants meeting their Scope 3 emissions target or goal— as well as the likely financial and operational impact—which could depend on the amount and type of their Scope 3 emissions. Investors could also compare the potential impacts of these plans on the three different registrants. Without disclosures of the amount and type of Scope 3 emissions, investors would face difficulty assessing the likely impacts of a target or goal that includes Scope 3 emissions on registrants and comparing the relative impacts across registrants.

If required to disclose Scope 3 emissions, a registrant would be required to identify the categories of upstream and downstream activities that have been included in the calculation of its Scope 3 emissions.

462 See WBCSD and World Resources Institute, Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (Sept. 2011).
463 See proposed 17 CFR 229.1500(r).
464 See id. The “investments” category would capture what is commonly referred to as “financed emissions.”
465 See proposed 17 CFR 229.1504(c)(1).
466 Activity data refers to a quantitative measure of a level of activity that results in GHG emissions. Depending on the activity, such data could be expressed, for example, as: Liters of fuel consumed; kilowatt-hours of electricity consumed; kilograms of material consumed; kilometers of distance traveled; hours of time operated; square meters of area occupied; kilograms of waste generated; kilograms of product sold; or quantity of money spent. See GHG Protocol, Corporate Value Chain (Scope 3) Accounting and Reporting Standard, Chapter 7.
investors better understand the risk exposure posed by the registrant’s value chain in comparison with other registrants and make more informed investment decisions.

We acknowledge that a registrant’s material Scope 3 emissions is a relatively new type of metric, based largely on third-party data, that we have not previously required. We are proposing the disclosure of this metric because we believe capital markets have begun to assign financial value to this type of metric, such that it can be material information for investors about financial risks facing a company. Scope 3 emissions disclosure is an integral part of both the TCFD and the GHG Protocol, which are widely accepted. It also has been widely recognized that, for some companies, disclosure of just Scopes 1 and 2 emissions could convey an incomplete, and potentially misleading, picture. We have attempted to calibrate our proposal to balance investors’ demand for this information with the current limitations of the Scope 3 emissions data.

We also recognize, as discussed below, that the reporting of Scope 3 emissions may present more challenges than the reporting of Scopes 1 and 2 emissions. But in light of the fact that a GHG emissions reporting regime may be incomplete without the reporting of Scope 3 emissions, we are proposing to include them, with an appropriate transition period and safe harbor, at the outset. Although we have not proposed to exclude specific upstream or downstream activities from the scope of the proposed Scope 3 disclosure requirement, we have limited the proposed disclosure requirement to those value chain emissions that overall are material. We also have not proposed a bright-line quantitative threshold for the materiality determination as suggested by some commenters because whether Scope 3 emissions are material would depend on the particular facts and circumstances, making it difficult to establish a “one size fits all” standard.

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93. How would investors use GHG emissions disclosures to inform their investment and voting decisions? How would such disclosures provide insight into a registrant’s financial condition, changes in financial condition, and results of operations? How would such disclosures help investors evaluate an issuer’s climate risk-related exposure? Would such disclosures enable investors to better assess physical risks associated with climate-related events, transition risks, or both types of risks?

94. Should we require a registrant to disclose its GHG emissions both in the aggregate, per scope, and on a disaggregated basis for each type of greenhouse gas that is included in the Commission’s proposed definition of “greenhouse gases,” as proposed?

95. We have proposed defining “greenhouse gases” as a list of specific gases that aligns with the GHG Protocol and the list used by the EPA and other organizations. Should other gases be included in the definition? Should we expand the definition to include any other gases to the extent scientific data establishes a similar impact on climate change with reasonable certainty? Should we require a different standard to be met for other greenhouse gases to be included in the definition?

96. Should we require a registrant to express its emissions data in CO2e, as proposed? If not, is there another common unit of measurement that we should use? Is it important to designate a common unit of measurement for GHG emissions data, as proposed, or should we permit registrants to select and disclose their own unit of measurement?

97. Should we require a registrant to disclose its total Scope 1 emissions and total Scope 2 emissions separately for its most recently completed fiscal year, as proposed? Are there other approaches that we should consider?

98. Should we require a registrant to disclose its Scope 3 emissions for the fiscal year if material, as proposed? Should we use a quantitative threshold, such as a percentage of total GHG emissions (e.g., 25%, 40%, 50%) to require the disclosure of Scope 3 emissions? If so, is there any data supporting the use of a particular percentage threshold? Should we require registrant in particular industries, for which Scope 3 emissions are a high percentage of total GHG emissions, to disclose Scope 3 emissions?

99. Should we require a registrant that has made a GHG emissions reduction commitment that includes Scope 3 emissions to disclose its Scope 3 emissions, as proposed? Should we instead require registrants that have made any GHG emissions reduction commitments, even if those commitments do not extend to Scope 3, to disclose their Scope 3 emissions? Should we only require Scope 3 emissions disclosure if a registrant has made a GHG emissions reduction commitment that includes Scope 3 emissions?

100. Should Scope 3 emissions disclosure be voluntary? Should we require Scope 3 emissions disclosure in stages, e.g., requiring qualitative disclosure of a registrant’s significant categories of upstream and downstream activities that generate Scope 3 emissions upon effectiveness of the proposed rules, and requiring quantitative disclosure of a registrant’s Scope 3 emissions at a later date? If so, when should we require quantitative disclosure of a registrant’s Scope 3 emissions?

101. Should we require a registrant to exclude any use of purchased or generated offsets when disclosing its Scope 1, Scope 2, and Scope 3 emissions, as proposed? Should we require a registrant to disclose both a total amount with, and a total amount without, the use of offsets for each scope of emissions?

102. Should we require a registrant to disclose its Scope 3 emissions for each separate significant category of upstream and downstream emissions as well as a total amount of Scope 3 emissions for the fiscal year, as proposed? Should we only require the disclosure of the total amount of Scope 3 emissions for the fiscal year? Should we require the separate disclosure of Scope 3 emissions only for certain categories of emissions and, if so, for which categories?

103. Should the proposed rules include a different standard for...
requiring identification of the categories of upstream and downstream emissions, such as if those categories of emissions are significant to total GHG emissions or total Scope 3 emissions? Are there any other categories of, or ways to categorize, upstream or downstream emissions that a registrant should consider as a source of Scope 3 emissions? For example, should we require a registrant to disclose Scope 3 emissions only for categories of upstream or downstream activities over which it has influence or indirect control, or for which it can quantify emissions with reasonable reliability? Are there any proposed categories of upstream or downstream emissions that we should exclude as sources of Scope 3 emissions?

104. Should we, as proposed, allow a registrant to provide their own categories of upstream or downstream activities? Are there additional categories, other than the examples we have identified, that may be significant to a registrant’s Scope 3 emissions and that should be listed in the proposed rule? Are there any categories that we should preclude, e.g., because of lack of accepted methodologies or availability of data? Would it be useful to allow registrants to add categories that are particularly significant to them or their industry, such as Scope 3 emissions from land use change, which is not currently included in the Greenhouse Gas Protocol’s Scope 3 categories? Should we specifically add an upstream emissions disclosure category for land use?

105. Should we require the calculation of a registrant’s Scope 1, Scope 2, and/or Scope 3 emissions to be as of its fiscal year end, as proposed? Should we instead allow a registrant to provide its GHG emissions disclosures according to a different timeline than the timeline for its Exchange Act annual report? If so, what should that timeline be? For example, should we allow a registrant to calculate its Scope 1, Scope 2, and/or Scope 3 emissions for a 12-month period ending on the latest practicable date in its fiscal year that is no earlier than three months or, alternatively, six months prior to the end of its fiscal year? Would allowing for an earlier calculation date alleviate burdens on a registrant without compromising the value of the disclosure? Should we allow such an earlier calculation date only for a registrant’s Scope 3 emissions? Would the fiscal year end calculations required for a registrant to determine if Scope 3 emissions are material eliminate the benefits of an earlier calculation date? Should we instead require a registrant to provide its GHG emissions disclosures for its most recently completed fiscal year one, two, or three months after the due date for its Exchange Act annual report in an amendment to that report?

106. Should we require a registrant that is required to disclose its Scope 3 emissions to describe the data sources used to calculate the Scope 3 emissions, as proposed? Should we require the proposed description to include the use of: (i) Emissions reported by parties in the registrant’s value chain, and whether such reports were verified or unverified; (ii) data concerning specific activities, as reported by parties in the registrant’s value chain; and (iii) data derived from economic studies, published databases, government statistics, industry associations, or other third-party sources outside of a registrant’s value chain, including industry averages of emissions, activities, or economic data, as proposed? Are there other sources of data for Scope 3 emissions the use of which we should specifically require to be disclosed? For purposes of the disclosure requirement, should we exclude or prohibit the use of any of the proposed specified data sources when calculating Scope 3 emissions and, if so, which ones?

107. Should we require a registrant to provide location data for its disclosed sources of Scope 1, Scope 2, and Scope 3 emissions if feasible? If so, should the feasibility of providing location data depend on whether it is known or reasonably available pursuant to the Commission’s existing rules (Securities Act Rule 409 and Exchange Act Rule 12b–21)? Would requiring location data, to the extent feasible, assist investors in understanding climate-related risks, and in particular, likely physical risks, associated with a registrant’s emissions’ sources? Would a requirement to disclose such location data be duplicative of any of the other disclosure requirements that we are proposing?

108. If we require a registrant to provide location data for its GHG emissions, how should that data be presented? Should the emissions data be grouped by zip code separately for each scope? Should the disclosure be presented in a cartographic data display, such as what is commonly known as a “heat map”? If we require a registrant to provide location data for its GHG emissions, should we also require additional disclosure about the source of the emissions?

109. GHG Intensity

In addition to requiring the disclosure of its GHG emissions in gross terms, the proposed rules would also require a registrant to disclose the sum of its Scopes 1 and 2 emissions in terms of GHG intensity. 472 If required to disclose Scope 3 emissions, a registrant would also be required to separately disclose its Scope 3 emissions in terms of GHG intensity. 473 GHG intensity disclosure should provide context to a registrant’s emissions in relation to its business scale (e.g., emissions per economic output). For example, car manufacturer A may generate more emissions in terms of CO₂e than car manufacturer B; however, when analyzing an intensity metric (emissions per unit of production), it becomes apparent that car manufacturer A actually has a lower emission rate per car produced than car manufacturer B, which indicates a registrant’s emission efficiency. Because emission efficiency can be a potential indicator of the likelihood of the registrant being impacted by transition risks, such GHG intensity disclosure could provide decision-useful information to investors. In addition, the proposed GHG intensity disclosure would provide a standardized method for presenting such measure of efficiency across registrants, which should facilitate comparability of the registrant’s emissions efficiency over time.

The proposed rules would define “GHG intensity” (or “carbon intensity”) to mean a ratio that expresses the impact of GHG emissions per unit of economic value (e.g., metric tons of CO₂e per unit of total revenues, using the registrant’s reporting currency) or per unit of production (e.g., metric tons of CO₂e per unit of product produced). 474 For purposes of standardizing the disclosure and facilitating its comparability, we are proposing to require the disclosure of GHG intensity in terms of metric tons of CO₂e per unit of total revenue and per unit of production for the fiscal year. 475 Total revenue is one of the most commonly used and understood financial metrics when investors analyze a registrant’s financial results and applies to most registrants (depending on the nature and maturity of the business) and therefore would be a good common denominator for the

472 See proposed 17 CFR 229.1504(d)(1).
473 See proposed 17 CFR 229.1504(d)(2). The proposed safe harbor for Scope 3 emissions disclosure would apply to this proposed GHG intensity metric for Scope 3 emissions. See infra Section II.C.3.
474 See proposed 17 CFR 229.1506(i). We derived this proposed definition from the GHG Protocol. See GHG Protocol, A Corporate Accounting and Reporting Standard, Chapter 9.
475 See proposed 17 CFR 229.1504(d)(1).
intensity calculation. The selected unit of production should be relevant to the registrant’s industry to facilitate investor comparison of the GHG intensity of companies within an industry without regard to registrant size. Investors may find such a comparison to be useful to making informed investment decisions to the extent that a registrant within a particular industry that has a lower GHG intensity relative to its peers that face fewer climate-related risks.

If the registrant has no revenue for a fiscal year, it would be required to calculate its GHG intensity with another financial measure (e.g., total assets), with an explanation of why the particular measure was used. Similarly, if the registrant does not have a unit of production, it would be required to calculate its GHG intensity with another measure of economic output, depending on the nature of its business (e.g., data processing capacity, volume of products sold, or number of occupied rooms) with an explanation of why the particular measure was used.476

A registrant would also voluntarily disclose other additional measures of GHG intensity, including non-financial measures such as economic output, provided it includes an explanation of the reasons why those particular GHG intensity measures were used and why the registrant believes such measures provide useful information to investors.477 In all cases, the registrant would be required to disclose the methodology and other information required pursuant to the proposed GHG emissions metrics instructions.478

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109. Should we require a registrant to disclose the intensity of its GHG emissions for the fiscal year, with separate calculations for (i) the sum of Scope 1 and Scope 2 emissions and, if applicable (ii) its Scope 3 emissions (separately from Scopes 1 and 2), as proposed? Should we define GHG intensity, as proposed? Is there a different definition we should use for this purpose?

110. Should we require the disclosed GHG intensity to be expressed in terms of metric tons of CO₂e per unit of total revenue, as proposed? Should we require a different financial measure of GHG intensity and, if so, which measure? For example, should GHG intensity be expressed in terms of metric tons of CO₂e per unit of production?

111. Should we require the disclosed GHG intensity to be expressed in terms of metric tons of CO₂e per unit of production, as proposed? Would such a requirement facilitate the comparability of the disclosure? Should we require a different economic output measure of GHG intensity and, if so, which measure? For example, should GHG intensity be expressed in terms of metric tons of CO₂e per number of employees? Should we require the GHG intensity to be expressed per unit of production relevant to the registrant’s business (rather than its industry)? Is further guidance needed on how to comply with the proposed requirement? Would requiring GHG intensity to be expressed in terms of metrics tons of CO₂e per unit of production require disclosure of commercially sensitive or competitively harmful information?

112. Should we require a registrant with no revenue or unit of production for a fiscal year to disclose its GHG intensity based on, respectively, another financial measure or measure of economic output, as proposed? Should we require such a registrant to use a particular financial measure, such as total assets, or a particular measure of economic output, such as total number of employees? For registrants who may have minimal revenue, would the proposed calculation result in intensity disclosure that is confusing or not material? Should additional guidance be provided with respect to such instances?

113. Should we permit a registrant to disclose other measures of GHG intensity, in addition to the required measures, as long as the registrant explains why it uses the particular measure of GHG intensity and discloses the corresponding calculation methodology used, as proposed?

d. GHG Emissions Data for Historical Periods

The proposed rules would require disclosure to be provided for the registrant’s most recently completed fiscal year and for the historical fiscal years included in the registrant’s consolidated financial statements in the applicable filing, to the extent such historical GHG emissions data is reasonably available.479 Requiring historical GHG emissions data, to the extent available, would provide useful information for investors by enabling investors to track over time the registrant’s exposure to climate-related impacts represented by the yearly emissions data, and to assess how it is managing the climate-related risks associated with those impacts.

476 See proposed 17 CFR 229.1504(d)(3).
477 See proposed 17 CFR 229.1504(d)(4).
478 See proposed 17 CFR 229.1504(e)(1) and infra Section II.G.2 for the proposed disclosure requirements pertaining to GHG emissions methodology.

479 See proposed 17 CFR 229.1504(a).

480 See supra Section II.C for a discussion of proposed 17 CFR 229.1502.

481 Alternatively, if a registrant has no revenue, and it decides to calculate GHG intensity using total assets, we believe it would be appropriate for that registrant to provide its GHG intensity for the same number of years as are required on its balance sheets (i.e., two years if not a SRC).
only two years of Scopes 1 and 2 emissions metrics would be required.\textsuperscript{482} A registrant, however, would not otherwise be required to provide a corresponding GHG emissions metric for a fiscal year preceding its current reporting fiscal year if, for example, it was not required to and has not previously presented such metric for such fiscal year and the historical information necessary to calculate or estimate such metric is not reasonably available to the registrant without unreasonable effort or expense.\textsuperscript{483}

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114. Should we require GHG emissions disclosure for the registrant’s most recently completed fiscal year and for the appropriate, corresponding historical fiscal years included in the registrant’s consolidated financial statements in the filing, to the extent such historical GHG emissions data is reasonably available, as proposed?\textsuperscript{484} Should we instead only require GHG emissions metrics for the most recently completed fiscal year presented in the relevant filing? Would requiring historical GHG emissions metrics provide important or material information to investors, such as information allowing them to analyze trends?

\textbf{2. GHG Emissions Methodology and Related Instructions}

The proposed rules would require a registrant to describe the methodology, significant inputs, and significant assumptions used to calculate its GHG emissions metrics.\textsuperscript{485} As proposed, the description of the registrant’s methodology must include the registrant’s organizational boundaries, operational boundaries, calculation approach, and any calculation tools used to calculate the registrant’s GHG emissions.\textsuperscript{486} Organizational boundaries would be defined to mean the boundaries that determine the operations owned or controlled by a registrant for the purpose of calculating its GHG emissions.\textsuperscript{487} Operational boundaries would be defined to mean the boundaries that determine the direct and indirect emissions associated with the business operations owned or controlled by a registrant.\textsuperscript{488} This information should help investors understand the scope of a registrant’s

\textbf{operations included in its GHG emissions metrics and how those metrics were measured. With this information, investors could more knowledgeably compare a registrant’s GHG emissions metrics with the GHG emissions metrics of other registrants and make more informed investment decisions.}

\textbf{a. The Setting and Disclosure of Organizational Boundaries}

The proposed rules would require a registrant to disclose its Scope 1 emissions and its Scope 2 emissions separately after calculating them from all sources that are included in the registrant’s organizational and operational boundaries.\textsuperscript{490} An initial step for many registrants may be to set their organizational boundaries.\textsuperscript{491} Those boundaries determine the business operations owned or controlled by a registrant to be included in the calculation of its GHG emissions.\textsuperscript{492}

\textbf{Because both Scope 1 and Scope 2 emissions relate to the operations owned or controlled by a registrant, setting a registrant’s organizational boundaries is an important part of determining its Scopes 1 and 2 emissions.}

Several commenters stated that the GHG Protocol’s standards and guidance would provide an appropriate framework for reporting GHG emissions if the Commission required disclosure of GHG emissions.\textsuperscript{493} A company following the GHG Protocol would base its organizational boundaries on either an equity share approach or a control approach.\textsuperscript{494} Our proposed approach, however, would require a registrant to set the organizational boundaries for its GHG emissions using the same scope of entities, operations, assets, and other holdings within its business organization as those included in, and based upon the same set of accounting principles applicable to, its consolidated financial statements.\textsuperscript{495}

For similar reasons to those noted above regarding the proposed time periods required for GHG emissions disclosure, we propose requiring the scope of consolidation and reporting to be consistent for financial data and GHG emissions data. This would be accomplished by applying existing GAAP.\textsuperscript{496}\textsuperscript{497} Requiring a consistent approach should help avoid potential investor confusion about the reporting scope used in determining a registrant’s GHG emissions and the reporting scope used for the financial statement metrics, which are included in the financial statements. Applying existing GAAP could help limit the compliance burden for GHG registrants and would be able to use familiar concepts from financial reporting when preparing their required GHG emissions disclosures. Requiring registrants to follow the scope of reporting used in their financial statements should also enhance comparability across registrants when compared with the multiple options available under the GHG Protocol.

Thus, as proposed, the scope of reporting for a registrant’s GHG emissions metrics would be consistent with the scope of reporting for the proposed financial statement metrics and other financial data included in its consolidated financial statements in order to provide investors a consistent view of the registrant’s business across its financial and GHG emissions disclosures. For example, a registrant that prepares its financial statements pursuant to U.S. GAAP would apply relevant guidance from U.S. GAAP (e.g., FASB ASC Topic 810 Consolidation and FASB ASC Topic 323 Investments—Equity Method and Joint Ventures) when determining which entities would be subject to consolidation or which investments qualify for equity method accounting or proportionate consolidation.\textsuperscript{498}\textsuperscript{499} Therefore, under the proposed rules a registrant would be required to include all of the emissions from an entity that it consolidates.\textsuperscript{500} For an equity method investee or an

\textbf{494 Foreign private issuers that file consolidated financial statements under IFRS as issued by the IASB would apply IFRS under the proposed rules as the basis for setting its organizational boundaries for the purpose of providing the proposed GHG emissions disclosure.}

\textbf{495 Issuers that are permitted to, and do, apply IFRS issued by the International Accounting Standards Board would apply the IASB’s equivalent standards. See, e.g., IFRS 10 Consolidated Financial Statements, IFRS 11 Joint Arrangements and International Accounting Standards (“IAS”) 28 Investments in Associates and Joint Ventures. See supra note 319, which states that foreign private issuers that file consolidated financial statements under home country GAAP and reconcile to U.S. GAAP, would be required to use U.S. GAAP as the basis for calculating and disclosing the proposed climate-related financial statement metrics. The same requirement would apply for the purpose of determining the proposed GHG emissions metrics.}

\textbf{496 See proposed 17 CFR 229.1504(c)(2).}
operation that is proportionally consolidated, the registrant would be required to include its share of emissions based on its percentage ownership of such investee or operation.\footnote{See id.} For a registrant that applies the equity method to an investee, the percentage of ownership interest used to record its share of earnings or losses in the investee must be the same for measuring its share of GHG emissions by the equity method investee.\footnote{See id.} The proposed rules would permit a registrant to exclude emissions from investments that are not consolidated, are not proportionately consolidated, or that do not qualify for the equity method of accounting in the registrant’s consolidated financial statements.\footnote{See proposed 17 CFR 229.1504(b)(2).}

For example, a registrant might own or control several plants but have only a minority ownership in another plant over which it has no control. For the plants that are owned or controlled by the registrant, all of those plants’ direct and indirect emissions should be included in its Scopes 1 and 2 emissions disclosure (regardless of ownership percentage that resulted in consolidation for financial statement purposes).\footnote{See proposed 17 CFR 229.1500(m) (defining organizational boundaries as the boundaries that determine the operations owned or controlled by a registrant) and 17 CFR 229.1504(b)(1) (requiring the disclosure of Scopes 1 and 2 emissions separately after calculating them from all sources included in a registrant’s organizational and operational boundaries).} If the registrant’s proportional interest in the latter plant is reflected in its consolidated financial statements (e.g., the investment qualifies for the equity method or a proportionate consolidation approach), when calculating its Scopes 1 and 2 emissions the registrant should include such proportional share (based on ownership interest) of that plant’s emissions in the total of each of its Scopes 1 and 2 emissions.\footnote{See proposed 17 CFR 229.1504(e)(2).}

A related provision under the proposed rules would require a registrant to use the same organizational boundaries when calculating its Scope 1 emissions and Scope 2 emissions\footnote{See proposed 17 CFR 229.1504(e)(2).} since both sets of emissions relate to operations that a registrant owns or controls. If required to disclose its Scope 3 emissions, a registrant would also be required to apply the same organizational boundaries used when determining its Scopes 1 and 2 emissions as an initial step in identifying the sources of indirect emissions from activities in its value chain over which it lacks ownership and control which must be included in the calculation of its Scope 3 emissions.\footnote{See id.} Requiring a registrant to use the same organizational boundaries when calculating its Scopes 1, 2 and 3 emissions should help limit investor confusion over those operations or activities over which it has ownership or control (sources of its Scopes 1 and 2 emissions) and those activities in its value chain over which it lacks ownership or control (sources of its Scope 3 emissions). The proposed provision also would provide that, once a registrant has determined its organizational (and operational) boundaries, it must consistently use those boundaries when calculating its GHG emissions.\footnote{See id.} This proposed provision should help investors track and compare a registrant’s GHG emissions over time.

b. The Setting and Disclosure of Operational Boundaries

When describing the methodology, significant inputs, and significant assumptions used to calculate its GHG emissions metrics, a registrant is required to describe its operational boundaries.\footnote{See id.} This would involve identifying emissions sources within its plants, offices, and other operational facilities that fall within its organizational boundaries, and then categorizing the emissions as either direct or indirect emissions. For example, a registrant might have direct emissions from one or more of the following sources that it owns or controls:

- Stationary equipment (from the combustion of fuels in boilers, furnaces, burners, turbines, heaters, and incinerators);
- Transportation (from the combustion of fuels in automobiles, trucks, buses, trains, airplanes, boats, ships, and other vessels);
- Manufacturing processes (from physical or chemical processes, such as CO₂ from the calcination process in cement manufacturing or from catalytic cracking in petrochemical processing, and PFC emissions from aluminum smelting); and
- Fugitive emission sources (equipment leaks from joints, seals, packing, gaskets, coal piles, wastewater treatment, pits, cooling towers, and gas processing facilities, and other unintentional releases).\footnote{See proposed Item 1504(e)(1).}

Most registrants would likely have emission sources from stationary equipment and transportation devices. Registrants in certain industrial sectors, such as cement, aluminum, and other manufacturers, or oil and gas production and refining, are likely also to produce emissions from physical or chemical processes. Some registrants would likely have emissions from all four types of sources, particularly if they have their own power generation or waste treatment facilities.\footnote{See id.}

The proposed rules would require a registrant to include its approach to categorizing its emissions and emissions sources when describing its methodology to determine its operational boundaries.\footnote{See proposed 17 CFR 229.1504(e)(1).} A registrant could use the above non-exclusive list of emissions sources or other categories of emissions sources as long as it describes how it determined the emissions to include as direct emissions, for the purpose of calculating its Scope 1 emissions, and indirect emissions, for the purpose of calculating its Scope 2 emissions.\footnote{See id.} For most registrants, purchased electricity would likely constitute a large percentage of their Scope 2 emissions. Although Scope 2 emissions are generated from a source external to a registrant, the electricity (or steam, heat, or cooling) is consumed by the registrant’s operations that it owns or controls.

c. The Selection and Disclosure of a GHG Emissions Calculation Approach, Including Emission Factors

In addition to setting its organizational and operational boundaries, a registrant would need to select a GHG emissions calculation approach. While the direct measurement of GHG emissions from a source by monitoring concentration and flow rate is likely to yield the most accurate calculations, due to the expense of the direct monitoring of emissions, an acceptable and common method for calculating emissions involves the application of published emission factors to the total amount of purchased fuel consumed by a particular source.\footnote{See, e.g., GHG Protocol, Corporate Accounting and Reporting Standard, Chapter 6.} The proposed rules would define “emission factor” as a multiplication factor allowing actual GHG emissions to be calculated from available activity data or, if no activity data is available, economic data, to

\footnote{See id.}
derive absolute GHG emissions. If no activity data is available, a registrant may use an emission factor based on economic data. For example, when calculating Scope 3 emissions from purchased goods or services, a registrant could determine the economic value of the goods or services purchased and multiply it by an industry average emission factor (expressed as average emissions per monetary value of goods or services).

The EPA has published a set of emission factors based on the particular type of source (e.g., stationary combustion, mobile combustion, refrigerants, and electrical grid, among others) and type of fuel consumed (e.g., natural gas, coal or coke, crude oil, and kerosene, among many others). The GHG Protocol’s own set of GHG emission calculation tools are based in part on the EPA’s emission factors. Whatever set of emission factors a registrant chooses to use, it must identify the emission factors and its source.

After a registrant has selected a calculation approach (i.e., direct measurement or application of emission factors), the registrant would determine what data must be collected and how to conduct the relevant calculations, including whether to use any publicly-available calculation tools. In this regard, we note that there are a number of publicly-available calculation tools a registrant may elect to utilize in determining its GHG emissions.

Finally, a registrant would gather and report GHG emissions up to the corporate level. For example, when determining its Scope 1 emissions for a particular plant, a registrant might add up the amount of natural gas consumed by furnaces and other stationary equipment during its most recently completed fiscal year and then apply the CO2 emission factor for natural gas to that total amount to derive the amount of GHG emissions expressed in CO2. The registrant would repeat this process for each type of fuel consumed and for each type of source. If a registrant owns a fleet of trucks, it might total the amount of diesel fuel or other type of gasoline consumed for the fiscal year and apply the appropriate CO2 emission factor for that vehicle and type of fuel. A registrant that uses refrigerants also might apply the appropriate emission factor for the particular type of refrigerant to the total amount of that refrigerant used during the fiscal year. As part of the roll-up process for a registrant with multiple entities and emission sources, once it has determined the amount of CO2e for each type of direct emissions source and for each facility within its organizational and operational boundaries, the registrant would then add them together to derive the total amount of Scope 1 emissions for the fiscal year.

A registrant would undergo a similar process when calculating its Scope 2 emissions for its most recently completed fiscal year. There are two common methods for calculating Scope 2 emissions for purchased electricity: The market-based method and the location-based method. Pursuant to the market-based method, a registrant would calculate its Scope 2 emissions based on emission factors and other data provided by the generator of electricity.
would be able to evaluate both if the registrant’s selection of an emission factor is reasonable given the registrant’s industry sector and whether changes in reported emissions reflect changes in actual emissions in accordance with its strategy or simply a change in calculation methodology. Like registrants in other sectors, registrants in the financial sector would be required to disclose their Scope 3 emissions if those emissions are material and to describe the methodology used to calculate those emissions. A financial registrant’s Scope 3 emissions disclosures would likely include the emissions from companies that the registrant provides debt or equity financing to (“financed emissions”). While financial registrants may use any appropriate methodology to calculate its Scope 3 emissions, the Partnership for Carbon Accounting Financials’ Global GHG Accounting & Reporting Standard (the “PCAF Standard”) provides one methodology that complements the GHG Protocol and assists financial institutions in calculating their financed emissions.526 The PCAF Standard was developed to work with the calculation of Scope 3 emissions for the “investment” category of downstream emissions and was endorsed by the drafters of the GHG Protocol.527 The PCAF Standard covers six asset classes: Listed equity and corporate bonds; business loans and unlisted equity; project finance; commercial real estate; mortgages; and motor vehicle loans.528 At this time, we are not proposing to require a particular methodology for the financial sector in order to provide a financial sector registrant the flexibility to choose the methodology that best suits its particular portfolio and financing activities. We believe the proposed requirement to disclose the methodology used (e.g., the PCAF Standard or another standard) would provide sufficient information to an investor.

d. Additional Rules Related to Methodology Disclosure

We are proposing additional rules related to the methodology for calculating GHG emissions. Some of these rules would apply generally to the determination of GHG emissions while some would apply specifically to the calculation of Scope 3 emissions. For example, one proposed rule would provide that a registrant may use reasonable estimates when disclosing its GHG emissions as long as it also describes the assumptions underlying, and its reasons for using, the estimates.529 While we encourage registrants to provide as accurate a measurement of its GHG emissions as is reasonably possible, we recognize that, in many instances, direct measurement of GHG emissions at the source, which would provide the most accurate measurement, may not be possible. Several commenters indicated that a registrant may find it difficult to complete its GHG emissions calculations for its most recently completed fiscal year in time to meet its disclosure obligations for that year’s Exchange Act annual report.530 The proposed rules would permit a registrant to use a reasonable estimate of its GHG emissions for its fourth fiscal quarter if no actual reported data is reasonably available, together with actual, determined GHG emissions data for its first three fiscal quarters when disclosing its GHG emissions for its most recently completed fiscal year, as long as the registrant promptly discloses in a subsequent filing any material difference between the estimate used and the actual, determined GHG emissions data for the fourth fiscal quarter.531 We believe that this proposed provision would help address the concerns of commenters about the timely completion of both the work required to disclose a registrant’s GHG emissions as of its fiscal year-end and to meet its other Exchange Act annual reporting obligations.532

Another proposed provision would require a registrant to disclose, to the extent material and as applicable, any use of third-party data when calculating its GHG emissions, regardless of the particular scope of emissions.533 While this proposed provision would be most relevant to the disclosure of Scope 3 emissions, where the use of third-party data is common, it would apply in other instances when third-party data is material to the GHG emissions determination, such as when determining Scope 2 emissions using contractual, supplier-provided emission factors for purchased electricity. When disclosing the use of third-party data, a registrant would be required to identify the source of the data and the process the registrant undertook to obtain and assess such data.534 This information would help investors better understand the basis for, and assess the reasonableness of, the GHG emissions determinations and, accordingly, evaluate the GHG disclosures as part of a registrant’s business and financial information.

One proposed provision would require a registrant to disclose any material change to the methodology or assumptions underlying its GHG emissions disclosure from the previous fiscal year.535 For example, if a registrant uses a different set of emission factors, or develops a more direct method of measuring GHG emissions, which results in a material change to the GHG emissions produced from the previous year under (or assuming) the same organizational and operational boundaries, it would be required to report that change. This should help investors more knowledgeably compare the emissions data from year to year and better understand the nature and significance of a material change in emissions (i.e., was the change primarily due to an implementation of strategy or a change in methodology).

Another proposed provision would require a registrant to disclose, to the extent material and as applicable, any gaps in the data required to calculate its GHG emissions.536 This proposed provision would be particularly relevant to a registrant’s Scope 3 emissions. While a registrant’s GHG emissions disclosure should provide investors with a reasonably complete understanding of the registrant’s GHG emissions in each scope of emissions, as previously noted, we recognize that a
registrant may encounter data gaps, particularly when calculating its Scope 3 emissions. The proposed provision would require the registrant to disclose the data gaps and discuss whether it used proxy data or another method to address such gaps. A registrant would also be required to discuss how its accounting for any data gaps has affected the accuracy or completeness of its GHG emissions disclosure. This information should help investors understand certain underlying uncertainties and limitations, and evaluate the corresponding reliability, of a registrant’s GHG emissions disclosure, particularly for its Scope 3 emissions, as part of their assessment of the registrant’s business and financial information.

One proposed provision would provide that, when determining whether its Scope 3 emissions are material, and when disclosing those emissions, in addition to emissions from activities in its value chain, a registrant must include GHG emissions from outsourced activities that it previously conducted as part of its own operations, as reflected in the financial statements for the periods covered in the filing. This proposed approach, which is consistent with the GHG Protocol, would help ensure that investors receive a complete picture of a registrant’s carbon footprint by precluding the registrant from excluding emissions from activities that are typically conducted as part of operations over which it has ownership or control but that are outsourced in order to reduce its Scopes 1 or 2 emissions. Another proposed provision would provide that, if a registrant is required to disclose Scope 3 emissions, and if there was any significant overlap in the categories of activities producing the Scope 3 emissions, the registrant must describe the overlap, how it accounted for the overlap, and its disclosed total Scope 3 emissions. For example, a mining registrant may mine and process iron ore in the production of steel. If the registrant has allocated GHG emissions to both categories (i.e., processing of sold products and use of sold products), it would be required to describe the overlap in emissions between the two categories of downstream activities, how it accounted for the overlap, and the effect on its disclosed total Scope 3 emissions. For example, if the total reported Scope 3 emissions involved some double-counting because of the overlap, a registrant would be required to report this effect. This information could help investors better understand the true extent of a registrant’s disclosed Scope 3 emissions and, thus, the climate-related risks faced by the registrant.

Finally, a proposed provision would provide that a registrant may present its estimated Scope 3 emissions in terms of a range as long as it discloses its reasons for using the range and the underlying assumptions. This proposed provision reflects our understanding that, because a registrant may encounter more difficulties obtaining all of the data required for determining its Scope 3 emissions compared to determining its Scopes 1 and 2 emissions, presenting its Scope 3 emissions in terms of a range may be a reasonable means of estimating these emissions when faced with such gaps in the data.

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115. Should we require a registrant to disclose the methodology, significant inputs, and significant assumptions used to calculate its GHG emissions metrics, as proposed? Should we require a registrant to use a particular methodology for determining its GHG emission metrics? If so, should the required methodology be pursuant to the GHG Protocol’s Corporate Accounting and Reporting Standard and related standards and guidance? Is there another methodology that we should require a registrant to follow when determining its GHG emissions? Should we require a registrant to follow the GHG Protocol in all respects, as proposed? Would this provide flexibility for registrants to choose certain methods and approaches in connection with GHG emissions determination that meet the particular circumstances of their industry or business or that emerge along with developments in GHG emissions methodology as long as they are transparent about the methods and underlying assumptions used? Are there adjustments that should be made to the proposed methodological disclosure requirements that would provide flexibility for registrants while providing sufficient comparability for investors?

116. Should we require a registrant to disclose the organizational boundaries used to calculate its GHG emissions, as proposed? Should we require a registrant to determine its organizational boundaries using the same scope of entities, operations, assets, and other holdings within its business organization as that used in its consolidated financial statements, as proposed? Would prescribing this method of determining organizational boundaries avoid potential investor confusion about the reporting scope used in determining a registrant’s GHG emissions and the reporting scope used for the financial statement metrics, which are included in the financial statements? Would prescribing this method of determining organizational boundaries result in more robust guidance for registrants and enhanced comparability for investors? If, as proposed, the organizational boundaries must be consistent with the scope of the registrant’s consolidated financial statements, would requiring separate disclosure of the organizational boundaries be redundant or otherwise unnecessary?

117. Except for calculating Scope 3 emissions, the proposed rules would not require a registrant to disclose the emissions from investments that are not consolidated, proportionately consolidated, or that do not qualify for the equity method of accounting. Should we require such disclosures for Scopes 1 and 2 emissions, and if so, how?

118. Could situations arise where it is impracticable for a registrant to align the scope of its organizational boundaries for GHG emission data with the scope of the consolidation for the rest of its financial statements? If so, should we allow a registrant to take a different approach to determining the organizational boundaries of its GHG emissions and provide related disclosure, including an estimation of the resulting difference in emissions disclosure (in addition to disclosure about methodology and other matters that would be required by the proposed GHG emissions disclosure rules)?

119. Alternatively, should we require registrants to use the organizational boundary approaches recommended by the GHG Protocol (e.g., financial control, operational control, or equity share)? Do those approaches provide a clear enough framework for complying with the proposed rules? Would such an
approach cause confusion when analyzing information in the context of the consolidated financial statements or diminish comparability? If we permit a registrant to choose one of the three organizational boundary approaches recommended by the GHG Protocol, should we require a reconciliation with the scope of the rest of the registrant’s financial reporting to make the disclosure more comparable?

120. Should we require a registrant to disclose its operational boundaries, as proposed? Should we require a registrant to discuss its approach towards the categorization of emissions (e.g., as direct or indirect emissions) and emissions sources (e.g., stationary or mobile) when describing its operational boundaries, as proposed?

121. The proposed operational boundaries disclosure is based largely on concepts developed by the GHG Protocol. Would requiring a registrant to determine its organizational boundaries pursuant to the GAAP applicable to financial metrics included in the financial statements but its operational boundaries largely pursuant to concepts developed by the GHG Protocol cause confusion? Should we require a registrant to apply the GAAP applicable to its financial statements when determining whether it “controls” a particular source pursuant to the definition of Scope 1 emissions, or particular operations pursuant to the definition of Scope 2 emissions, as proposed? If not, how should “control” be determined and would applying a definition of control that differs from applicable GAAP result in confusion for investors?

122. Should we require a registrant to use the same organizational boundaries when calculating its Scopes 1 and 2 emissions, as proposed? Are there any circumstances when a registrant’s organizational boundaries for determining its Scope 2 emissions should differ from those required for determining its Scope 1 emissions? Should we also require a registrant to apply the same organizational boundaries used when determining its Scopes 1 and 2 emissions as an initial step in identifying the sources of indirect emissions from activities in its value chain over which it lacks ownership and control and which must be included in the calculation of its Scope 3 emissions, as proposed? Are there any circumstances where using a different organizational boundary for purposes of Scope 3 emissions disclosure would be appropriate?

123. Should we require a registrant to be consistent in its use of its organizational and operational boundaries once it has set those boundaries, as proposed? Would the proposed requirement help investors to track and compare the registrant’s GHG emissions over time?

124. Should we require a registrant to disclose the methodology for calculating the GHG emissions, including any emission factors used and the source of the emission factors, as proposed? Should we require a registrant to use a particular set of emission factors, such as those provided by the EPA or the GHG Protocol?

125. Should we permit a registrant to use reasonable estimates when disclosing its GHG emissions as long as it also describes the assumptions underlying, and its reasons for using, the estimates, as proposed? Should we permit the use of estimates for only certain GHG emissions, such as Scope 3 emissions? Should we permit a registrant to use a reasonable estimate of its GHG emissions for its fourth fiscal quarter if no actual reported data is reasonably available, together with actual, determined GHG emissions data for its first three fiscal quarters when disclosing its GHG emissions for its most recently completed fiscal year, as long as the registrant promptly discloses in a subsequent filing any material difference between the estimate used and the actual, determined GHG emissions data for the fourth fiscal quarter, as proposed? If so, should we require a registrant to report any such material difference in its next Form 10–Q or in a Form 6–K, if a foreign private issuer? Should we permit a domestic registrant to report any such material difference in a Form 8–K if such form is filed (rather than furnished) with the Commission? Should any such reasonable estimate be subject to conditions to help ensure accuracy and comparability? If so, what conditions should apply?

126. Should we require a registrant to disclose, to the extent material, any use of third-party data when calculating its GHG emissions, regardless of the particular scope of emissions, as proposed? Should we require the disclosure of the use of third-party data only for certain GHG emissions, such as Scope 3 emissions? Should we require the disclosure of the use of third-party data for Scope 3 emissions, regardless of its materiality to the determination of those emissions? If a registrant discloses the use of third-party data, should it also be required to identify the source of such data and the process the registrant undertook to obtain and assess the data, as proposed?

127. Should we require a registrant to disclose any material change to the methodology or assumptions underlying its GHG emissions disclosure from the previous year, as proposed? If so, should we require a registrant to restate its GHG emissions data for the previous year, or for the number of years for which GHG emissions data has been provided in the filing, using the changed methodology or assumptions? If a registrant’s organizational or operational boundaries, in addition to methodology or assumptions, change, to what extent should we require such disclosures of the material change, restatements or reconciliations? In these cases, should we require a registrant to apply certain accounting standards or principles, such as FASB ASC Topic 250, as guidance regarding when retrospective disclosure should be required?

128. Should we require a registrant to disclose, to the extent material, any gaps in the data required to calculate its GHG emissions, as proposed? Should we require the disclosure of data gaps only for certain GHG emissions, such as Scope 3 emissions? If a registrant discloses any data gaps encountered when calculating its Scope 3 emissions or other type of GHG emissions, should it be required to discuss whether it used proxy data or another method to address such gaps, and how its management of any data gaps has affected the accuracy or completeness of its GHG emissions disclosure, as proposed? Are there other disclosure requirements or conditions we should adopt to help investors obtain a reasonably complete understanding of a registrant’s exposure to the GHG emissions sourced by each scope of emissions?

129. When determining the materiality of its Scope 3 emissions, or when disclosing those emissions, should a registrant be required to include GHG emissions from outsourced activities that it previously conducted as part of its own operations, as reflected in the financial statements for the periods covered in the filing, in addition to emissions from activities in its value chain, as proposed? Would this requirement help ensure that investors receive a complete picture of a registrant’s carbon footprint by precluding the registrant from excluding emissions from activities that are typically conducted as part of operations over which it has ownership or control but that are outsourced in order to reduce its Scopes 1 or 2 emissions? Should a requirement to include outsourced activities be subject to certain conditions or exceptions and, if so, what conditions or exceptions?

130. Should we require a registrant that must disclose its Scope 3 emissions to discuss whether there was any...
significant overlap in the categories of activities that produced the Scope 3 emissions? If so, should a registrant be required to describe any overlap, how it accounted for the overlap, and its effect on the total Scope 3 emissions, as proposed? Would this requirement help investors assess the accuracy and reliability of the Scope 3 emissions disclosure?

131. Should we permit a registrant to present its Scope 3 emissions in terms of a range as long as it discloses its reasons for using the range and the underlying assumptions, as proposed? Should we place limits or other parameters regarding the use of a range and, if so, what should those limits or parameters be? For example, should we require a range to be no larger than a certain size? What other conditions or guidance should we provide to help ensure that a range, if used, is not overly broad and is otherwise reasonable?

132. Should we require a registrant to follow a certain set of published standards for calculating Scope 3 emissions that have been developed for a registrant’s industry or that are otherwise broadly accepted? For example, should we require a registrant in the financial industry to follow PCAF’s Global GHG Accounting & Reporting Standard for the Financial Industry when calculating its financed emissions within the “Investments” category of Scope 3 emissions? Are there other industry-specific standards that we should require for Scope 3 emissions disclosure? Should we require a registrant to follow the GHG Protocol’s Corporate Value Chain (Scope 3) Accounting and Reporting Standard if an industry-specific standard is not available for Scope 3 emissions disclosure? If we should require the use of a third-party standard for Scope 3 emissions reporting, or any other scope of emissions, how should we implement this requirement?

3. The Scope 3 Emissions Disclosure Safe Harbor and Other Accommodations

We recognize that the calculation and disclosure of Scope 3 emissions may pose difficulties compared to Scopes 1 and 2 emissions, which has caused concern for some commenters.

It may be difficult to obtain activity data from suppliers and other third parties in a registrant’s value chain, or to verify the accuracy of that information. It may also be necessary to rely heavily on estimates and assumptions to generate Scope 3 emissions data. For example, registrants may need to rely on assumptions about how customers will use their products in order to calculate Scope 3 emissions from the use of sold products.

Depending on the size and complexity of a company and its value chain, the task of calculating Scope 3 emissions could be challenging. We expect that some of these challenges may recede over time. For example, as more companies make their Scope 1 and 2 emissions data publicly available, these data can serve as the input for other companies’ Scope 3 calculations. In addition, large companies that are voluntarily disclosing Scope 3 emissions information currently are also working with suppliers to increase access to emissions data and improve its reliability, which could have positive spillover effects for other companies that use the same suppliers.

Furthermore, within certain industries, there is work underway to improve methodologies and share best practices to make Scope 3 calculations less burdensome and more reliable. Notwithstanding these anticipated developments, and disclosing Scope 3 emissions could represent a challenge for certain registrants, in particular those that do not currently report such information on a voluntary basis.

To balance concerns about reporting Scope 3 emissions with the need for decision-useful emissions disclosure, we are proposing the following accommodations for Scope 3 emissions disclosure:

- A safe harbor for Scope 3 emissions disclosure from certain forms of liability under the Federal securities laws;
- An exemption for smaller reporting companies (“SRCs”) from the Scope 3 emissions disclosure provision; and
- A delayed compliance date for Scope 3 emissions disclosure.

We are proposing a safe harbor for Scope 3 emissions disclosure to alleviate concerns that registrants may have about liability for information that would be derived largely from third parties in a registrant’s value chain. Many commenters recommended that the Commission adopt a safe harbor for climate-related disclosures. These commenters asserted that a safe harbor would encourage registrants to provide meaningful, quantitative metrics and analysis. Other commenters focused their recommendation for a safe harbor on certain types of climate-related disclosures, such as those pertaining to scenario analysis, third-party derived data (such as Scope 3 emissions), or forward-looking statements generally.

With respect to Scope 3 emissions specifically, commenters recommended that the Commission provide a safe harbor due to the reliance on estimates and data needed for Scope 3 emissions reporting that are outside of the registrant’s control.

While we are not proposing a broad safe harbor for all climate-related disclosures, many of which are similar...
to other business and financial information required by Commission rules, we are proposing a targeted safe harbor for Scope 3 emissions data in light of the unique challenges associated with this information. The proposed safe harbor would provide that disclosure of Scope 3 emissions by or on behalf of the registrant would be deemed not to be a fraudulent statement unless it is shown that such statement was made or reaffirmed without a reasonable basis or was disclosed other than in good faith. The safe harbor would extend to any statement regarding Scope 3 emissions that is disclosed pursuant to proposed subpart 1500 of Regulation S–K and made in a document filed with the Commission.

For purposes of the proposed safe harbor, the term “fraudulent statement” would be defined to mean a statement that is an untrue statement of material fact, a statement false or misleading with respect to any material fact, an omission to state a material fact necessary to make a statement not misleading, or that constitutes the employment of a manipulative, deceptive, or fraudulent device, contrivance, scheme, transaction, act, practice, course of business, or an artifice to defraud as those terms are used in the Securities Act or the Exchange Act or the rules or regulations promulgated thereunder. The proposed safe harbor is intended to mitigate potential liability concerns associated with providing emissions disclosure based on third-party information by making clear that registrants would only be liable for such disclosure if it was made without a reasonable basis or was disclosed other than in good faith. It also may encourage more robust Scope 3 emissions information, to the extent registrants feel reassured about relying on actual third-party data as opposed to national or industry averages for their emissions estimates.

Several commenters expressed concern that the Commission would impose a “one size fits all” approach, which could disproportionately impact smaller registrants, when adopting climate-related disclosure rules. Several commenters recommended that the Commission phase-in or scale down the climate-related disclosure requirements for smaller registrants. Although we are not proposing to exempt SRCs from the full scope of the proposed climate-related disclosure rules, we are proposing to exempt SRCs from the proposed Scope 3 emissions disclosure requirement. We believe that exempting SRCs from the proposed Scope 3 emissions disclosure requirement would be appropriate in light of the proportionately higher costs they could incur, compared to non-SRCs, to engage in the data gathering, verification, and other actions associated with Scope 3 emissions reporting, many of which may have fixed cost components.

To further ease the burden of complying with the proposed Scope 3 disclosure requirement, we are also proposing a delayed compliance date for this requirement. As explained in greater detail below, all registrants, regardless of their size, would have an additional year to comply initially with the Scope 3 emissions disclosure requirement beyond the compliance date for the other proposed rules. Moreover, because a registrant’s Scope 3 emissions consist of the Scopes 1 and 2 emissions of its suppliers, distributors, and other third parties in the registrant’s value chain, to the extent those parties become subject to the proposed rules, the increased availability of Scopes 1 and 2 emissions data following the rules’ effectiveness should help ease the burden of complying with the Scope 3 emissions disclosure requirement.

Finally, we note that Securities Act Rule 409 and Exchange Act Rule 12b–21, which provide accommodations for information that is unknown and not reasonably available, would be available for the proposed Scope 3 emissions disclosures. These rules allow for the conditional omission of required information when such information is unknown and not reasonably available to the registrant, either because obtaining the information would involve unreasonable effort or expense, or because the information rests peculiarly within the knowledge of others.

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1500 of Regulation S–K and made in a document filed with the Commission.554 For purposes of the proposed safe harbor, the term “fraudulent statement” would be defined to mean a statement that is an untrue statement of material fact, a statement false or misleading with respect to any material fact, an omission to state a material fact necessary to make a statement not misleading, or that constitutes the employment of a manipulative, deceptive, or fraudulent device, contrivance, scheme, transaction, act, practice, course of business, or an artifice to defraud as those terms are used in the Securities Act or the Exchange Act or the rules or regulations promulgated thereunder.555 The proposed safe harbor is intended to mitigate potential liability concerns associated with providing emissions disclosure based on third-party information by making clear that registrants would only be liable for such disclosure if it was made without a reasonable basis or was disclosed other than in good faith. It also may encourage more robust Scope 3 emissions information, to the extent registrants feel reassured about relying on actual third-party data as opposed to national or industry averages for their emissions estimates.

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See, e.g., letters from American Bankers Association (June 11, 2021); Biotechnology Innovation Organization (June 15, 2021); BNP Paribas; Cardano Risk Management Ltd.; Callevant Consultancy; Chamber of Commerce (June 11, 2021); Credit Roundtable (June 11, 2021); Douglas Hileman Consulting; Environmental Bankers Association (June 9, 2021); Grant Thornton; Virginia Harper Ho; Manulife Investment Management; Mirova US; Morrison & Foerster; NEI Investments (June 11, 2021); New York State Society of Certified Public Accountants; PIMCO; and SIFMA.

See proposed 17 CFR 229.1504(c)(3). We also are proposing a later compliance date for SRGs. See infra Section III.M.

Scope 3 emissions disclosure requirement? For example, should we exempt EGCs, foreign private issuers, or a registrant that is filing or has filed a registration statement for its initial public offering during its most recently completed fiscal year from the Scope 3 disclosure requirement? Instead of an exemption, should we provide a longer phase in for the Scope 3 disclosure requirements for SRCs than for other registrants?

H. Attestation of Scope 1 and Scope 2 Emissions Disclosure

1. Overview

The proposed rules would require a registrant, including a foreign private issuer, that is an accelerated filer or large accelerated filer to include in the relevant filing an attestation report covering the disclosure of its Scope 1 and Scope 2 emissions and to provide certain related disclosures about the service provider. As proposed, the attestation engagement must, at a minimum, be at the following assurance level for the indicated fiscal year for the required GHG emissions disclosure.

<table>
<thead>
<tr>
<th>Filer type</th>
<th>Scopes 1 and 2 GHG disclosure compliance date*</th>
<th>Limited assurance</th>
<th>Reasonable assurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accelerated Filer</td>
<td>Fiscal year 2024 (filed in 2025)</td>
<td>Fiscal year 2025 (filed in 2026)</td>
<td>Fiscal year 2027 (filed in 2028)</td>
</tr>
<tr>
<td>Large Accelerated Filer</td>
<td>Fiscal year 2023 (filed in 2024)</td>
<td>Fiscal year 2024 (filed in 2025)</td>
<td>Fiscal year 2026 (filed in 2027).</td>
</tr>
</tbody>
</table>

* See infra Section II.M for a discussion of the proposed disclosure compliance dates for Scopes 1 and 2 GHG emissions disclosure. If the accelerated filer or the large accelerated filer has a non-calendar year fiscal year-end date that results in its 2024 or 2023 fiscal year, respectively, commencing before the compliance dates of the, it would not be required to comply with proposed GHG emissions disclosure requirements until the following fiscal year (as discussed below in Section II.M). Accordingly, for such filers, the time period for compliance with the corresponding requirement under proposed Item 1505 would be one year later than illustrated above.

During the transition period when limited assurance is required, the proposed rules would permit an accelerated filer or a large accelerated filer, at its option, to obtain reasonable assurance of its Scope 1 and 2 emissions disclosure. For example, an accelerated filer or a large accelerated filer may choose to obtain reasonable assurance such that its GHG emissions disclosure receives the same level of assurance as its financial statements. At its option, an accelerated filer or a large accelerated filer would be able to obtain any level of assurance over its climate-related disclosures that are not required to be assured pursuant to proposed Item 1505(a). For example, an accelerated filer or a large accelerated filer could voluntarily include an attestation report at the limited assurance level for its GHG intensity metrics or its Scope 3 emissions disclosure. To avoid potential confusion, however, the voluntary assurance obtained by such filer would be required to follow the requirements of proposed Item 1505(b)-(d), including using the same assurance standard as the required assurance over Scope 1 and Scope 2. For filings made by accelerated filers and large accelerated filers after the compliance date for the GHG emissions disclosure requirements but before proposed Item 1505(a) requires limited assurance, the filer would only be required to provide the disclosure called for by proposed Item 1505(e). As discussed below in Section II.H.5, a registrant that is not an accelerated filer or a large accelerated filer that obtains voluntary assurance would be required to comply only with proposed Item 1505(e).

Many commenters recommended that we require climate-related disclosures to be subject to some level of assurance to enhance the reliability of the disclosures. Commenters noted that companies are increasingly seeking some type of third-party assurance or “review”) provided over a registrant’s interim financial statements included in a Form 10-Q. We refer to “assurance” broadly when describing the level and scope of assurance to which climate-related disclosures should be subject. Our proposed approach to assurance has been guided by “attestation” standards published by organizations including the PCAOB, AICPA, and the International Auditing and Assurance Standards Board (“IAASB”). Such attestation standards apply to engagements other than audit and review of historical financial statements and have been widely used in the current voluntary ESG and GHG assurance market for a number of years.

561 See proposed 17 CFR 229.1505(a). In order to attest to the Scopes 1 and 2 emissions disclosure, we believe a GHG emissions attestation provider would be required to include in its evaluation relevant contextual information. In particular, the attestation provider would be required to evaluate the registrant’s compliance with (i) proposed Item 1504(a), which includes presentation requirements (e.g., aggregation by each constituent greenhouse gas), (ii) the calculation instructions included in proposed Item 1504(b), and (iii) the disclosure requirements in proposed Item 1504(e) regarding methodology, organizational boundary, and operational boundary. See infra Section II.H.3 for further discussion of the criteria against which the Scopes 1 and 2 emissions disclosure are measured or evaluated.

562 See proposed 17 CFR 229.1505(d).

563 See proposed 17 CFR 229.1505(a)(1).

564 Reasonable assurance is equivalent to the level of assurance provided in an audit of a registrant’s consolidated financial statements included in a Form 10-K. Limited assurance is equivalent to the level of assurance (commonly referred to as a "review") provided over a registrant’s interim financial statements included in a Form 10-Q. We refer to “assurance” broadly when describing the level and scope of assurance to which climate-related disclosures should be subject. Our proposed approach to assurance has been guided by “attestation” standards published by organizations including the PCAOB, AICPA, and the International Auditing and Assurance Standards Board (“IAASB”). Such attestation standards apply to engagements other than audit and review of historical financial statements and have been widely used in the current voluntary ESG and GHG assurance market for a number of years.

565 See proposed 17 CFR 229.1505(a)(2). If the accelerated filer or large accelerated filer was required to obtain reasonable assurance over its Scope 1 and Scope 2 emissions disclosures and the attestation provider chose to follow, for example, the AICPA attestation standards, the accelerated filer or large accelerated filer could voluntarily obtain limited assurance over its GHG intensity metric or Scope 3 emissions disclosures, and the attestation provider would be required to follow the AICPA’s attestation standard for providing limited assurance.

566 See, e.g., letters from AICPA; Americans for Financial Reform Education Fund et al; Andrew Behar; Baillie Gifford; Carbon Tracker Initiative; Cardano Risk Management Ltd.; CDP; Center for American Progress; Center for Audit Quality; Ceres et al.; Climate Disclosure Standards Board; Climate Governance Initiative; Emmanuel Haack; Eti SpA; ERM CVS (recommending limited assurance); George Serafeim; Regenerative Crisis Response Committee; Friends of the Earth, Amazon Watch, and Rainforest Action Network; Hermes Equity Ownership Limited; Impax Asset Management; Institutional Shareholder Services; Interfaith Center on Corporate Responsibility (recommending reasonable assurance); International Corporate Governance Institute; International Organization for Standardization; Morningstar, Inc.; Natural Resources Defense Council; NY City Comptroller; NY State Comptroller; Oxfam America; Pricewaterhouse Coopers; Revolving Door Project; TotalEnergies (recommending limited assurance); Value Balancing Alliance; WBCSD; William and Flora Hewlett Foundation; and World Benchmarking Alliance.
verification over ESG and climate-related disclosures. For example, according to one commenter, 80 percent of S&P 100 companies currently subject certain items of their ESG information, including climate-related disclosures such as greenhouse gas emissions, to some type of third-party assurance or verification. Several commenters recommended that we require climate-related disclosures to be subject to limited assurance, which provides a lower level of assurance than reasonable assurance, but is less costly, and is the most common form of assurance provided for ESG, including climate-related disclosures, in the current voluntary reporting landscape.

One commenter recommended that, at a minimum, we require a registrant to obtain a limited assurance report for its Scopes 1 and 2 emissions disclosure while encouraging optional verification for other ESG metrics.

Another commenter indicated that a limited assurance requirement for climate-related disclosures would be similar to the EU’s Corporate Sustainability Reporting Directive proposal that, if adopted, would initially require companies in the European Union to obtain limited assurance on reported sustainability information with an option to move towards reasonable assurance in the future. One commentator stated the view that, while the professional capacity of audit firms might, at this point, be insufficient to provide reasonable assurance of ESG data, it supported a mandatory limited assurance requirement for climate risk reporting. Other commenters recommended that we require climate-related disclosures to be audited at the reasonable assurance level.

Some commenters, however, opposed any third-party assurance requirement for climate-related disclosures because of the significant cost that these commenters asserted it could impose on public companies, and because, in their view, application of assurance standards to data that is different from traditional financial reporting disclosures, such as GHG emissions, would be a relatively new and evolving field. Some of these commenters indicated that, as a first step, registrants should develop their internal controls and disclosure controls and procedures (“DCP”) to include climate-related disclosures, and defer mandated third-party assurance requirements to a later time.

We recognize that requiring GHG emissions disclosure in Commission filings should enhance the consistency, comparability, and reliability of such disclosures due to the application of DCP and the third-party verification of certain prescriptive elements that may help improve standardization of GHG emissions calculations. Nevertheless, the evolving and unique nature of GHG emissions reporting involves and, in some cases, warrants varying methodologies, differing assumptions, and a substantial amount of estimation. Certain aspects of GHG emissions disclosure also involve reliance on third-party data. As such, 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.

Our rules typically do not require registrants to obtain assurance over disclosure provided outside of the financial statements, including quantitative disclosure. We believe, however, that there are important distinctions between existing quantitative disclosure required to be provided outside of the financial statements and the proposed GHG emissions disclosure. In contrast to GHG emissions disclosure, quantitative disclosure outside of the financial statements typically is derived, at least in part, from the same books and records that are used to generate a registrant’s audited financial statements and accompanying notes and that are subject to ICFR. Accordingly, such quantitative disclosure has been subject to audit procedures as part of the audit of the financial statements in the same filing. Further, the auditor’s read and consider obligation requires an evaluation of this quantitative information based on the information obtained through the audit of the financial statements.

Unlike other quantitative information that is provided outside of the financial statements, GHG emissions disclosure would generally not be developed from information that is included in the registrant’s books and records and, therefore, would not be subjected to audit procedures. In addition, although not an assurance engagement, we have adopted rules requiring an expert to review and provide conclusions on other specialized, quantitative data that is provided outside of the financial statements.

Accordingly, to enhance its reliability, we believe it is appropriate to require that GHG emissions disclosure be subject to third-party attestation. For similar reasons, we also considered proposing to require that management assess and disclose the effectiveness of controls over GHG emissions.

For example, disclosure pursuant to 17 CFR 229.303 (Item 303 of Regulation S–K—MD&A) is derived in part from the same books and records that are subject to ICFR and used to generate a registrant’s audited financial statements and accompanying notes (e.g., the liquidity and capital resources disclosures are anchored to the audited cash flows information disclosed in the financial statements).

Although GHG emissions disclosure would generally not be directly derived from the same books and records that are used to generate a registrant’s audited financial statements and accompanying notes and that are subject to ICFR, GHG emission disclosure, as proposed, would be required to use the same organizational and operational boundaries as the registrant’s financial statement disclosures.

578 See PCAOB AS 21393 Federal Register / Vol. 87, No. 69 / Monday, April 11, 2022 / Proposed Rules 21393
emissions disclosure (apart from the existing requirements with respect to the assessment and effectiveness of DCP). More specifically, in addition to the requirement to assess such controls, we considered whether to require management to include a statement in their annual report regarding their responsibility for the design and evaluation of controls over GHG emissions disclosures, as well as to disclose their conclusion regarding the effectiveness of such controls. We also considered proposing to require a GHG emissions assurance provider’s attestation of the effectiveness of controls over GHG emissions disclosure in addition to the proposed attestation over the Scopes 1 and 2 GHG emissions disclosure. Although both such requirements could further enhance the reliability of the related Scopes 1 and 2 GHG emissions disclosure, we are not currently proposing them at this time. We are, however, continuing to consider these alternatives, including: (i) the need to develop guidance for management on conducting such an assessment and (ii) whether appropriate attestation standards exist. Accordingly, we request comment on these and related issues below.

The Commission has long recognized the important role played by an independent audit in contributing to the reliability of financial reporting.581 Relatedly, studies suggest that investors have greater confidence in information that has been assured, particularly when it is assured at the reasonable assurance level.582 Although a limited assurance engagement provides a lower level of assurance than a reasonable assurance engagement,583 studies of ESG-related assurance, which is typically provided at a limited assurance level, have found benefits such as credibility enhancement, lower cost of equity capital, and lower analyst forecast errors and dispersion.584 Therefore, proposing to require Scope 1 and Scope 2 emissions disclosure by accelerated filers and large accelerated filers be subject to limited assurance initially, with an eventual scaling up to reasonable assurance, could potentially improve both the actual reliability of disclosure and investor confidence in such disclosure.585 Increasing investor demand for consistent, comparable, and reliable climate-related financial information appears to have led a growing number of companies to voluntarily obtain third-party assurance over their climate-related disclosures both within the U.S. and globally. For example, according to one study, 53% of the S&P 500 companies had some form of assurance or verification over climate-related metrics, along with other metrics.586 Another survey of sustainability reporting from 5,200 companies across 52 countries (including the United States) stated that, of the top 100 companies (by revenue), 80% have reporting on ESG (including climate), with up to 61% of those companies also obtaining assurance.587 The prevalence of major companies obtaining assurance related to sustainability assurance in ESG-related information.


583 See, e.g., Ryan J. Casey, et al., Understanding and Contributing to the Enigma of Corporate Social Responsibility (CSR) Assurance in the United States, 34 Auditing: A Journal of Practice and Theory 97, 122 (Feb. 2015) (finding that corporate social responsibility assurance results in lower cost-of-capital along with lower analyst forecast errors and disposition, and that financial analysts find related CSR reports to be more credible when independently assured). See also infra note 592 for statistics illustrating that limited assurance is more commonly obtained voluntarily in the current market than reasonable assurance over ESG-related information.

584 See, e.g., letter from Institute for Policy Integrity, Environmental Defense Fund, Initiative on Climate Risk & Resilience Law (“Voluntary frameworks typically lack independent auditing requirements, which is one reason many investors perceive current disclosures to be unreliable or uneven.”). See also EVORA Global and SIERA, Investor Survey 2021: Part 2 ESG Data Challenge (2021), 7, available at https://evorglobal.com/wp-content/uploads/2021/12/ESG-Data-Challenge- Investor-Survey-Part-2.pdf (“Investors are integrating ESG across the investment lifecycle, for the purposes of strategy, reporting, peer benchmarking, etc., however the majority (86%) are not sure of their ESG data quality. About 52% of the investors consider that their ESG data is partially investment-grade.”); State Street Global Advisors, The ESG Benchmark Gap: Meeting the Investor Demand for ESG Data Quality (2019), available at https://www.ssga.com/investment-topics/environmental-social-governance/2019/03/ esg-data-challenge.pdf.


589 See CAQ, 52% of 5,200 Companies Have Some Form of Assurance or Verification Over Climate-related Metrics (March 2021), available at https://www.caq.org/news/52-of-5200-companies-have-some-form-of-assurance-or-verification-over-climate-related-metrics-


591 See note 604 for a discussion of the key differences between limited and reasonable assurance engagements
developed by accreditation bodies with notice and public comment and other robust due process procedures for standard setting, while other service providers may use privately developed “verification” standards.

To improve accuracy, comparability, and consistency with respect to the proposed GHG emissions disclosure, we are proposing to require a minimum level of attestation services for accelerated filers and large accelerated filers including: (1) Limited assurance for Scopes 1 and 2 emissions disclosure that scales up to reasonable assurance after a specified transition period; (2) minimum qualifications and independence requirements for the attestation service provider; and (3) minimum requirements for the accompanying attestation report. These proposed requirements would be minimum standards that the GHG emissions attestation provider engaged by accelerated filers and large accelerated filers must meet, but, as mentioned above, would not prevent a registrant from obtaining a heightened level of assurance over its climate-related disclosures (prior to the transition to reasonable assurance) or to obtain assurance over climate-related disclosures other than Scope 1 and Scope 2 emissions.

By specifying minimum standards for the attestation provided with respect to GHG emissions disclosure by accelerated filers and large accelerated filers, the proposed rules should improve accuracy and consistency in the reporting of this information, while also providing investors with an enhanced level of reliability against which to evaluate the disclosure. In addition to the proposed minimum standards for attestation services, the proposed additional disclosure requirements for registrants, described below, should further assist investors in understanding the qualifications and suitability of the GHG emissions attestation provider selected by the registrant, particularly in light of the broad spectrum of attestation providers that would be permitted to provide attestation services under the proposed rules.

Although we are proposing certain minimum standards for attestation services, this proposal does not aim to create or adopt a specific attestation standard for assuring GHG emissions, just as this proposal does not define a single methodology for calculating GHG emissions. This is because both the reporting and attestation landscapes are currently evolving and it would be premature to adopt one approach and potentially curtail future innovations in these two areas. The evolving nature of GHG emissions calculations and attestation standards could suggest that it may also be premature to require assurance. We are soliciting comment on the feasibility of our proposal and will consider any public feedback received, but we have preliminarily determined that the phased-in approach that we are proposing, along with an extended time period for disclosure compliance for accelerated filers, balances the benefits of third-party assurance in this evolving space.

The proposed minimum standards for attestation services and the proposed additional disclosure requirements would not eliminate fragmentation with respect to assurance or obviate the need for investors to assess and compare multiple attestation standards. Nevertheless, we believe some flexibility in our approach is warranted at this time given the unique and evolving nature of third-party assurance for climate-related disclosures. We believe the proposed minimum standards and additional disclosure requirements would enable investors to better understand the assurance that has been provided.

We are cognizant of the fact that the calculation and disclosure of GHG emissions would be new for many registrants, as would be the application of assurance standards to GHG emissions disclosure. For these reasons and the reasons discussed in greater detail below, we are proposing to require assurance (1) only for accelerated filers and large accelerated filers, (2) only with respect to Scope 1 and Scope 2 emissions, and (3) with an initial transition period for limited assurance and a subsequent transition period for reasonable assurance.

Although we have considered the challenges that mandatory assurance of GHG emissions disclosure could present, accelerated filers and large accelerated filers should have the necessary resources to devote to complying with such requirements over the proposed implementation timetable. For the many accelerated filers that are already voluntarily obtaining some form of assurance over their GHG emissions, any cost increases associated with complying with the proposed rules would be mitigated. Furthermore, larger issuers generally bear proportionately lower compliance costs than smaller issuers due to the fixed cost components of such compliance.

The proposed transition periods would also provide existing accelerated filers and large accelerated filers one fiscal year to transition to limited assurance and two additional fiscal years to transition to reasonable assurance. For existing accelerated filers, this transition period would be in addition to the one additional year they will have to comply with the Scopes 1 and 2 emission disclosure requirements (compared to large accelerated filers). As such, these filers would have significant time to develop processes to support their GHG emissions disclosure requirements and the relevant DCP, as well as to adjust to the incremental costs and efforts associated with escalating levels of assurance. During this transition period, GHG emissions attestation providers would also have time to prepare themselves for providing such services in connection with Commission filings.

In addition to the challenges posed by the newness of calculating and disclosing GHG emissions, we believe that only requiring assurance over Scope 1 and Scope 2 emissions would be appropriate because the emissions result directly or indirectly from

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590 See infra Section I.H.3.
591 See, e.g., CAQ, S&P 500 and ESG Reporting (Aug. 9, 2021) (pointing to the use of assurance methodologies developed by individual service providers, which in some cases were based on IAASB International Standard on Assurance Engagements (ISAE 3000 with modifications).
592 See, e.g., CAQ, S&P 500 and ESG Reporting (Aug. 9, 2021) (providing statistics on limited assurance versus reasonable assurance obtained voluntarily in the current market (e.g., at least 26 of 31 companies that obtained assurance from public company auditors obtained limited assurance; at least 174 of 235 companies that obtained assurance or verification from other service providers (non-public company auditors) obtained limited assurance)). For similar information on the S&P 100, see CAQ, S&P 100 and ESG Reporting (Apr. 28, 2021), available at https://www.thecaq.org/sp-100-and-esg-reporting/. Based on an analysis by Commission staff on Mar. 3, 2022, a substantial number of the S&P 500 companies (460+) are large accelerated filers and therefore would be subject to the proposed assurance requirements.
593 See infra note 955 in Section IV.C of the Economic Analysis for further discussion on proportionate costs between different types of filers.
594 See infra note 604 for a discussion of the key differences between limited and reasonable assurance engagements.
595 By limiting the assurance requirements to accelerated filers and large accelerated filers, a new registrant would not be required to provide assurance until it has been subject to the requirements of Section 13(a) or 15(d) of the Exchange Act for a period of at least twelve calendar months and it has filed at least one annual report pursuant to Section 13(a) or 15(d) of the Exchange Act. See 17 CFR 240.12b–2. Therefore, no registrant would be required to provide assurance covering its GHG emissions disclosure during an initial public offering. However, any registrant that voluntarily includes an attestation report for GHG emissions disclosure would be required to comply with proposed Item 1505(e).
facilities owned or activities controlled by a registrant, which makes it relatively more accessible and easier to subject to the registrant’s DCP compared to Scope 3 data. Further, as discussed earlier, many registrants already voluntarily seek assurance over their GHG emissions disclosure (predominately Scope 1 and Scope 2 disclosures),596 which further supports the feasibility and readiness of Scope 1 and Scope 2 emissions disclosure for mandatory assurance. In contrast, we are not proposing to require assurance of Scope 3 emissions disclosure at this time because the preparation of such disclosure presents unique challenges.597 Depending on the size and complexity of a company and its value chain, the task of calculating Scope 3 emissions could be relatively more burdensome and expensive than calculating Scope 1 and Scope 2 emissions. In particular, it may be difficult to obtain activity data from suppliers, customers, and other third parties in a registrant’s value chain, or to verify the accuracy of that information compared to disclosures of Scope 1 and Scope 2 emissions data, which are more readily available to a registrant.

We are proposing to require accelerated filers and large accelerated filers to obtain limited assurance, with an eventual scaling up to reasonable assurance. The objective of a limited assurance engagement is for the service provider to express a conclusion about whether it is aware of any material modifications that should be made to the subject matter (e.g., the Scopes 1 and 2 emissions disclosure) in order for it to be fairly stated or in accordance with the relevant criteria (e.g., the methodology and other disclosure requirements specified in proposed 17 CFR 229.1504 (Item 1504 of Regulation S–K)).598 In such engagements, the conclusion is expressed in the form of negative assurance regarding whether any material misstatements have been identified.599 In contrast, the objective of a reasonable assurance engagement, which is the same level of assurance provided in an audit of a registrant’s consolidated financial statements, is to express an opinion on whether the subject matter is in accordance with the relevant criteria, in all material respects. A reasonable assurance opinion provides positive assurance that the subject matter is free from material misstatement.600

Reasonable assurance is feasible whenever limited assurance can be provided on an upwards reconciliation and as noted above the voluntary attestation obtained by some registrants has been at the reasonable assurance level.601 We understand, however, that a limited assurance engagement is less extensive and is currently the level of assurance most commonly provided602 in the voluntary assurance market for climate-related disclosure.603 Therefore, prior to the transition to reasonable assurance, the additional compliance efforts required to comply with the proposed assurance requirement should be limited for the many registrants that—according to commenters and others—are already obtaining limited assurance for their climate-related disclosures.604 Furthermore, although reasonable assurance provides a significantly higher level of assurance than limited assurance, we believe limited assurance would benefit investors during the initial transition period by enhancing the reliability of a registrant’s Scopes 1 and 2 emissions disclosure, in light of the benefits that assurance provides, as discussed above. Moreover, under the proposed rules, accelerated filers and large accelerated filers would not be prevented from obtaining reasonable assurance for their climate disclosures earlier than required. After the transition to mandatory reasonable assurance, investors would have the benefits of a higher level of assurance with smaller incremental costs to accelerated filers and large accelerated filers than moving directly to a reasonable assurance requirement.

Request for Comment

135. Should we require accelerated filers and large accelerated filers to obtain an attestation report covering their Scope 1 and Scope 2 emissions disclosure, as proposed? Should we require accelerated filers and large accelerated filers to obtain an attestation report covering other aspects of their climate-related disclosures beyond Scope 1 and 2 emissions? For example, should we also require the attestation of GHG intensity metrics, or of Scope 3 emissions? 605


596 The scope of work in a limited assurance engagement is substantially less than a reasonable assurance engagement. The primary difference between the two levels of assurance relates to the nature, timing, and extent of procedures required to obtain sufficient, appropriate evidence to support the limited assurance conclusion or reasonable assurance opinion. Limited assurance engagements primarily include procedures such as inquiries and analytical procedures and do not necessarily include a consideration of the design or effectiveness of internal controls that have been effectively designed, whereas reasonable assurance engagements require the assurance service provider to consider and obtain an understanding of internal controls. More extensive testing procedures beyond inquiries and analytical procedures, including recalibration and verification of underlying data inputs, are also required in reasonable assurance engagements, such as inspecting source documents that support transactions selected on a sample basis. Driven by these differences, the cost of limited assurance is generally lower than that of reasonable assurance.

597 See letters from CAQ and Energy Infrastructure Council; supra note 592 (providing statistics on voluntary assurance obtained by S&P 100 and S&P 500 companies).
emissions, if disclosed? Conversely, should we require accelerated filers and large accelerated filers to obtain assurance covering only Scope 1 emissions disclosure? Should any voluntary assurance obtained by these registrants be phased-in over time? If so, what time frame? Should we require all Scope 3 emissions disclosure to be subject to assurance or only certain categories of Scope 3 emissions? Would it be possible for accelerated filers and large accelerated filers to obtain an attestation report covering the process or methodology for calculating Scope 3 emissions rather than obtaining an attestation report covering the calculations of Scope 3 emissions? Alternatively, is there another form of verification of Scope 3 disclosure that would be more appropriate than obtaining an attestation report?

137. Should the attestation requirement be limited to accelerated filers and large accelerated filers, as proposed? Alternatively, should the attestation requirement be limited to a subset of accelerated filers and large accelerated filers? If so, what conditions should apply? Should the attestation requirement only apply to well-known seasoned issuers? Should the attestation requirement also apply to other types of registrants? Should we create a new test for determining whether the attestation requirements apply to a registrant that would take into account the resources of the registrant and also apply to initial public offerings? For example, should we create a test similar to the SRC definition, which includes a separate determination for initial registration statements, but using higher public float and annual revenue amounts?

138. Instead of requiring only accelerated filers and large accelerated filers to include an attestation report for Scope 1 and Scope 2 emissions, should the proposed attestation requirements also apply to registrants other than accelerated filers and large accelerated filers? If so, should the requirement apply only after a specified transition period? Should such registrants be required to provide assurance at the same level as accelerated filers and large accelerated filers and over the same scope of GHG emissions disclosure, or should we impose lesser requirements (e.g., only limited assurance and/or assurance over Scope 1 emissions disclosure only)?

139. Should we require accelerated filers and large accelerated filers to initially include attestation reports reflecting attestation engagements at a limited assurance level, eventually increasing to a reasonable assurance level, as proposed? What level of assurance should apply to the proposed GHG emissions disclosure, if any, and when should that level apply? Should we provide a one fiscal year transition period between when limited assurance would be required for accelerated filers and large accelerated filers, as proposed? Should we provide an additional two fiscal year transition period between when limited assurance is first required and when reasonable assurance is required for accelerated filers and large accelerated filers, as proposed?

140. Should we provide the same transition periods (from the Scopes 1 and 2 emissions disclosure compliance date) for accelerated filers and large accelerated filers, as proposed? Instead, should different transition periods apply to accelerated filers and large accelerated filers? Should we provide transition periods with different lengths than those proposed? Should we require the attestation to be at a reasonable assurance level without having a transition period where only limited assurance is required? Should we instead impose assurance requirements to coincide with reporting compliance periods?

141. Under prevailing attestation standards, “limited assurance” and “reasonable assurance” are defined terms that we believe are generally understood in the marketplace, both by those seeking and those engaged to provide such assurance. As a result, we have not proposed definitions of those terms. Should we define “limited assurance” and “reasonable assurance” and, if so, how should we define them? Would providing definitions in this context cause confusion in other attestation engagements not covered by the proposed rules? Are the differences between these types of attestation engagements sufficiently clear without providing definitions?

142. As proposed, there would be no requirement for a registrant to either provide a separate assessment and disclosure of the effectiveness of controls over GHG emissions disclosure by management or obtain an attestation report from a GHG emissions attestation provider specifically covering the effectiveness of controls over GHG emissions disclosure. Should we require accelerated filers and large accelerated filers to provide a separate management assessment and disclosure of the effectiveness of controls over GHG emissions disclosure (separate from the existing requirements with respect to the assessment and effectiveness of DCP)? Should we require management to provide a statement in their annual report on their responsibility for the design and evaluation of controls over GHG emissions disclosure and to disclose their conclusion regarding the effectiveness of such controls? Instead of, or in addition to, such management assessment and statement, should we require the registrant to obtain an attestation report from a GHG emissions attestation provider that covers the effectiveness of such GHG emissions controls as of the date when the accelerated filer or large accelerated filer is required to comply with the reasonable assurance requirement under proposed Item 1505(a)? If so:

(i) Would it be confusing to apply either such requirement in light of the existing DCP requirements that would apply to the proposed GHG emissions disclosure?

(ii) Would a separate management assessment and statement on the effectiveness of controls over GHG emissions provide meaningful disclosure to investors beyond the existing requirement for DCP?

(iii) Should we specify that the separate management assessment and statement must be provided by the accelerated filer’s or large accelerated filer’s principal executive and principal financial officers, or persons performing similar functions? Should we clarify which members of the accelerated filer or large accelerated filer’s management should be involved in performing the underlying assessment?

(iv) What controls framework(s) would the effectiveness of the registrant’s controls over GHG emissions disclosure be evaluated against, if any?

(v) For the GHG emissions attestation provider, what requirements should be applied to such GHG emissions disclosure controls attestation requirement? For example, what attestation standards should apply? Should other service provider(s) in addition to or in lieu of the GHG emissions attestation provider be permitted to provide such attestation over the effectiveness of the GHG controls?

(vi) Should we limit such a requirement to accelerated filers and

606 See 17 CFR 230.405 (defining “well-known seasoned issuer”).

large accelerated filers only or should it apply to other registrants as well? (vii) What would be the potential benefits and costs of either approach? (viii) Should we require a certification on the design and evaluation of controls over GHG emissions disclosures by officers serving in the principal executive and principal financial officer roles or persons performing similar functions for an accelerated filer or large accelerated filer? Would a certification requirement have any additional benefits or impose any additional costs when compared to a requirement for management to assess and disclose in a statement in the annual report the effectiveness of controls over GHG emissions? 143. We considered whether to require registrants to include the GHG emissions metrics in the notes or a separate schedule to their financial statements, by amending Regulation S–X instead of Regulation S–K. (i) Would there be benefits to including this information in a registrant’s financial statements? For example, would requiring the GHG emissions disclosure to be included in the financial statements improve the consistency, comparability, reliability, and decision-usefulness of the information for investors? Would it facilitate the integration of GHG metrics and targets into the registrant’s financial analysis? Would such placement cause registrants to incur significantly more expense in obtaining an audit of the disclosure? If so, please quantify those additional expenses where possible. (ii) Should we require a registrant to include the GHG emissions disclosure in its audited financial statements so that the disclosure would be subject to the existing requirements for an independent audit and ICFR? If so, we seek comment on the following aspects of this alternative: (a) If GHG emissions disclosure is subject to ICFR, or an internal control framework similar to ICFR, would GHG emissions disclosure be more reliable compared to what is currently proposed? What are the benefits or costs? (b) Should the GHG emissions disclosure be included in a note to the registrant’s financial statements (e.g., in the note where the proposed financial statement metrics as discussed above in Section II.F would be included) or in a schedule, or somewhere else? If the GHG emissions disclosure was required in the financial statements, should it be subject to a reasonable assurance audit like the evaluation in the financial statements? If in a schedule, should the GHG emissions disclosure be disclosed in a schedule similar to those required under Article 12 of Regulation S–X, which would subject the disclosure to audit and ICFR requirements? Should we instead require the metrics to be disclosed as supplemental financial information, similar to the disclosure requirements under FASB ASC Topic 932–235–50–2 for registrants that have significant oil- and gas-producing activities? If so, should such supplemental schedule be subject to ICFR requirements? Instead of requiring the GHG emissions disclosure to be included in a note to the registrant’s audited financial statements, should we require a new financial statement for such metrics? (c) PCAOB auditing standards apply to the audit of a registrant’s financial statements. If GHG emissions disclosure is included in a supplemental schedule to the financial statements, should we allow other auditing standards to be applied? If so, which ones? What, if any, additional guidance or revisions to such standards would be needed in order to apply them to the audit of GHG emissions disclosure? (d) What are the costs and benefits of employing registered public accounting firms to perform audits of GHG emissions disclosure and related attestation of internal controls? Are there potential cost savings in employing registered public accountants that currently perform audits of financial statements and attestation of ICFR to review GHG emissions disclosure and any related internal controls? If we require GHG emissions disclosure to be presented in the financial statements, should we permit entities other than registered public accounting firms to provide assurance of this information, as proposed for the current attestation requirements under Regulation S–K? If not limited to registered public accounting firms, who should be permitted to provide assurance of GHG emissions disclosure? Should we permit environmental consultants, engineering firms, or other types of specialists to provide assurance? What are the costs and benefits of such approach? Would the reliability of the audits and therefore the information disclosed be affected if assurance providers other than registered public accounting firms are permitted to conduct these audits? Please provide supporting data where possible. If we should allow for assurance providers that are not registered public accounting firms, what qualifications and oversight should they have, and what requirements should we impose on them? Should we direct the PCAOB to develop a separate registration process for service providers that are not otherwise registered? What expertise, independence and quality control standards should apply? (e) What would be the other potential benefits and costs of such an approach? 2. GHG Emissions Attestation Provider Requirements The proposed rules would require the GHG emissions attestation report required by proposed Item 1505(a) for accelerated filers and large accelerated filers to be prepared and signed by a GHG emissions attestation provider.608 The proposed rules would define a GHG emissions attestation provider to mean a person or a firm that has all of the following characteristics: • Is an expert in GHG emissions by virtue of having significant experience in measuring, analyzing, reporting, or attesting to GHG emissions. Significant experience means having sufficient competence and capabilities necessary to: o perform engagements in accordance with professional standards and applicable legal and regulatory requirements; and o enable the service provider to issue reports that are appropriate under the circumstances,609 • Is independent with respect to the registrant, and any of its affiliates,610 for whom it is providing the attestation report, during the attestation and professional engagement period.611 The proposed expertise requirement is intended to help ensure that the service provider preparing the attestation report has sufficient competence and capabilities necessary to execute the attestation engagement. In this regard, if the service provider is a firm, we would expect that it have policies and procedures designed to provide it with reasonable assurance that the personnel selected to conduct the GHG emissions attestation engagement have significant experience with respect to both attestation engagements and GHG disclosure. This would mean that the service provider has the qualifications necessary for fulfillment of the responsibilities that it would be called on to assume, including the appropriate engagement of

608 See proposed 17 CFR 229.1505(b). 609 See proposed 17 CFR 229.1505(b)(1). 610 “Affiliates,” for purposes of proposed 17 CFR 229.1505 has the meaning provided in 17 CFR 210.2–01, except references to “audit” are deemed to be references to the attestation services provided pursuant to this section. See proposed 17 CFR 229.1505(b)(2)(iii). 611 See proposed 17 CFR 229.1505(b)(2) and 229.1505(b)(2)(v) (defining the term “attestation and professional engagement period”).
specialists, if needed.612 The proposed expertise requirement would apply to the person or the firm signing the GHG emissions attestation report.613

The second proposed requirement is modeled on the Commission’s qualifications for accountants under 17 CFR 210.2–01 (Rule 2–01 of Regulation S–X), which are designed to ensure that auditors are independent of their audit clients. Similar to how assurance provided by independent public accountants improves the reliability of financial statements and disclosures and is a critical component of our capital markets, assurance of GHG emissions disclosure by independent service providers should also improve the reliability of such disclosure. Academic studies demonstrate that assurance provided by an independent auditor reduces the risk that an entity provides materially inaccurate information to external parties, including investors, by facilitating the dissemination of transparent and reliable financial information.614 615 We expect that GHG emissions disclosure would similarly benefit if assured by an independent service provider. Moreover, the potential conflicts of interest, or even the appearance of such conflicts of interest, between the GHG emissions attestation provider and the registrant could raise doubts for investors about whether they can rely on the attestation service and its report.616

Similar to Rule 2–01 of Regulation S–X,617 the proposed rules would provide that a GHG emissions attestation provider is not independent if during the attestation and professional engagement period such attestation provider is not, or a reasonable investor with knowledge of all relevant facts and circumstances would conclude that such attestation provider is not, capable of exercising objective and impartial judgment on all issues encompassed within the attestation provider’s engagement.618 The proposed definition for the attestation and professional engagement period, which is modeled on Rule 2–01 of Regulation S–X, includes both (1) the period covered by the attestation report and (2) the period of the engagement to attest to the registrant’s GHG emissions or to prepare a report filed with the Commission (the “professional engagement period”).

Under the proposed rules, the professional engagement period would begin when the GHG emissions attestation service provider either signs an initial engagement letter (or other agreement to attest to a registrant’s GHG emissions) or begins attest procedures, whichever is earlier.619

The proposed rules would further state that, in determining whether a GHG emissions attestation provider is independent, the Commission will consider:

• Whether a relationship or the provision of a service creates a mutual or conflicting interest between the attestation provider and the registrant (or any of its affiliates), places the attestation provider in the position of attesting to such attestation provider’s own work, results in the attestation provider acting as management or an employee of the registrant (or any of its affiliates) when the attest provider to exercise due diligence with respect to its obligations under a limited engagement letter or reasonable assurance engagement.620

These proposed provisions are modeled on the factors used by the Commission in determining whether an accountant is independent.621 Similar to Rule 2–01 of Regulation S–X, the proposed provisions should help protect investors by requiring the GHG emissions attestation provider to be independent both in fact and appearance from the registrant, including its affiliates.

Because the GHG emissions attestation provider would be a person whose profession gives authority to the statements made in the attestation report and who is named as having provided an attestation report that is part of the registration statement, the registrant would be required to obtain and include the written consent of the GHG emissions attestation provider pursuant to Securities Act Section 7,622 the corresponding rule requiring the written consents of such experts,623 and the Regulation S–K provision requiring the attachment of the written consent of an expert to a Securities Act registration statement.624 The GHG emissions attestation provider would also be subject to liability under the federal securities laws for the attestation conclusion or, when applicable, opinion provided. Such liability should encourage the attestation service provider to exercise due diligence with respect to its obligations under a limited or reasonable assurance engagement.

Request for Comment

144. Should we require a registrant to obtain a GHG emissions attestation report that is provided by a GHG emissions attestation provider that meets specified requirements, as proposed? Should one of the requirements be that the attestation provider is an expert in GHG emissions, with significant experience in measuring, analyzing, reporting, or attesting to GHG emissions, as proposed? Should we specify that significant experience means having sufficient competence and capabilities?
necessary to: (a) Perform engagements in accordance with professional standards and applicable legal and regulatory requirements and (b) enable the service provider to issue reports that are appropriate under the circumstances, as proposed? Should we instead require that the GHG emissions attestation provider have a specified number of years of the requisite type of experience, such as 1, 3, 5, or more years? Should we specify that a GHG emissions attestation provider meets the expertise qualifications and characteristics of an expert under the proposed rules? For example, should we include a provision that requires a GHG emissions attestation provider that is a firm to have established policies and procedures designed to provide it with reasonable assurance that the personnel selected to provide the GHG attestation service have the qualifications necessary for fulfillment of the responsibilities that the GHG emissions attestation provider will be called on to assume, including the appropriate engagement of specialists, if needed? Should we require that the GHG emissions attestation provider be independent with respect to the registrant, and any of its affiliates, for whom it is providing the attestation report, as proposed? Should we specify that a GHG emissions attestation provider is not independent if such attestation provider is not, or a reasonable investor with knowledge of all relevant facts and circumstances would conclude that such attestation provider is not, capable of exercising objective and impartial judgment on all issues encompassed within the attestation provider’s engagement, as proposed? The proposed provision is based on a similar provision regarding the qualification of an accountant to be an independent auditor under Rule 2–01 of Regulation S–X. Is Rule 2–01 an appropriate model for determining the independence of a GHG emissions attestation provider? Is being independent from a registrant and its affiliates an appropriate qualification for a GHG emissions attestation provider? Should we specify the factors the Commission would consider in determining whether a GHG emissions attestation provider is independent include whether a relationship or the provision of a service creates a mutual or conflicting interest between the attestation provider and the registrant, including its affiliates, places the attestation provider in the position of attesting to such attestation provider’s own work, results in the attestation provider acting as management or an employee of the registrant, including its affiliates, or places the attestation provider in a position of being an advocate for the registrant and its affiliates, as proposed? Should we specify that the Commission will consider all relevant circumstances, including all financial and other relationships between the attestation provider and the registrant, including its affiliates, and not just those relating to reports filed with the Commission, as proposed? Should we adopt all of the proposed factors for determining the independence of a GHG emissions attestation provider, or are there factors we should omit? Are there any additional factors that we should specify that the Commission will consider when determining the independence of a GHG emissions attestation provider? For example, should we include any non-exclusive specifications of circumstances that would be inconsistent with the independence requirements, similar to those provided in 17 CFR 210.2–01(c) (Rule 2–01(c) of Regulation S–X)? Should the definition of “affiliates” be modeled on Rule 2–01, as proposed, or should we define differently? Would defining the term differently than proposed cause confusion because the rest of the proposed independence requirement is modeled on Rule 2–01? Many accountants are likely familiar with the proposed definition and their required compliance with Rule 2–01, would non-accountants understand how to comply with and apply this concept? Should the term “attestation and professional engagement period” be defined in the proposed manner? If not, how should “attestation and professional engagement period” be defined? Alternatively, should the Commission specify a different time period during which an attestation provider must meet the proposed independence requirements? Should we require disclosure requirements when there is a change in, or disagreement with, the registrant’s GHG emissions attestation provider that are similar to the disclosure requirements in Item 4.01 of Form 8–K and 17 CFR 229.304 (Item 304 of Regulation S–K)? Accountants are already required to comply with the relevant quality control and management standards when providing audit and attest services under the PCAOB, AICPA, or IAASB standards. These quality control and management standards would apply to accountants providing GHG attestation services pursuant to those standards as well. Should we require the GHG emissions attestation provider to comply with additional minimum quality control requirements (e.g., acceptance and continuance of engagements, engagement performance, professional code of conduct, and ethical requirements) to provide greater consistency over the quality of service provided by GHG emissions attestation providers who do not (or cannot) use the PCAOB, AICPA, or IAASB attestation standards? If so, what should the minimum requirements be? As proposed, the GHG emissions attestation provider would be a person whose profession gives authority to statements made in the attestation report and who is named as having provided an attestation report that is part of the registration statement, and therefore the registrant would be required to obtain and include the written consent of the GHG emissions attestation provider pursuant to Securities Act Section 7 and related Commission rules. This would subject the GHG emissions attestation provider to potential liability under Section 11 of the Securities Act. Would the possibility of Section 11 liability deter qualified persons from serving as GHG emissions attestation providers? Should we require the report on GHG emissions at the limited assurance level by a GHG emissions attestation provider that has reviewed such information is not considered part of a registration statement prepared or certified by a person whose profession gives authority to a statement made by him or a report prepared or certified by such person within the meaning of Section 7 and 11 of the Act? 3. GHG Emissions Attestation

Engagement and Report Requirements

The proposed rules would require the attestation report required by proposed Item 1505(a) for accelerated filers and large accelerated filers to be included in the separately-captioned “Climate-Related Disclosure” section in the
relevant filing and provided pursuant to standards that are publicly available at no cost and are established by a body or group that has followed due process procedures, including the broad distribution of the framework for public comment. The requirement that the standards be established by a body or group that has followed due process procedures would be similar to the requirements for determining a suitable, recognized control framework for use in management’s evaluation of an issuer’s ICFR. In both cases, a specific framework is not prescribed but minimum requirements for what constitutes a suitable framework are provided. This approach would help to ensure that the standards upon which the attestation engagement and report are based are the result of a transparent, public, and reasoned process. This requirement should also help to protect investors who may rely on the attestation report by limiting the standards to those that have been sufficiently developed. Rather than prescribe a particular attestation standard, the proposed approach recognizes that more than one suitable attestation standard exists and that others may develop in the future.

In our view, the attestation standards, for example, of the PCAOB, AICPA, and IAASB would meet this due process requirement. In addition, all of these attestation standards are publicly available at no cost to investors who desire to review them. We believe that open access is an important consideration when determining the suitability of attestation standards for application to GHG emissions disclosure because it would enable investors to evaluate the report against the requirements of the selected attestation standard. By highlighting these standards, we do not mean to imply that other standards currently used in voluntary reporting would not be suitable for use under the proposed rules. Our proposal intends to set minimum standards while acknowledging the current voluntary practices of registrants. As noted below, we seek comment on whether other standards currently used in the voluntary climate-related assurance market or that are otherwise under development would meet the proposed due process requirement and also be suitable for application to GHG emissions under the Commission’s proposed rules.

The proposed rules would not include any requirement for a registrant to obtain an attestation report covering the effectiveness of internal controls over GHG emissions disclosure, and therefore such a report would not be required even when the GHG emissions attestation engagement is performed at a reasonable assurance level. Given the current evolving state of GHG emissions reporting and assurance, we believe that existing DCP obligations, and the proposed requirement that accelerated filers and large accelerated filers initially obtain at least limited assurance of such disclosure, are appropriate first steps toward enhancing the reliability of GHG emissions disclosure. We also note that, under prevailing attestation standards for limited assurance engagements, the testing of and attestation over internal controls are not required. With respect to the eventual reasonable assurance engagements, while there are requirements under prevailing attestation standards to consider and obtain an understanding of internal controls, there is no required attestation of the effectiveness of internal controls such as that included in Section 404(b) of the Sarbanes-Oxley Act of 2002 (Sarbanes-Oxley Act).

We recognize that the attestation standards that a GHG emissions attestation provider may use would have specific requirements for the form and content of attestation reports. The proposed rules would require a GHG emissions attestation provider to follow the specific requirements regarding form and content of the reports set forth by the attestation standard (or standards) used by such attestation provider. Nevertheless, in order to provide some standardization and comparability of GHG emissions attestation reports, the proposed rules would impose minimum requirements for the GHG emissions attestation report. In particular, such minimum report requirements would provide investors with consistent and comparable information about the GHG emissions attestation engagement and report obtained by the registrant when the engagement is conducted by a GHG emissions attestation provider using an attestation standard that may be less widely used or that has less robust report requirements than more prevalent standards.

The proposed minimum attestation engagement and report requirements are primarily derived from the AICPA’s attestation standards (e.g., SSAE No. 18), which are commonly used by accountants who currently provide GHG attestation engagement services as well as other non-GHG-related attestation engagement services, and are largely similar to the report requirements under PCAOB AT–101 and IAASB ISAE 3410. Many of the following proposed minimum attestation report requirements are also elements of an accountant’s report when attesting to internal control over financial reporting, of an accountant’s report on audited financial statements (which is conducted at a reasonable assurance level), or of a review report on interim financial statements (which is conducted at a limited assurance level). We explain below each of the proposed minimum components of a GHG emissions attestation report. These are all common elements of current assurance reports and are also similar to elements of other expert reports and legal opinions provided in Commission filings and other transactions.

As proposed, the GHG emissions attestation report would be required to include an identification or description of the subject matter or assertion on which the attestation provider is
Scopes 1 and 2 emissions disclosure, the identified criteria would include the requirements in proposed Item 1504 of Regulation S–K and, in particular, Item 1504(a), which includes presentation requirements such as disaggregation by each constituent greenhouse gas. The identified criteria would also include Item 1504(b) and the applicable instructions in Item 1504(e) regarding methodology, organizational boundary, and operational boundary. In other words, this minimum requirement would require an attestation provider to refer to the requirements with which the registrant must comply when making the disclosure that is subject to the attestation. Without the frame of reference provided by the identified criteria, the conclusion or opinion included in the report may be open to individual interpretation and misunderstanding by investors.

Prevailing attestation standards require the criteria against which the subject matter is measured or evaluated to be “suitable.” In the context of the proposed rules, suitable criteria would, when followed, result in reasonably consistent measurement or evaluation of the registrant’s disclosure that is within the scope of the engagement. Characteristics of suitable criteria include relevance, objectivity, measurability, and completeness.638 We believe that proposed Item 1504 of Regulation S–K would satisfy the suitable criteria requirements of the prevailing attestation standards because the proposed requirements set forth relevant, objective standards that call for measurable and complete disclosure of GHG emissions that would allow for a consistent evaluation of the registrant’s disclosure.

The GHG emissions attestation report would further be required to include a statement that identifies the level of assurance provided and describes the nature of the attestation engagement.639 For example, under the proposed rule, an attestation report providing limited assurance would need to include not only a statement that limited assurance is the provided level of assurance, but also would need to describe the scope of work performed in a limited assurance engagement, which typically would indicate that the procedures performed vary in nature, timing, and extent compared to a reasonable assurance engagement. This proposed minimum requirement would help investors understand the level of assurance provided.

The proposed rules would require the attestation report to include a statement that identifies the attestation standard (or standards) used.640 As previously discussed, the standard used must be publicly available at no cost and have been established by a body or group that has followed due process procedures, including the broad distribution of the framework for public comment.641 This minimum report requirement would allow investors to easily identify the attestation standard that the engagement is executed against, which is particularly important because the proposed rules do not prescribe a particular attestation standard.

Understanding the attestation standard used would allow investors to better understand the attestation performed by evaluating the report against the attestation standard’s requirements and would facilitate comparability across the attestation reports of different registrants.

The attestation report would also be required to include a statement that describes the registrant’s responsibility to report on the subject matter or assertion being reported on in order to make it clear to investors who is ultimately responsible for the disclosure.642 At a minimum, this proposed provision would require a statement that the registrant is responsible for the subject matter, or its assertion on the subject matter. This proposed requirement, like all of the minimum requirements, has corollaries outside of the GHG emissions context. For example, an independent auditor’s audit report on a registrant’s financial statements is required to include a statement that the registrant’s management is responsible for the financial statements that are being audited.643

The proposed rules would further require the attestation report to include a statement that describes the attestation provider’s responsibilities in connection with the preparation of the attestation report.644 This is consistent with existing requirements in reports such as those issued by the independent auditor on the audited financial statements or a review report on the interim financial statements. For example, with respect to

633 See proposed 17 CFR 229.1505(c)(1).
634 See, e.g., AICPA SSAE No. 22, AT–C § 210.45(c); AICPA SSAE No. 21, AT–C § 205.63(c).
635 See proposed 17 CFR 229.1505(c)(1).
636 As previously mentioned, we are soliciting comment regarding whether the GHG emissions should be reported as of fiscal year-end or some other 12-month period. See supra Section II.C.1.
637 See proposed 17 CFR 229.1505(c)(2).
638 See, e.g., AICPA SSAE No. 18, AT–C § 105.A16 and .A42; AICPA SSAE No. 21, AT–C § 105.A16 and .A44. In addition to relevance and completeness, the characteristics of suitable criteria under ISA 300.A23 include reliability, neutrality and understandability. Despite the differences in the characteristics listed, the underlying concepts and objectives are consistent.
639 See proposed 17 CFR 229.1505(c)(3).
640 See proposed 17 CFR 229.1505(c)(4).
641 See proposed 17 CFR 229.1505(a)(2).
642 See proposed 17 CFR 229.1505(c)(5).
643 See, e.g., PCAOB AS 3101, par. 9(a).
644 See proposed 17 CFR 229.1505(c)(6).
a limited assurance engagement, under prevailing attestation standards, the report would typically include a statement that the attestation provider’s responsibilities include expressing a conclusion on the subject matter or the assertion based on the attestation provider’s review.\(^{644}\) Similarly, for a reasonable assurance engagement, the report would typically include a statement that the attestation provider’s responsibilities include expressing an opinion on the subject matter or assertion, based on the attestation provider’s examination.\(^{645}\)

The proposed rules would also require the attestation report to include a statement that the attestation provider is independent, as required by proposed 17 CFR 229.1505(a).\(^{646}\) Because independence from the registrant, including its affiliates, would be a necessary qualification for the GHG emissions attestation provider,\(^{647}\) the attestation report would be required to include the attestation provider’s confirmation of his or her compliance with the proposed independence requirement.

The proposed rules would further require the attestation report, for a limited assurance engagement, to include a description of the work performed as a basis for the attestation provider’s conclusion.\(^{648}\) This proposed provision is intended to enhance the transparency of the GHG emissions attestation report for investors by eliciting disclosure about the procedures undertaken by the attestation provider in its limited assurance engagement, such as inquiries and analytical procedures. This information would allow investors to assess and understand the extent of procedures performed to support the conclusion reached by the attestation provider, which could also facilitate an investor’s comparison of different attestation reports provided under the same or different attestation standards.

The GHG emissions attestation report would also be required to include a statement that describes any significant inherent limitations associated with the measurement or evaluation of the subject matter (at a minimum, Scopes 1 and 2 emissions) against the criteria (i.e., the applicable requirements in proposed Item 1504).\(^{649}\) Such a statement is a common characteristic of attestation reports, including the independent auditor’s report on internal control over financial reporting. This proposed provision is intended to elicit disclosure about the estimation uncertainties inherent in the quantification of GHG emissions, driven by reasons such as the state of the science, methodology, and assumptions used in the measurement and reporting processes. For example, an attestation provider might include in its report a statement about measurement uncertainty resulting from accuracy and precision of GHG emission conversion factors.

The proposed rules would require the GHG emissions attestation report to include the attestation provider’s conclusion or opinion, as applicable, based on the attestation standard(s) used.\(^{650}\) For a limited assurance engagement, under prevailing attestation standards, the conclusion would typically state whether the provider is aware of any material modifications that should be made to the subject matter in order for the disclosure to be in accordance with (or based on) the requirements specified in Item 1504, or for the registrant’s assertion about such subject matter to be fairly stated.\(^{651}\) For a reasonable assurance engagement, the attestation provider would typically provide an opinion on whether the subject matter is in accordance with (or based on) the requirements specified in Item 1504 in all material respects, or that the registrant’s assertion about its subject matter is fairly stated, in all material respects.\(^{652}\)

Finally, the proposed rules would require the GHG emissions attestation report to include the signature of the attestation provider (whether by an individual or a person signing on behalf of the attestation provider’s firm),\(^{653}\) the city and state where the attestation report has been issued,\(^{654}\) and the date of the report.\(^{655}\) These are all common elements of current assurance and expert reports, and each of these proposed provisions would help to identify and confirm the validity of the GHG emissions attestation provider.

Request for Comment

154. Should we require the attestation engagement and related attestation report to be provided pursuant to

\(^{644}\) See, e.g., AICPA SSAE No.22, AT–C sec. 210.45(f).
\(^{645}\) See, e.g., AICPA SSAE No. 21, AT–C sec. 205.63(f) and sec. 206.12(e)(ii).
\(^{646}\) See proposed 17 CFR 229.1505(c)(7).
\(^{647}\) See supra Section II.H.2.
\(^{648}\) See proposed 17 CFR 229.1505(c)(6).
\(^{649}\) See proposed 17 CFR 229.1505(c)(9).
\(^{650}\) See proposed 17 CFR 229.1505(c)(10).
\(^{651}\) See, e.g., AICPA SSAE No. 22, AT–C sec. 210.45(f).
\(^{652}\) See, e.g., AICPA SSAE No. 21, AT–C sec. 205.63(k) and sec. 206.12(j).
\(^{653}\) See proposed 17 CFR 229.1505(c)(11).
\(^{654}\) See proposed 17 CFR 229.1505(c)(12).
\(^{655}\) See proposed 17 CFR 229.1505(c)(13).
With respect to the Scope 1 and Scope 2 emissions attestation required pursuant to proposed Item 1505(a) for accelerated filers and large accelerated filers, the registrant would be required to disclose in the filing, based on relevant information obtained from any GHG emissions attestation provider:

- Whether the attestation provider has a license from any licensing or accreditation body to provide assurance, and if so, the identity of the licensing or accreditation body, and whether the attestation provider is a member in good standing of that licensing or accreditation body;\(^{661}\)
- Whether the GHG emissions attestation engagement is subject to any oversight inspection program, and if so, which program (or programs);\(^{662}\) and
- Whether the attestation provider is subject to record-keeping requirements with respect to the work performed for the GHG emissions attestation engagement and, if so, identify the record-keeping requirements and the duration of those requirements.\(^{663}\)

The first two above items of disclosure would help investors better understand the qualifications of the GHG emissions attestation provider, which in turn could help them assess the reliability of the attestation results. An example of a license from a licensing or accreditation body to provide assurance would be a Certified Public Accountant license issued by a state board of accountancy (e.g., the California Board of Accountancy), while an example of oversight programs would include the AICPA peer review program, among others. The proposed disclosure requirement about any record-keeping requirements to which the attestation provider is subject would help enhance the transparency of the attestation process by providing investors with information about the business practices of the attestation provider that has been retained by the registrant.\(^{664}\)

Request for Comment

160. Should we require certain items of disclosure related to the attestation of a registrant’s GHG emissions to be provided by the registrant in its filing that includes the attestation report (where the GHG emissions and other climate-related disclosures are presented), based on relevant information obtained from the GHG emissions attestation provider, as proposed? Should these additional items of disclosure instead be included in the attestation report?

161. Should we require the registrant to disclose whether the attestation provider has a license from any licensing or accreditation body to provide assurance, and if so, the identity of the licensing or accreditation body, and whether the attestation provider is a member in good standing of that licensing or accreditation body, as proposed? In lieu of disclosure, should we require a GHG emissions attestation provider to be licensed to provide assurance by specified licensing or accreditation bodies? If so, which licensing or accreditation bodies should we specify?

162. Should we require a registrant to disclose whether the GHG emissions attestation engagement is subject to any oversight inspection program, and if so, which program (or programs), as proposed? Should we instead require the registrant to disclose whether the attestation engagement is subject to certain specified oversight programs? If so, which oversight programs should we specify?

163. Should we require a registrant to disclose whether the attestation provider is subject to record-keeping requirements with respect to the work performed for the GHG emissions attestation engagement and, if so, identify the record-keeping requirements and duration of those requirements, as proposed? In lieu of disclosure, should we specify that the record-keeping requirements of a GHG emissions attestation provider must be of a certain minimum duration, such as three, five, or seven years, or some other period? Should we specify that the record-keeping requirements must include certain reasonable procedures and, if so, what procedures?

5. Disclosure of Voluntary Attestation

Because GHG emissions reporting and assurance landscapes are both relatively new and evolving as described earlier, at this time, we are proposing to require a registrant, other than a large accelerated filer or an accelerated filer that is required to include a GHG emissions attestation report pursuant to proposed Item 1505(a), to disclose within the separately captioned “Climate-Related Disclosure” section in
the filing the following information if the registrant’s GHG emissions disclosures were subject to third-party attestation or verification:

(i) Identify the provider of such assurance or verification; 665
(ii) Describe the assurance or verification standard used; 666
(iii) Describe the level and scope of assurance or verification provided; 667
(iv) Briefly describe the results of the assurance or verification; 668
(v) Disclose whether the third-party service provider has any other business relationships with or has provided any other professional services to the registrant that may lead to an impairment of the service provider’s independence with respect to the registrant; 669 and
(vi) Disclose any oversight inspection program to which the service provider is subject (e.g., the AICPA’s peer review program). 670

Taken together, these proposed disclosure items should help investors understand the nature and reliability of the attestation or verification provided and help them assess whether the voluntary assurance or verification has enhanced the reliability of the GHG emissions disclosure. We are limiting the proposed assurance disclosure requirement to a registrant’s GHG emissions disclosure because registrants are more likely to obtain assurance voluntarily for this disclosure item than for other climate-related disclosures.671

The proposed approach should mitigate the compliance burden of the proposed GHG emissions disclosure rules, taking into consideration the proportionate compliance costs that may impact accelerated and large accelerated filers versus other types of filers, while providing transparency for investors about the level and reliability of the assurance or verification, if any, provided on the GHG emissions disclosures.

Request for Comment

164. Should we require a registrant that is not required to include a GHG emissions attestation report pursuant to proposed Item 1505(a) to disclose within the separately captioned “Climate-Related Disclosure” section in the filing the following information, if the registrant’s GHG emissions disclosure was subject to third-party attestation or verification, as proposed:

(i) Identify the provider of such assurance or verification;
(ii) Disclose the assurance or verification standard used;
(iii) Describe the level and scope of assurance or verification provided;
(iv) Briefly describe the results of the assurance or verification;
(v) Disclose whether the third-party service provider has any other business relationships with or has provided any other professional services to the registrant that may lead to an impairment of the service provider’s independence with respect to the registrant; and
(vi) Disclose any oversight inspection program to which the service provider is subject (e.g., the AICPA’s peer review program), each as proposed?

165. Instead of requiring a registrant to disclose whether the third-party service provider has any other business relationships with or has provided any other professional services to the registrant that may lead to an impairment of the service provider’s independence with respect to the registrant as proposed, should we require the third-party service provider to be independent, according to the standard proposed under Item 1505(b) for accelerated filers and large accelerated filers that are required to include a GHG emissions attestation report pursuant to proposed Item 1505(a)? If not, should we provide guidance as to what constitutes an impairment of a service provider’s independence with respect to the registrant? Would this result in decision-useful information to an investor? Should we instead require a registrant to disclose whether the third-party service provider would be considered independent under some other independence requirement?

166. As proposed, a registrant would be required to disclose any oversight inspection program to which the service provider is subject, such as the PCAOB’s inspection program or the AICPA’s peer review program. Are there other oversight programs that we should provide as examples? Would such disclosure provide decision-useful information to an investor? Is it clear what “any oversight inspection program” would include?

167. As proposed, a registrant would not be required to disclose the voluntary assurance or verification fees associated with the GHG disclosures. Should we require GHG disclosure assurance or verification fees to be disclosed? Would such disclosure be decision-useful to investors making voting or investment decisions?

I. Targets and Goals Disclosure

If a registrant has set any climate-related targets or goals, then the proposed rules would require the registrant to provide certain information about those targets or goals.672 Those goals or targets might, for example, relate to the reduction of GHG emissions, or address energy usage,673 water usage, conservation or ecosystem restoration. A registrant might also set goals with regard to revenues from low-carbon products in line with anticipated regulatory requirements, market constraints, or other goals established by a climate-related treaty, law, regulation, policy, or organization. The proposed disclosure requirements could help investors better understand the scope of a registrant’s climate-related targets or goals, including those related to GHG emissions, and assist in assessing progress towards achieving those targets or goals.

Many commenters recommended that we require registrants to provide detailed information about their climate-related targets and goals, including action plans and timelines for achieving such targets as GHG emissions reductions and performance data measured against those targets.674 This information could be important for investors in light of the fact that, according to one publication, two-thirds of S&P 500 companies had set a carbon

665 See proposed 17 CFR 229.1505(e)(1).
666 See proposed 17 CFR 229.1505(e)(2).
667 See proposed 17 CFR 229.1505(e)(3).
668 See proposed 17 CFR 229.1505(e)(4).
669 See proposed 17 CFR 229.1505(e)(5).
670 See proposed 17 CFR 229.1505(e)(6).
671 See, e.g., letters from BNP Paribas; Eni SpA; ERM CVS; and Walmart. See also CAQ, S&P 500 and ESG Reporting.
672 See proposed 17 CFR 229.1506(a)(1).
673 For example, numerous companies have pledged to achieve 100% of the electricity used in their global operations from renewable sources by 2050. See RE100. What are the requirements to become a RE100 member?, available at https://www.re100.org/technical-definition.
674 See, e.g., letters from Americans for Financial Reform Education Fund and Public Citizen; Center for Law and Social Policy; Domini Impact Investments; Dynamex, Inc.; FAIRR Initiative; Generation Investment Management; Hanson Armstrong; HP, Inc.; Interfaith Center on Corporate Responsibility; NYC Office of Comptroller; Pre-Distribution Initiative; Regenerative Crisis Response Committee; and WK Associates.
Despite the numerous commitments to reduce GHG emissions, according to several sources, many companies do not provide their investors with sufficient information to understand how the companies intend to achieve those commitments or the progress made regarding them. The proposed disclosure requirements are intended to elicit enhanced information about climate-related targets and goals so that investors can better evaluate these points.

If a registrant has set climate-related targets or goals, the proposed rules would require it to disclose them, including, as applicable, a description of:

- The scope of activities and emissions included in the target;
- The unit of measurement, including whether the target is absolute or intensity based;
- The defined time horizon by which the target is intended to be achieved, and whether the time horizon is consistent with one or more goals established by a climate-related treaty, law, regulation, policy, or organization;
- The defined baseline time period and baseline emissions against which progress will be tracked with a consistent base year set for multiple targets;
- Any interim targets set by the registrant; and
- How the registrant intends to meet its climate-related targets or goals.

This information would help investors understand a registrant’s particular target or goal and a particular timeline for that target or goal, how the target or goal is to be measured, and how progress against the target or goal is to be tracked. For example, a registrant might disclose that it plans to cut its Scopes 1 and 2 emissions by 50 percent by 2030. The registrant might also disclose a target to reduce its Scope 3 emissions by 50 percent by 2033. In addition, the registrant might also set a goal of achieving net zero greenhouse gas emissions across its operations by 2050, in keeping with the goals of the Paris Agreement.

Under the proposed rules, the registrant would be required to disclose the baseline year for multiple targets. Requiring disclosure of defined baseline time periods and baseline emissions against which progress will be tracked, with a consistent base year for multiple targets, could help investors compare the progress made towards each target. The registrant would also be required to disclose the unit of measurement, including whether the target is expressed in absolute terms or is intensity-based. If the registrant has set intervening targets (e.g., reducing its Scope 3 emissions by 35 percent by 2030), the registrant would be required to disclose these targets. Each of the proposed disclosure requirements is intended to provide investors with additional insight into the scope and specifics of a registrant’s climate-related targets or goals.

The proposed rules would further require a registrant to discuss how it intends to meet its climate-related targets or goals. This information should enable investors to better understand the potential impacts on a registrant associated with pursuing its climate-related targets or goals. For example, a target or goal regarding net GHG emissions reduction, the discussion could include a strategy to increase energy efficiency, transition to lower carbon products, purchase carbon offsets or RECs, or engage in carbon removal and carbon storage. For a registrant operating in a water-stressed area, with the goal of reducing its freshwater needs, the discussion could include a strategy to increase the water efficiency of its operations, such as by recycling wastewater or, if in agriculture, engaging in bioengineering techniques to make crops more resilient and less water dependent. Information about how a registrant intends to achieve its climate-related target or goal could provide investors with a better understanding of the potential costs to mitigate a potential climate-related risk, such as a manufacturer’s reduction of GHG emissions through implementation of a relatively high cost solution such as carbon capture and storage technology.

The proposed rules would also require a registrant to disclose relevant data to indicate whether it is making progress toward achieving the target or goal and how such progress has been achieved. A registrant would be required to update this disclosure each fiscal year by describing the actions taken during the year to achieve its targets or goals. This proposed disclosure could help investors assess how well a registrant is managing its identified climate-related risks.

Some companies might establish climate-related goals or targets without yet knowing how they will achieve those goals. They might plan to develop their strategies over time, particularly as new technologies become available that might facilitate their achievement of their goals. The fact that a company has set a goal or target does not mean that it has a specific plan for how it will achieve those goals. What is important is that investors be informed of a registrant’s plans and progress wherever it is in the process of developing and implementing its plan.

If the registrant has used carbon offsets or RECs in its plan to achieve climate-related targets or goals, it would be required to disclose the amount of carbon reduction represented by the offsets or the amount of generated renewable energy represented by the RECS, the source of the offsets or RECs, a description and location of the underlying projects, any registries or other authentication of the offsets or RECs, and the cost of the offsets or RECs. For example, a carbon offset might pertain to an underlying project to reduce GHG emissions, increase the storage of carbon, or enhance GHG removals from the atmosphere. Information regarding the source, value, underlying projects, and authentication of the offsets or RECs could help investors assess the offsets or RECs and the effectiveness of the registrant’s plan to achieve its climate-related targets or goals. Such information could also help investors understand changes in the use or viability of the carbon offsets or RECs as part of achieving a registrant’s climate-related targets or goals that are caused by changes in regulation or markets. A reasonable investor could well assess differently the effectiveness and value to a registrant of the use of carbon offsets where the underlying projects resulted in authenticated reductions in GHG emissions compared to the use of offsets where the underlying projects resulted in the avoidance, but not the reduction, in GHG emissions or otherwise lacked verification. As some commenters have indicated, mandated detailed disclosure about the nature of a purchased carbon

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675 See supra note 66 (referencing The Wall Street Journal (Nov. 5, 2021)).
677 See proposed 17 CFR 229.1506(b)(1) through (6).
678 See proposed 17 CFR 229.1506(b)(3).
679 See proposed 17 CFR 229.1506(b)(4).
680 See proposed 17 CFR 229.1506(b)(5).
681 See proposed 17 CFR 229.1506(b)(6).
682 See proposed 17 CFR 229.1506(b)(6).
683 See proposed 17 CFR 229.1502.
684 See proposed 17 CFR 229.1506(c).
685 See id.
686 See proposed 17 CFR 229.1506(d).
offset could also help to mitigate instances of greenwashing.\footnote{687}

Proposed 17 CFR 229.1505(a)(2) (Item 1505(a)(2)) would state that a registrant may provide the disclosures required by the section when discussing climate-related impacts on its strategy, business model, and outlook (in response to proposed Item 1502) or when discussing its transition plan as part of its risk management disclosure (in response to proposed Item 1503). If so, it need not repeat the disclosure in response to the proposed targets and goals section but should cross-reference to the section where the information has been provided.

A registrant’s disclosure of its climate-related targets or goals should not be construed to be promises or guarantees. To the extent that information regarding a registrant’s climate-related targets or goals would constitute forward-looking statements, which we would expect, for example, with respect to how a registrant intends to achieve its climate-related targets or goals and expected progress regarding those targets and goals, the PSLRA safe harbors would apply to such statements, assuming all other statutory requirements for those safe harbors are satisfied.

Request for Comment

168. Should we require a registrant to disclose whether it has set any targets related to the reduction of GHG emissions, as proposed? Should we also require a registrant to disclose whether it has set any other climate-related target or goal, e.g., regarding energy usage, water usage, conservation or ecosystem restoration, or revenues from low-carbon products, in line with anticipated regulatory requirements, market constraints, or other goals, as proposed? Are there any other climate-related targets or goals that we should specify and, if so, which targets or goals? Is it clear when disclosure under this proposed item would be triggered, or do we need to provide additional guidance? Would our proposal discourage registrants from setting such targets or goals?

169. Should we require a registrant, when disclosing its targets or goals, to disclose:

- The scope of activities and emissions included in the target;
- The unit of measurement, including whether the target is absolute or intensity based;
- The defined time horizon by which the target is intended to be achieved, and whether the time horizon is consistent with one or more goals established by a climate-related treaty, law, regulation, or organization;
- The defined baseline time period and baseline emissions against which progress will be tracked with a consistent base year set for multiple targets;
- Any intervening targets set by the registrant; and
- How it intends to meet its targets or goals, each as proposed?

Are there any other items of information about a registrant’s climate-related targets or goals that we should require to be disclosed, in addition to or instead of these proposed items? Are there any proposed items regarding such targets or goals that we should exclude from the required disclosure? If a registrant has set multiple targets or goals, should it be permitted to establish different base years for those targets or goals?

170. Should we require a registrant to discuss how it intends to meet its climate-related targets or goals, as proposed? Should we provide examples of potential items of discussion about a target or goal regarding GHG emissions reduction, such as a strategy to increase energy efficiency, a transition to lower carbon products, purchasing carbon offsets or RECs, or engaging in carbon removal and carbon storage, as proposed? Should we provide additional examples of items of discussion about climate-related targets or goals and, if so, what items should we add? Should we remove any of the proposed examples of items of discussion?

171. Should we require a registrant, when disclosing its targets or goals, to disclose any data that indicates whether the registrant is making progress towards meeting the target and how such progress has been achieved, as proposed?

172. Should we require that the disclosure be provided in any particular format, such as charts? Would certain formats help investors and others better assess these disclosures in the context of assessing the registrant’s business and financial condition? What additional or other requirements would help in this regard?

173. If a registrant has used carbon offsets or RECs, should we require the registrant to disclose the amount of carbon reduction represented by the offsets or the amount of generated renewable energy represented by the RECs, the source of the offsets or RECs, the nature and location of the underlying projects, any registries or other authentication of the offsets or RECs, and the cost of the offsets or RECs, as proposed? Are there other items of information about carbon offsets or RECs that we should specifically require to be disclosed when a registrant describes its targets or goals and the related use of offsets or RECs? Are there proposed items of information that we should exclude from the required disclosure about offsets and RECs?

174. Should we apply the PSLRA statutory safe harbors as they currently exist to forward-looking statements involving climate-related targets and goals, or other climate-related forward-looking information? Should we instead create a separate safe harbor for forward-looking climate-related information, including targets and goals? Should we adopt an exception to the PSLRA statutory safe harbors that would extend the safe harbors to climate-related forward-looking disclosures made in an initial public offering registration statement?

J. Registrants Subject to the Climate-Related Disclosure Rules and Affected Forms

The proposed climate-related disclosure rules would apply to a registrant with Exchange Act reporting obligations pursuant to Exchange Act Section 13(a)\footnote{688} or Section 15(d)\footnote{689} and

\footnote{687}{See, e.g., letter from Dimensional Fund Advisors.}

\footnote{688}{15 U.S.C. 78m(a).}

\footnote{689}{15 U.S.C. 78o(d).}
companies filing a Securities Act or Exchange Act registration statement.

Specifically, we are proposing to require a registrant to include climate-related disclosure in Securities Act or Exchange Act registration statements (Securities Act Forms S–1, F–1, S–3, F–3, S–4, F–4, and S–11, and Exchange Act Forms 10 and 20–F) and Exchange Act annual reports (Forms 10–K and 20–F), including the proposed financial statement metrics.691 Similar to the treatment of other important business and financial information, the proposed rules would also require registrants to disclose any material change to the climate-related disclosure provided in a registration statement or annual report in its Form 10–Q (or, in certain circumstances, Form 6–K for a registrant that is a foreign private issuer that does not report on domestic forms).692

The proposed rules would amend Form 20–F and the Securities Act forms that a foreign private issuer may use to register the offer and sale of securities under the Securities Act to require the same climate-related disclosures as proposed for Form 10–K filers on matters, such as risk factors and MD&A, that are similar and relevant to the proposed climate-related disclosures.694 We are not proposing generally to exempt SRCs, EGCS,695 or registrants that are foreign private issuers from the entire scope of the proposed climate-related disclosure rules because we agree with commenters who stated that, because of their broad impact across industries and jurisdictions, climate-related risks may pose a significant risk to the operations and financial condition of domestic and foreign issuers, both large and small.696 While we are not proposing to exempt SRCs from the full scope of the proposed climate-related disclosure rules, we are proposing to exempt SRCs from the proposed Scope 3 emissions disclosure requirement.697 We are also proposing to provide a longer transition period for SRCs to comply with the proposed rules than we are proposing for other registrants.698 The proposed accommodations for Scope 3 emissions disclosures could mitigate the proposed rules’ compliance burden for smaller registrants that, when compared to larger registrants with more resources, may be less able to afford the fixed costs associated with the reporting of GHG emissions. In addition, the extended compliance period would give SRCs additional time to allocate the resources necessary to compile and prepare their climate-related disclosures.

Request for Comment

175. Should the proposed climate-related disclosures be required in Exchange Act reports and registration statements, as proposed? Should we exempt SRCs from all of the proposed climate-related disclosure rules instead of exempting them solely from Scope 3 emissions disclosure requirements, as proposed? Should we exempt SRCs from certain other proposed climate-related disclosure requirements and, if so, which requirements? For example, in addition to the proposed exemption from Scope 3 emissions disclosure, should we exempt SRCs from the proposed requirement to disclose Scopes 1 and 2 emissions? Are there certain types of other registrants, such as EGCS or business development companies ("BDCs"),699 that should be excluded from all or some of the proposed climate-related disclosure rules?

176. Should we require foreign private issuers that report on Form 20–F to provide a longer transition period for SRCs to comply with the proposed rules than we are proposing for other registrants? Should we exempt SRCs from all of the proposed climate-related disclosure rules instead of exempting them solely from Scope 3 emissions disclosure requirements, as proposed? Should we exempt SRCs from certain other proposed climate-related disclosure requirements and, if so, which requirements? For example, in addition to the proposed exemption from Scope 3 emissions disclosure, should we exempt SRCs from the proposed requirement to disclose Scopes 1 and 2 emissions? Are there certain types of other registrants, such as EGCS or business development companies ("BDCs"), that should be excluded from all or some of the proposed climate-related disclosure rules?
F to provide the same climate-related disclosures as Form 10–K filers, as proposed? Should we require climate-related disclosures in the registration statements available for foreign private issuers, as proposed? If not, how should the climate-related disclosures provided by foreign private issuer registrants differ from the disclosures provided by domestic registrants?

177. Should we require a registrant to disclose any material changes to the climate-related disclosure provided in a registration statement or annual report in its Form 10–Q or Form 6–K, as proposed? Are there any changes that should be required to be reported on Form 8–K?

178. Should we require the climate-related disclosure in the forms specified above? Is the application of the proposed rules to the forms sufficiently clear, or should we include additional clarifying amendments? For example, would the application of proposed Article 14 to Forms 20–F, F–1 and F–3 be sufficiently clear when a registrant prepares its financial statements pursuant to IFRS as issued by the International Accounting Standards Board ("IASB") without reconciliation to U.S. generally accepted accounting principles ("U.S. GAAP"), or should we add a related instruction to those forms?

179. Are there certain registration statements or annual reports that should be excluded from the scope of the proposed climate-related disclosure rules? For example, should we exclude Securities Act registration statements filed in connection with a registrant’s initial public offering? Would such an accommodation help address concerns about the burdens of transitioning to public company status? We have not proposed to require climate-related disclosures in registration statements on Form S–8 or annual reports on Form 11–K. Should we require such disclosures?

180. Should we require climate-related disclosure in Forms S–4 and F–4, as proposed? Should we provide transitional relief for recently acquired companies? For example, should we provide that a registrant would not be required to provide the proposed climate-related disclosures for a company that is a target of a proposed acquisition under Form S–4 or F–4 until the fiscal year following the year of the acquisition if the target company is not an Exchange Act reporting company and is not the subject of foreign climate-related disclosure requirements that are subject to the Commission’s proposed requirements? Should such transitional relief in this instance be for a longer period than one year and, if so, for how long should such transitional relief extend?

181. We have not proposed to amend Form 40–F, the Exchange Act form used by a Canadian issuer eligible to report under the Multijurisdictional Disclosure System ("MJDS") to register securities or to file its annual report under the Exchange Act, to include the proposed climate-related disclosure requirements. Should we require a Form 40–F issuer to comply with the Commission’s proposed climate-related disclosure requirements? Should we permit a MJDS issuer to comply with Canadian climate-related disclosure requirements instead of the proposed rules if they meet certain conditions or provide additional disclosures and, if so, which conditions or disclosures?

182. The proposed rules would not apply to asset-backed issuers. The Commission and staff are continuing to evaluate climate-related disclosures with respect to asset-backed securities. Should we propose that asset-backed issuers provide some or all of the disclosures under proposed Subpart 1500 of Regulation S–K? If so, which of the proposed disclosures should apply to asset-backed issuers? Are there other types of climate disclosure better suited to asset-backed issuers? How can climate disclosure best be tailored to various asset classes?

183. Should we adopt an alternative reporting provision that would permit a registrant that is a foreign private issuer and subject to the climate-related disclosure requirements of an alternative reporting regime that has been deemed by the Commission to be substantially similar to the requirements of proposed Subpart 1500 of Regulation S–K and Article 14 of Regulation S–X to satisfy its disclosure obligations under those provisions by complying with the reporting requirements of the alternative reporting regime ("alternative reporting provision")? If so, should we require the submission of an application for recognition of an alternative reporting regime as having substantially similar requirements for purposes of alternative reporting regarding climate-related disclosures? Should we permit companies, governments, industry groups, or climate-related associations to file such an application? Should we require the applicant to follow certain procedures, such as those set forth in 17 CFR 240.0–13?

184. If we adopt an alternative reporting provision, should we specify certain minimum standards that the alternative reporting regime must meet in order to be recognized and, if so, what standards? For example, should we specify that an alternative reporting regime must require the disclosure of a foreign private issuer’s Scopes 1 and 2 emissions and related targets, the proposed financial statement metrics, as well as disclosures pursuant to the TCFD’s recommendations regarding governance, strategy, and risk management disclosure? Should we specify that the alternative reporting regime must require the disclosure of Scope 3 emissions and, if so, should we deem the alternative reporting regime to be substantially similar even if its Scope 3 emissions requirements become effective after the Commission’s phase in period for Scope 3 emissions disclosure requirements? Should we specify that the alternative reporting regime must require the disclosure of scenario analysis if a registrant uses scenario analysis in formulating its strategy regarding climate-related risks? Are there certain climate-related disclosure requirements that have been adopted or are in the process of being adopted in other jurisdictions that we should consider to be substantially similar to the Commission’s rules for purposes of an alternative reporting provision? If so, which requirements should we consider?

185. If we adopt an alternative reporting provision, should it be a mutual recognition system, so that, as a condition of our recognition of a particular jurisdiction as an alternative reporting regime, that jurisdiction must recognize the Commission’s climate-related disclosure rules as an alternative reporting system that a registrant dual-listed in the United States and the other jurisdiction may use to fulfill the foreign jurisdiction’s climate-related disclosure rules?

186. If we adopt an alternative reporting provision, should we require a registrant filing the alternative climate-related disclosure to make certain changes that we deem necessary as a condition to alternative reporting? For example, should we require a registrant to comply with XBRL tagging requirements as a condition to filing alternative climate-related disclosure? Are there other specific conditions that we should impose on disclosure under an alternative climate reporting provision?

187. If we adopt an alternative reporting provision, should we require a registrant using that system to:
- State in the filing that it is relying on this alternative reporting provision;
- Identify the alternative reporting regime for which the climate-related disclosure was prepared;
- Provide the jurisdiction of the alternative reporting regime;
- Provide a description of the alternative reporting regime;
- Provide a description of the climate-related disclosures required by the alternative reporting regime;
- Provide a description of the climate-related disclosures required by the Commission's rules; and
- Provide a description of the climate-related disclosures required by the jurisdiction’s rules.
standards body, such as the ISSB? If so, should such alternative reporting be limited to foreign private issuers, or should we extend this option to all registrants? What conditions, if any, should we place on a registrant’s use of alternative reporting provisions based on the ISSB or a similar body?

K. Structured Data Requirement

The proposed rules would require a registrant to tag the proposed climate-related disclosures in Inline eXtensible Business Reporting Language (“Inline XBRL”) in accordance with 17 CFR 232.405 (Rule 405 of Regulation S–T) and the EDGAR Filer Manual. The proposed requirements would include block text tagging and detail tagging of narrative and quantitative disclosures provided pursuant to Subpart 1500 of Regulation S–K and Article 14 of Regulation S–X.701

In 2009, the Commission adopted rules requiring operating companies to submit the information from the financial statements (including footnotes and schedules thereto) included in certain registration statements and periodic and current reports in a structured, machine-readable data language using eXtensible Business Reporting Language (“XBRL”).702 In 2018, the Commission adopted modifications to these requirements by requiring issuers to use Inline XBRL, which is both machine-readable and human-readable, to reduce the time and effort associated with preparing XBRL filings and improve the quality and usability of XBRL data for investors.703 In 2020, the Commission adopted Inline XBRL requirements for business development companies that will be effective no later than February 2023.705

Requiring Inline XBRL tagging of the proposed climate-related disclosures would benefit investors by making the disclosures more readily available and easily accessible to investors, market participants, and other users for aggregation, comparison, filtering, and other analysis, as compared to requiring a non-machine readable data language such as ASCII or HTML. This would enable automated extraction and analysis of climate-related disclosures, allowing investors and other market participants to more efficiently perform large-scale analysis and comparison of climate-related disclosures across companies and time periods. At the same time, we do not expect the incremental compliance burden associated with tagging the additional information to be unduly burdensome, because issuers subject to the proposed requirements are or in the near future will be subject to similar Inline XBRL requirements in other Commission filings.706

Request for Comment

190. Should we require registrants to tag the climate-related disclosures, including block text tagging and detail tagging of narrative and quantitative disclosures required by Subpart 1500 of Regulation S–K and Article 14 of Regulation S–X in Inline XBRL, as proposed? Should we permit custom tags for the climate-related disclosures? 191. Should we modify the scope of the proposed climate-related disclosures required to be tagged? For example, should we only require tagging of the quantitative climate-related metrics? 192. Are there any third-party taxonomies the Commission should

701 See proposed 17 CFR 229.1507.
702 For the proposed Subpart 1500 disclosures, this tagging requirement would be implemented by including a cross-reference to Rule 405 of Regulation S–T in proposed Item 1507 of Regulation S–K, and by revising Rule 405(b) of Regulation S–T to include the proposed climate-related disclosures required by Subpart 1500 of Regulation S–K. The proposed Article 14 of Regulation S–X disclosures would be subject to existing requirements in Rule 405(b) to tag information in financial statements (including footnotes). Pursuant to Rule 301 of Regulation S–T the EDGAR Filer Manual is incorporated by reference into the Commission’s rules. In conjunction with the EDGAR Filer Manual, Regulation S–T governs the electronic submission of documents filed with the Commission. Rule 405 of Regulation S–T specifically governs the scope and manner of disclosure tagging requirements for operating companies and investment companies, including the requirement in Rule 405(a)(3) to use Inline XBRL as the specific structured data language to use for tagging the disclosures.
704 See supra note 92.
705 See supra notes 704 and 705. Inline XBRL requirements for business development companies will take effect beginning Aug. 1, 2022 (for seasoned issuers) and Feb. 1, 2023 (for all other issuers). See id. If the proposed Inline XBRL requirements are adopted in the interim, they will not apply to business development companies prior to the aforementioned effectiveness dates.
look to in connection with the proposed tagging requirements?

193. Should we require issuers to use a different structured data language to tag climate-related disclosures? If so, what structured data language should we require? Should we leave the structured data language undefined?

L. Treatment for Purposes of Securities Act and Exchange Act

We are proposing to treat the proposed required climate-related disclosures as “filed” and therefore subject to potential liability under Exchange Act Section 18,707 except for disclosures furnished on Form 6-K. The proposed filed climate-related disclosures would also be subject to potential Section 11 liability708 if included in or incorporated by reference into a Securities Act registration statement. This treatment would apply both to the disclosures in response to proposed subpart 1500 of Regulation S–K and to proposed Article 14 of Regulation S–X.

Form 6–K disclosures would not be treated as “filed” because the form, by its own terms, states that “information and documents furnished in this report shall not be deemed to be ‘filed’ for the purposes of Section 18 of the Act or otherwise subject to the liabilities of that section.” 709 The treatment of disclosures on Form 6–K as furnished is a long-standing part of our foreign private issuer disclosure system.710

Commenters expressed differing views on whether we should treat Commission-mandated climate-related disclosures as filed or furnished. Many commenters recommended that we treat such climate-related disclosures as filed.711 Some of these commenters stated that we should treat climate-related disclosures like financial disclosures and require them to be filed together with the rest of the Commission filing.712 Other commenters indicated that the treatment of climate-related disclosures as filed would help ensure that investors have confidence in the accuracy and completeness of such disclosures because of the liability associated with filed documents.713

Other commenters recommended that we treat climate-related disclosures as furnished.714 Some of these commenters stated that the Commission’s treatment of such disclosures as filed could act as a disincentive to providing “broader” disclosure and would incentivize some issuers “to disclose in the manner most limited to meet the specific requirement and avoid more robust explanation.” 715

Other commenters stated that the treatment of climate-related disclosures as furnished would be appropriate because, in their view, much of that disclosure is based on projections and aspirational statements ill-suited to the application of a stricter liability standard. 716

We agree with those commenters who indicated that the treatment of climate-related disclosures as filed could help promote the accuracy and reliability of such disclosures for the benefit of investors.717 In this regard, we believe these disclosures should be subject to the same liability as other important business or financial information that the registrant includes in its registration statements and periodic reports. While we acknowledge commenters who stated that the methodology underlying climate data continues to evolve,718 we intend to provide registrants with an ample transition period to provide such disclosure.719 Further, much of the disclosure proposed to be required reflects discussion of a company’s own climate risk assessment and strategy, which is not dependent on external sources of information. In addition, we have provided guidance and proposed rules on the applicability of safe harbors to certain disclosures under the proposed rules. For these reasons, we believe it would be appropriate for the proposed disclosures to be filed rather than furnished, except with respect to the proposed disclosure we are requiring on Form 6–K.

Request for Comment

194. Should we treat the climate-related disclosures required by proposed subpart 1500 of Regulation S–K and proposed Article 14 of Regulation S–X as filed for purposes of potential liability under the Securities Act and Exchange Act, except for the climate disclosures on Form 6–K, as proposed? Should we instead treat the climate-related disclosures required by both proposed subpart 1500 of Regulation S–K and proposed Article 14 of Regulation S–X as furnished? Are there reasons why the proposed climate-related disclosures should not be subject to Section 18 liability?

195. Should we only treat the climate-related disclosures required by proposed subpart 1500 of Regulation S–K as filed? Should we only treat the climate-related disclosures required by proposed Article 14 of Regulation S–X as filed? Is there some other subset of climate-related disclosures that should be treated as furnished rather than filed? For example, should we only treat as filed disclosures related to a registrant’s Scopes 1 and 2 emissions, and treat a registrant’s Scope 3 emissions as furnished?

196. Should we treat the climate disclosures on Form 6–K as filed?

M. Compliance Date

We recognize that many registrants may require time to establish the necessary systems, controls, and procedures to comply with the proposed climate-related disclosure requirements. In addition, some commenters recommended that the Commission not adopt a “one size fits all” approach when promulgating climate-related disclosure rules because such an approach would disproportionately impact smaller registrants.720 In order to provide registrants, especially smaller registrants, with additional time to prepare for the proposed climate-related disclosures, we are proposing phased-in dates for complying with proposed subpart 1500 of Regulation S–K and Article 14 of Regulation S–X, which would provide additional time for certain smaller registrants. The table

709 Form 6–K, General Instruction B.
711 See, e.g., letters from Baillie Gifford; Rob Bonta, California Attorney General et al.; Calvert Research and Management; Carolyn Kohoot; Center for American Progress; Ceres et al.; Certified B Corporations; Clean Yield Asset Management; Climate Risk Disclosure Lab; Consumer Federation of America; Environmental Bankers Association; Friends of the Earth, Amazon Watch, and Rainforest Action Network; Garcia Hamilton & Associates (June 11, 2021); Grant Thornton; Sarah Ladin; Miller/Howard Investments; Natural Resources Defense Council; New York State Society of Certified Public Accountants; Nia Impact Capital; Teachers Insurance and Annuity Association of America; ValueEdge Advisors (July 5, 2021); and Vert Asset Management.
712 See, e.g., letters from Rob Bonta, California Attorney General et al.; Calvert Research and Management; and Ceres et al.
713 See, e.g., letters from Consumer Federation of America; and Natural Resources Defense Council.
714 See, e.g., letters from American Petroleum Institute; Associated General Contractors of America; Bank Policy Institute; Business Roundtable; Chamber of Commerce; Chevron; Cisco; ConocoPhilips; Dell Technologies; Dow; FedEx Corporation (June 11, 2021); Investment Company Institute; NAFCO Industries, Inc. (June 11, 2021); KPMG, LLP; National Association of Manufacturers; National Investor Relations Institute; National Mining Association; Society for Corporate Governance; and United Airlines Holdings, Inc.
715 Letter from American Petroleum Institute; see also letters from Chamber of Commerce; and National Association of Manufacturers.
716 See, e.g., letters from National Mining Association; and United Airlines Holdings.
717 See supra note 713.
718 See supra note 556.
The proposed compliance dates in the table above would apply to both annual reports and registration statements. For example, if a non-accelerated filer with a December 31st fiscal year-end filed a registration statement that was not required to include audited financial statements for fiscal year 2024 (e.g., the registration statement was filed in 2023 or 2024), it would not be required to comply with the proposed climate disclosure rules in that registration statement.

A registrant with a different fiscal year-end date that results in its fiscal year 2023 commencing before the effective date of the rules would not be required to comply with subpart 1500 of Regulation S–K and Article 14 of Regulation S–X until the following fiscal year. For example, a large accelerated filer with a March 31st fiscal year-end date would not be required to comply with the proposed climate disclosure rules until its Form 10-K for fiscal year 2024, filed in June, 2024. This would provide large accelerated filers, who would have the earliest compliance date of all categories of filers, with what we believe is a reasonable amount of time to comply with the rules.

We believe that initially applying the disclosure requirements to the more limited pool of large accelerated filers would be appropriate, because many large accelerated filers are already collecting and disclosing climate-related information, have already devoted resources to these efforts, and have some levels of controls and processes in place for such disclosure. In comparison, registrants that are not large accelerated filers may need more time to develop the systems, controls, and processes necessary to comply with the proposed rules, and may face proportionately higher costs.

Accordingly, we propose to provide them additional time to comply.

We also recognize that obtaining the data necessary to calculate a registrant’s Scope 3 emissions might prove challenging since much of the data is likely to be under the control of third parties. In order to provide sufficient time for registrants to make all necessary arrangements to begin gathering and assessing such data, we are proposing an additional one-year phase-in period for the Scope 3 emissions disclosure requirements. As previously mentioned, we also are proposing an exemption for SRCs from the proposed Scope 3 emissions disclosure provision.

The proposed mandatory compliance periods are intended to provide registrants with ample time to prepare to provide the proposed disclosures. Registrants would, however, be able to provide the disclosures at any time after the effective date of the rules.

Request for Comment

197. Should we provide different compliance dates for large accelerated filers, accelerated filers, non-accelerated filers, or SRCs, as proposed? Should any of the proposed compliance dates in the table above be earlier or later? Should any of the compliance dates be earlier so that, for example, a registrant would be required to comply with the Commission’s climate-related disclosure rules for the fiscal year in which the rules become effective?

198. Should we provide a compliance date for the proposed Scope 3 emissions disclosure requirements that is one year later than for the other disclosure requirements, as proposed? Should the compliance dates for the Scope 3 emissions disclosure requirements be earlier or later? Should the compliance date for the Scope 3 emissions disclosure requirements depend upon whether the registrant is a large accelerated filer, accelerated filer, or non-accelerated filer?

199. Should we provide different compliance dates for registrants that do not have a December 31st fiscal year-end?

200. Should we include rules or guidance addressing less common situations, such as, but not limited to, reverse mergers, recapitalizations, other acquisition transactions, or if a registrant’s SRC (or EGC) status changes as a result of such situations?

201. Are there other phase-ins or exemptions regarding any or all of the proposed rules that we should provide?

III. General Request for Comments

We request and encourage any interested person to submit comments on any aspect of the proposed amendments, other matters that might have an impact on the proposed amendments, and any suggestions for additional changes. With respect to any comments, we note that they are of greatest assistance to our rulemaking initiative if accompanied by supporting data and analysis of the issues addressed in those comments and by alternatives to our proposals where appropriate.

IV. Economic Analysis

We are mindful of the economic effects that may result from the proposed rules, including the benefits, costs, and the effects on efficiency, competition, and capital formation.

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Notes:

723 See, e.g., letters from Adobe; Apple; BNP Paribas; bp; Chevron; Eni SpA; and Walmart.

724 See supra Section II.C.3.
This section analyzes the expected economic effects of the proposed rules relative to the current baseline, which consists of the regulatory framework of disclosure requirements in existence today, the current disclosure practices of registrants, and the use of such disclosures by investors and other market participants. We anticipate the proposed rules will give rise to several benefits by strengthening investor protection, improving market efficiency, and facilitating capital formation. The primary benefit is that investors would have access to more consistent, comparable, and reliable disclosures with respect to registrants’ climate-related risks, which is expected to enable investors to make more informed investment or voting decisions.\textsuperscript{724} By providing access to this information through SEC filings for all public issuers, this enhanced disclosure could mitigate the challenges that investors currently confront in assessing the nature and extent of the climate-related risks faced by registrants and their impact on registrants’ business operations and financial condition. In this way, the proposed rules may reduce information asymmetry both among investors, which can reduce adverse selection problems and improve stock liquidity,\textsuperscript{725} and between investors and firms, which can reduce investors’ uncertainty about estimated future cash flows, thus lowering the risk premium they demand and therefore registrant’s cost of capital. The proposed rules could also mitigate certain agency problems between the firm’s shareholders and management, thus strengthening investor protection.\textsuperscript{726} Further, by enabling climate-related information to be more fully incorporated into asset prices, the proposed rules would allow climate-related risks to be borne by those who are most willing and able to bear them, thereby strengthening financial system resilience. Taken together, the proposed rules are expected to contribute to the efficient allocation of capital, capital formation, competition, and the maintenance of fair and orderly markets.\textsuperscript{727}

We are also mindful of the costs that would be imposed by the proposed rules. Registrants would face increased compliance burdens in meeting the new disclosure requirements. In some cases, these additional compliance burdens could be significant while in others relatively small if companies already provide information similar to that required by our rules. Other potential costs include increased litigation risk and the potential disclosure of proprietary information about firms’ operations and/or production processes.\textsuperscript{728}

\textbf{A. Baseline and Affected Parties}

This section describes the current regulatory and economic landscape with respect to climate-related disclosures. It discusses the parties likely to be affected by the proposed rules, current trends in registrants’ voluntary reporting on climate risks, related assurance practices, and existing mandatory disclosure rules under state and other Federal laws. These factors form the baseline against which we estimate the likely economic effects of the proposed rules.

\textbf{1. Affected Parties}

The proposed disclosure requirements would apply to Forms S–1, F–1, S–3, F–3, S–4, F–4, S–11, 6–K, 10, 10–Q, 10–K, and 20–F. Thus, the parties that are likely affected by the proposed rules include registrants subject to the disclosure requirements imposed by these forms, as well as investors and other market participants that use the information in these filings (e.g., financial analysts, investment advisors, asset managers, etc.).

The proposed rules may affect both domestic registrants and foreign private issuers (FPIs).\textsuperscript{729} We estimate that during calendar year 2020, excluding registered investment companies, there were approximately 6,220 registrants that filed on domestic forms\textsuperscript{730} and approximately 740 FPIs that filed on Forms 20–F. Among the registrants that filed on domestic forms, approximately 31 percent were large accelerated filers, 11 percent were accelerated filers, and 58 percent were non-accelerated filers. In addition, we estimate that approximately 50 percent of these domestic registrants were smaller reporting companies (SRCs) and 22 percent were emerging growth companies (EGCs).

\textbf{2. Current Regulatory Framework}

A number of the Commission’s existing disclosure requirements may elicit disclosure about climate-related risks; however, many of these requirements are principles-based in nature and thus the nature and extent of the information provided depends to an extent on the judgment of management. As discussed above, in 2010, the Commission published interpretive guidance on existing disclosure requirements as they pertain to business or legal developments related to climate change.\textsuperscript{731} The 2010 Guidance emphasized that if climate-related factors have a material impact on a firm’s financial condition, disclosure may be required under current Item 101 (Description of Business), Item 103 (Legal Proceedings), Item 105 (Risk Factors), or Item 303 (MD&A) of Regulation S–K. While these provisions may elicit some useful climate-related disclosure, these provisions have not resulted in the consistent and comparable information about climate-related risks that many investors have stated that they need in order to make informed investment or voting decisions.\textsuperscript{732}

\textbf{3. Existing State and Federal Laws}

There are also state and other Federal laws that require certain climate-related disclosures or reporting. For instance,

\textsuperscript{724} See infra Section IV.C.2

\textsuperscript{725} FPIs refer to the subset of all FPIs that file annual reports on Form 20–F, excluding MBIS filers using form 40–F.

\textsuperscript{726} The number of domestic registrants and FPIs affected by the final amendments is estimated as the number of unique companies, identified by Central Index Key (CIK), that filed a Form 10–K, Form 20–F, or an amendment thereto, or both a Form 10–K and a Form S–1, S–3, S–4, S–11, or S–11 with the Commission during calendar year 2020, excluding asset-backed securities issuers. For purposes of this economic analysis, these estimates do not include registrants that only filed a Securities Act registration statement during calendar year 2020, or only filed a Form 10–Q not preceded by a Securities Act registration statement (in order to avoid including entities such as certain co-issuers of debt securities). We believe that most registrants that have filed a Securities Act registration statement or a Form 10–Q not preceded by a Securities Act registration statement, other than such co-issuers, would be captured by this estimate. The estimates for the percentages of SRCs, EGCs, accelerated filers, large accelerated filers, and non-accelerated filers are based on data obtained by Commission staff using a computer program that analyzes SEC filings, with supplemental data from Ives Group Audit Analytics and manual review of filings by staff.

\textsuperscript{730} This number includes approximately 20 FPIs that filed on domestic forms in 2020 and approximately 90 BDCs.

\textsuperscript{731} See Commission Guidance Regarding Disclosure Related to Climate Change, Release No. 33–9106 (Feb. 5, 2010) [75 FR 6290 (Feb. 8, 2010)] ("2010 Climate Change Guidance"), available at https://www.sec.gov/rules/interp/2010/33-9106.pdf (The guidance did not create new legal requirements nor modify existing ones. Instead, it highlighted climate-related topics that registrants should consider in seeking to meet their existing disclosure obligations (e.g., the impact of legislation, regulation, international accords, indirect consequences, physical risks, etc.) and in what section they should be discussed (e.g., risk factors, MD&A, etc.). See also discussion in Section I.A.)
there are requirements for mandatory climate risk disclosure within the insurance industry. As of 2021, 14 states\textsuperscript{743} and the District of Columbia require any domestic insurers that write more than $100 million in annual net written premium\textsuperscript{734} to disclose their climate-related risk assessment and strategy via the NAIC Climate Risk Disclosure Survey.\textsuperscript{735} Survey question topics include climate risk governance, climate risk management, modeling and analytics, stakeholder engagement, and greenhouse gas management. In fiscal year 2020, there were 60 publicly traded insurance companies that may be required to provide disclosure pursuant to these state law provisions and that also would be subject to the proposed rules.

There also exist Federal- and state-level reporting requirements related to greenhouse gas (GHG) emissions. Federal GHG reporting requirements consist of the U.S. Environmental Protection Agency’s (EPA) 2009 Mandatory Reporting of Greenhouse Gases Rule.\textsuperscript{736} This rule requires large direct emitters and suppliers of fossil fuels to report their emissions to the EPA.\textsuperscript{737} Specifically, the rule requires each facility that directly emits more than 25,000 metric tons of CO\textsubscript{2}e per year to report these direct emissions. Additionally, facilities that supply certain products that would result in over 25,000 metric tons of CO\textsubscript{2}e if those products were released, combusted, or oxidized must similarly report these “supplied” emissions.\textsuperscript{738} The resulting emissions data are then made public through their website. Due to the nature of the EPA’s reporting requirements, their emissions data does not allow a clean disaggregation across the different scopes of emissions for a given registrant. The EPA requires reporting of facility-level direct emissions, which can contribute to a registrant’s Scope 1 emissions (but can typically be considered a subset, to the extent that the registrant has other non-reporting facilities), and facility-level supplied emissions, which can contribute to a registrant’s Scope 3 emissions (but can also be very different from it).\textsuperscript{739} Gases required to be reported by the EPA include all those referenced by the GHG Protocol and included within the proposed definition of “greenhouse gases.”\textsuperscript{740} The EPA estimates that the required reporting under their rule covers 85–90% of all GHG emissions from over 8,000 facilities in the United States.\textsuperscript{741}

In addition, at least 17 states have specific GHG emissions reporting requirements.\textsuperscript{742} States’ rules vary with respect to reporting thresholds and emissions calculation methodologies, but most tend to focus on direct emissions (\textit{i.e.}, Scope 1), with certain exceptions. For example, New York requires the reporting of direct emissions from any owner or operator of a facility that directly emits or has the potential to emit 100 tons per year or more of GHGs, and 100,000 tons per year or more of carbon dioxide equivalent (CO\textsubscript{2}e).\textsuperscript{743} Colorado excludes oil and gas that is exported out of state, but includes both imported and exported electricity when calculating the state’s emissions inventory.\textsuperscript{744} California requires annual reporting of GHG emissions by industrial sources that emit more than 10,000 metric tons of CO\textsubscript{2}e, transportation and natural gas fuel suppliers, and electricity importers.\textsuperscript{745} As a result of these federal and state-level emissions reporting requirements, some registrants affected by the proposed rules may already have in place certain processes and systems to measure and disclose their emissions.  

4. International Disclosure Requirements

Issuers with operations abroad may also be subject to those jurisdictions’ disclosure requirements. Many jurisdictions’ current and/or proposed requirements are based on the TCFD’s framework for climate-related financial reporting.\textsuperscript{746} In 2015, the Financial Stability Board (FSB) established the TCFD, an industry-led task force charged with developing a framework for assessing and disclosing climate-related financial risk. In 2017, the TCFD published disclosure recommendations that provide a framework to evaluate climate-related risks and opportunities through an assessment of their projected short-, medium-, and long-term financial impact on an issuer. The framework establishes eleven disclosure topics related to four pillars that reflect how companies operate: Governance, strategy, risk management, and metrics and targets.\textsuperscript{747} The TCFD forms the framework for the recently published climate prototype standard that the IFRS Foundation is considering as a potential model for standards by the IFRS Foundation’s International Sustainability Standards Board (ISSB). As of September 2021, the TCFD

\textsuperscript{732} The 14 states are California, Connecticut, Delaware, Maine, Maryland, Massachusetts, Minnesota, New Mexico, New York, Oregon, Pennsylvania, Rhode Island, Vermont, and Washington.

\textsuperscript{733} Net written premium is defined as the premiums written by an insurance company, minus premiums paid to reinsurers company, plus any reinsurer assumed.


\textsuperscript{736} According to the EPA, “direct emitters” are facilities that combust fuels or otherwise emit GHGs into the atmosphere from their facility. An example of this is a power plant that burns coal or natural gas and emits carbon dioxide directly into the atmosphere. The EPA estimates that the GHGRP data reported by direct emitters covers about half of total U.S. emissions. “Suppliers” are those entities that supply products into the economy which if combusted, released, or oxidized emit greenhouse gases. These fuels and industrial gases are not emitted from the supplier facility but instead distributed throughout the country and used. An example of this is gasoline, which is sold in the U.S. and primarily burned in cars throughout the country. The majority of GHG emissions associated with the transportation, residential and commercial sectors are accounted for by these suppliers.

\textsuperscript{737} The EPA’s emissions data does not include emissions from agriculture, land use, or direct emissions from sources that have annual emissions of less than 25,000 metric tons of CO\textsubscript{2}e.

\textsuperscript{738} On this latest point, in particular, facility-level supplied emissions cannot necessarily be characterized as a portion of the registrant’s Scope 3 emission as the boundaries of the entity required to report under the EPA reporting regime (the facility) are different from the boundaries of the entity required to report under our proposed rules (the registrant).

\textsuperscript{739} The EPA requires emissions reporting only for domestic facilities; the proposed rule would not be limited to U.S. facilities and includes indirect emissions. The EPA also requires some gases (e.g. fluorinated ethers, perfluoropolyether) that are considered optional under the GHG Protocol and that are not included within the proposed definition of “greenhouse gases.”

\textsuperscript{740} See supra note 736.

\textsuperscript{741} See supra note 736.

\textsuperscript{742} See NCSL, Greenhouse Gas Emissions Reduction Targets and Market-Based Policies (2021), available at https://www.ncsl.org/research/energy/greenhouse-gas-emissions-reduction-targets-and-market-based-policies.aspx. The 17 states with GHG reporting requirements are Hawaii, GHC Protocol and that are not included within the proposed definition of “greenhouse gases.”

\textsuperscript{743} See supra note 736.


\textsuperscript{747} See Section I.D.

reported that eight jurisdictions have implemented formal TCFD-aligned disclosure requirements for domestic issuers: Brazil, the European Union, Hong Kong, Japan, New Zealand, Singapore, Switzerland, and the United Kingdom. In addition, several other jurisdictions have proposed TCFD-aligned disclosure requirements, issued policies or guidance in line with the TCFD recommendations, or otherwise indicated support for the TCFD recommendations, including Australia, Canada, Denmark, France, Ireland, Italy, Malaysia, Norway, Russia and South Korea. Insofar as issuers have operations abroad, they would already be subject to these mandatory disclosure requirements, policies and guidance.

5. Current Market Practices
a. Climate-Related Disclosures in SEC Filings

The Commission’s staff reviewed 6,644 annual reports (Forms 10–K, 40–F, and 20–F) submitted from June 27, 2019 until December 31, 2020 to determine how many contain any of the following keywords: “climate change”, “climate risk”, “global warming”. The presence of any of the keywords in any part of the annual report is indicative of some form of climate-related disclosure. Table 1 (presented as a graph in Figure 1) shows that 33% of all annual reports contain some disclosure related to climate change, with a greater proportion coming from foreign registrants. The corresponding percentages for Forms 20–F and 40–F are 39% and 73%, respectively. Table 2 (presented as a graph in Figure 2) provides a breakdown by accelerated filer status. Among large accelerated filers, 49% of filings discussed climate change, while the figures for accelerated filers and non-accelerated filers are 29% and 17%, respectively. Table 3 (presented as a graph in Figure 3), which provides a breakdown by industry groups, shows that the industries with the highest percentage of annual reports containing climate-related disclosure include maritime transportation, electric services, oil and gas, steel manufacturing, and rail transportation, among others.

**Table 1—Filings With Climate-Related Keywords by Form Type**

<table>
<thead>
<tr>
<th>Form</th>
<th>Has keyword</th>
<th>All filings</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>10–K</td>
<td>1,785</td>
<td>5,791</td>
<td>31</td>
</tr>
<tr>
<td>20–F</td>
<td>286</td>
<td>729</td>
<td>39</td>
</tr>
<tr>
<td>40–F</td>
<td>91</td>
<td>124</td>
<td>73</td>
</tr>
<tr>
<td>Total</td>
<td>2,162</td>
<td>6,644</td>
<td>33</td>
</tr>
</tbody>
</table>

This table presents the analysis of annual filings submitted to the Commission between June 27, 2019, and Dec. 31, 2020. For each form type, the table indicates how many contain any of the climate-related keywords, which include “climate change,” “climate risk,” and “global warming.”
TABLE 2—FILINGS WITH CLIMATE-RELATED KEYWORDS BY ACCELERATED FILER STATUS

<table>
<thead>
<tr>
<th>Filer status</th>
<th>Has keyword</th>
<th>All filings</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAF</td>
<td>1,117</td>
<td>2,280</td>
<td>49</td>
</tr>
<tr>
<td>AF</td>
<td>371</td>
<td>1,290</td>
<td>29</td>
</tr>
<tr>
<td>NAF</td>
<td>465</td>
<td>2,754</td>
<td>17</td>
</tr>
<tr>
<td>Other</td>
<td>209</td>
<td>320</td>
<td>65</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,162</strong></td>
<td><strong>6,644</strong></td>
<td><strong>33</strong></td>
</tr>
</tbody>
</table>

This table presents the analysis of annual filings submitted to the Commission between June 27, 2019, and Dec. 31, 2020. Filer status consists of large accelerated filers (LAF), accelerated filers (AF), and non-accelerated filers (NAF). For each filer status, the table indicates how many contain any of the climate-related keywords, which include “climate change,” “climate risk,” and “global warming.”
### TABLE 3—Filings With Climate-Related Keywords by Industry

<table>
<thead>
<tr>
<th>Industry</th>
<th>Has keyword</th>
<th>All filings</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maritime Transportation</td>
<td>64</td>
<td>68</td>
<td>94</td>
</tr>
<tr>
<td>Electric Services</td>
<td>154</td>
<td>171</td>
<td>90</td>
</tr>
<tr>
<td>Oil and Gas</td>
<td>169</td>
<td>202</td>
<td>84</td>
</tr>
<tr>
<td>Steel Manufacturing</td>
<td>14</td>
<td>17</td>
<td>82</td>
</tr>
<tr>
<td>Rail Transportation</td>
<td>8</td>
<td>10</td>
<td>80</td>
</tr>
<tr>
<td>Paper and Forest Products</td>
<td>20</td>
<td>28</td>
<td>71</td>
</tr>
<tr>
<td>Insurance</td>
<td>46</td>
<td>66</td>
<td>70</td>
</tr>
<tr>
<td>Passenger Air and Air Freight</td>
<td>23</td>
<td>34</td>
<td>68</td>
</tr>
<tr>
<td>Trucking Services</td>
<td>14</td>
<td>22</td>
<td>64</td>
</tr>
<tr>
<td>Mining</td>
<td>109</td>
<td>198</td>
<td>55</td>
</tr>
<tr>
<td>Beverages, Packaged Foods and Meats</td>
<td>56</td>
<td>109</td>
<td>51</td>
</tr>
<tr>
<td>Construction Materials</td>
<td>54</td>
<td>118</td>
<td>46</td>
</tr>
<tr>
<td>Automotive</td>
<td>11</td>
<td>26</td>
<td>42</td>
</tr>
<tr>
<td>Real Estate Management and Development</td>
<td>274</td>
<td>661</td>
<td>41</td>
</tr>
<tr>
<td>Capital Goods</td>
<td>41</td>
<td>110</td>
<td>37</td>
</tr>
<tr>
<td>Technology Hardware &amp; Equipment</td>
<td>61</td>
<td>177</td>
<td>34</td>
</tr>
<tr>
<td>Agriculture</td>
<td>11</td>
<td>32</td>
<td>34</td>
</tr>
<tr>
<td>Textiles and Apparel</td>
<td>12</td>
<td>36</td>
<td>33</td>
</tr>
<tr>
<td>Not in Peer Group</td>
<td>478</td>
<td>1,431</td>
<td>33</td>
</tr>
<tr>
<td>Consumer Retailing</td>
<td>138</td>
<td>558</td>
<td>25</td>
</tr>
<tr>
<td>Banking</td>
<td>158</td>
<td>754</td>
<td>21</td>
</tr>
<tr>
<td>Chemicals</td>
<td>131</td>
<td>922</td>
<td>14</td>
</tr>
<tr>
<td>Interactive Media and Services</td>
<td>116</td>
<td>894</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>2,162</td>
<td>6,644</td>
<td>33</td>
</tr>
</tbody>
</table>

This table presents the analysis of annual filings submitted to the Commission between June 27, 2019, and Dec. 31, 2020. For each industry, the table indicates how many contain any of the climate-related keywords, which include “climate change,” “climate risk,” and “global warming.”
Figure 3. Filings with Climate-related Keywords by Industry

- Maritime Transportation
- Electric Services
- Oil & Gas
- Steel Manufacturing
- Rail Transportation
- Paper and Forest Products
- Insurance
- Passenger Air and Air Freight
- Trucking Services
- Mining
- Beverages, Packaged Foods and Meats
- Construction Materials
- Automotive
- Real Estate Management and Development
- Capital Goods
- Technology Hardware & Equipment
- Agriculture
- Not in Peer Group
- Textiles and Apparel
- Consumer Retailing
- Banking
- Chemicals
- Interactive Media and Services
Using the same sample of annual reports, additional analysis was conducted by Commission’s staff using natural language processing (NLP), which can provide insight on the semantic meaning of individual sentences within registrants’ climate-related disclosures and classify them into topics (i.e., clusters). The specific NLP method used in this analysis is word embedding, which utilizes Google’s publicly available, pre-trained word vectors that are then applied to the text of climate-related disclosures within regulatory filings. While this NLP analysis can be used to identify the general topic and the extent of disclosures, it is limited in its ability to discern the quality or decision-usefulness of disclosures from investors’ perspective.

755 The analysis suggests that climate-related disclosures can be broadly organized into four topics: Business impact, emissions, international climate accords, and physical risks. The analysis finds significant heterogeneity, both within the quantity and content, of climate-related disclosures across industries, as shown in Figures 4 and 5. Figure 4 presents the intensity of disclosure for domestic filings. The intensity refers to sentences per firm, which is calculated by taking the aggregate number of sentences in an industry and dividing it by the total number of firms within the industry (including those that do not discuss climate change at all). Thus, the intensity represents a more comparable estimate across industries.

Figure 4 shows that firms in the following industries have the most ample climate-related discussion, on average: Electric services, oil and gas, steel manufacturing, passenger air and air freight, and maritime transportation. The majority of the discussion is on business impact, followed by emissions, international climate accords, and physical risks. Figure 5 presents the corresponding information for foreign filings (Forms 40–F and 20–F). Overall, the analysis indicates that the majority of the disclosure is focused on transition risks, with comparatively fewer mentions of physical risk.
This figure presents the analysis of Form 10-K annual filings submitted to the Commission between June 27, 2019, and Dec. 31, 2020. Natural language processing (NLP) is used to analyze sentences contained within the annual filings and classify them into four broad topics (i.e. clusters): business impact, emissions, international climate accords, and physical risks. Intensity refers to sentences per firm, which is calculated by taking the aggregate number of sentences in an industry and dividing it by the total number of firms within the industry.
The staff’s findings are consistent with academic studies that have looked at the extent of climate-related disclosures by SEC registrants. Bolstad et al. (2020) systematically reviewed Form 10-K filings from Russell 3000 firms over the last 12 years and found that the majority of climate-related disclosure is focused on transition risks as opposed to physical risks. They further report that while 35% of Russell 3000 firms provided climate-related information in 2009, this figure grew to 60% in 2020, representing a significant increase. They also found that the extent of disclosure for a given report has increased. In 2009, firms mentioned climate risks 8.4 times on average in their Form 10-K. This figure grew to 19.1 times in 2020.

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757 Id. The methodology uses a series of keywords to determine whether a company provides climate-related disclosures. Some keywords may occur in non-climate contexts, with the authors noting that the statistics are biased.
b. Additional Trends in Climate-Related Disclosures

While Commission staff reviewed certain firms’ sustainability reports for climate-related disclosures, they did not conduct a systematic review of a large, representative sample of sustainability reports. However, as discussed below, a number of industry and advocacy groups have examined the scope of voluntary ESG reporting, including climate-related disclosures and their findings could be relevant to an assessment of the proposed rules’ impact.

The U.S. Chamber of Commerce’s Center for Capital Markets Competitiveness (CCMC), in collaboration with several other organizations, conducted a survey (“CCMC Survey”) on a sample of U.S. public companies—436 companies across 17 industries that range from small to large in terms of market capitalization. 758 According to the survey, over half of the companies (52%) are currently publishing a corporate social responsibility (CSR), sustainability, ESG or similar report whose content commonly includes information regarding climate-related risks. The most frequently discussed topics there are energy (74%), emissions (70%), environmental policy (60%), water (59%), climate mitigation strategy (57%), and supplier environmental policies (35%). Among the registrants that report climate-related information to the public, the majority disclose such information via external reports or company websites rather than regulatory filings. Similar to the Commission staff review, the CCMC Survey finds that about a third (34%) of the respondents disclose climate change, greenhouse gas emissions, or energy sourcing in their SEC filings information on risks. Among these firms, 82% disclose such information in Risk Factors, 26% in the MD&A, 19% in the Description of Business, and 4% in Legal Proceedings.

The Governance & Accountability Institute 759 (“G&A”) analyzed sustainability reports by the companies belonging to the Russell 1000 Index and found that in 2020, 70% published sustainability reports—up from 65% in 2019 and 60% in 2018. 760 Other sources confirm that, at least within samples of larger firms, a sizeable portion already measure and disclose their emissions, though not necessarily through their regulatory filings. The CDP 761 reports that out of the 524 U.S. companies in their Climate High Impact Sample, 762 402 disclosed through the CDP system in 2021, up from 379 in 2020, and 364 in 2019. Out of the sample of reviewed companies, 22.1% (89 out of 402 companies) reported Scope 1 emissions in 2021. This reflects an increase from the previous two years, during which 18% (67 out of 379 companies) reported such information in 2020, and 17% (62 out of 364 companies) in 2019. 763 One commenter stated that there is significant variation in disclosure rates of GHG emissions across various industries. 764 The commenter, using a sample of the 1,100 U.S. companies included within the Sustainalytics dataset, reports that the disclosure rate of material Scope 1, 2, and 3 emissions is 59.5%. 765 Furthermore, the International Platform on Sustainable Finance found that among the U.S. listed firms present in the Definitive dataset, 10.8% disclosed Scope 1 emissions in 2019, representing 55.4% of U.S. market capitalization. 766 To the extent that registrants’ current climate-related disclosures overlap with the proposed rules, registrants may face lower incremental compliance costs, as discussed in further detail below. 767

c. Use of Third-Party Frameworks

Some companies follow existing third-party reporting frameworks when developing climate-related disclosures for SEC filings or to be included in CSR, sustainability, ESG, or similar reports. For instance, the CCMC Survey finds that 59% of respondents follow one or more such frameworks. Among these respondents, 44% use SASB, 768 31% use the GRI, 769 29% use the TCFD, 770 and 24% use the CDP. 771 Similar statistics on the usage of different reporting frameworks are also provided by other studies. The G&A report 772 finds that 53% of the Russell 1000 reporters either mention or align with SASB, 773 52% utilized GRI reporting standards, 774 30% either

758 See Section IV.C.2.3.
759 The GRI standards are designed for communication by companies to investors about how sustainability issues impact long-term enterprise value. SASB standards guide the disclosure of financial material sustainability information by companies to their investors. SASB standards, which are available for 77 industries, identify the subset of ESG issues most relevant to financial performance in each industry. The SASB standards can be both complementary with the core elements of the TCFD recommendations, as well as used by organizations to operationalize them. See https://www.sasb.org/about/sasb-and-other-egf-frameworks/.
760 The GRI standards outline both how and what to report regarding the material economic, social and environmental impacts of an organization on sustainable development. For 33 potentially material sustainability topics, the GRI standards contain disclosure requirements. Three series of GRI standards support the reporting process: The GRI Topic Standards, each dedicated to a particular topic and listing disclosures relevant to that topic; the GRI Sector Standards, which are applicable to specific sectors; and the GRI Universal Standards, which apply to all organizations. The GRI Standards can be used in sustainability reports, as well as in annual or integrated reports that are oriented at a broad range of stakeholders. See https://www.globalreporting.org/standards/.
761 The TCFD recommended disclosures cover four core elements: Governance, Strategy, Risk Management and Metrics and Targets. Each element has two or three specific disclosures (as shown in Table 4) to be made in the organization’s mainstream report (i.e. annual financial filings). These are meant to generate comparable, consistent and reliable information on climate-related risks. The TCFD provides both general, and in some cases, sector-specific guidance for each disclosure, while simultaneously framing the context for disclosure, and offering suggestions on what and how to disclose in the mainstream report. See https://www.fsb-tcfd.org/recommendations/.
762 Of those reporters utilizing the GRI standards, G&A finds that a small portion (5%) utilizes the “Comprehensive” level of reporting, the majority (64%) chose to report in accordance with the “Core” option, while the remaining portion (31%)...
mention or align with TCFD recommendations, and 40% responded to the CDP Climate Change questionnaire. The law firm White & Case also conducted an in-depth review of website sustainability disclosures by 80 small- and mid-cap firms across five different industries and found comparable numbers.

While these various frameworks are distinct, they overlap in their alignment with the TCFD. In particular, the CDP questionnaire fully incorporates the TCFD framework and thus exhibits full alignment. The Corporate Reporting Dialogue also provides a detailed assessment of the various frameworks’ degrees of alignment with each TCFD disclosure item, ranging from maximum to minimum alignment as follows: Full, Reasonable, Moderate, Very Limited, and None. They report that the GRI exhibits “Reasonable” alignment, while the SASB generally exhibits “Moderate” or “Reasonable” alignment with the majority of the TCFD disclosure items. Thus, companies that report following the CDP, SASB, or GRI frameworks are, to varying degrees, already producing disclosures that are in line with parts of the TCFD. However, because each framework takes different approaches (e.g., intended audience, reporting channel) and because certain differences exist in the scope and definitions of certain elements, investors may find it difficult to compare disclosures under each framework.

### Table 4—Disclosure Rate of TCFD Elements Among U.S. Firms

<table>
<thead>
<tr>
<th>TCFD disclosure element</th>
<th>Rate of disclosure (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Governance:</td>
<td></td>
</tr>
<tr>
<td>(a) Describe the board’s oversight of climate-related risks and opportunities</td>
<td>17</td>
</tr>
<tr>
<td>(b) Describe management’s role in assessing and managing climate-related risks and opportunities</td>
<td>10</td>
</tr>
<tr>
<td>Strategy:</td>
<td></td>
</tr>
<tr>
<td>(a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term</td>
<td>45</td>
</tr>
<tr>
<td>(b) Describe the impact of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning</td>
<td>34</td>
</tr>
<tr>
<td>(c) Describe the resilience of the organization’s strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario</td>
<td>5</td>
</tr>
<tr>
<td>Risk Management:</td>
<td></td>
</tr>
<tr>
<td>(a) Describe the organization’s processes for identifying and assessing climate-related risks</td>
<td>15</td>
</tr>
<tr>
<td>(b) Describe the organization’s processes for managing climate-related risks</td>
<td>17</td>
</tr>
<tr>
<td>(c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization’s overall risk management</td>
<td>16</td>
</tr>
<tr>
<td>Metrics and Targets:</td>
<td></td>
</tr>
<tr>
<td>(a) Describe the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process</td>
<td>21</td>
</tr>
<tr>
<td>(b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks</td>
<td>19</td>
</tr>
<tr>
<td>(c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets</td>
<td>25</td>
</tr>
</tbody>
</table>

Carbon reduction targets or goals have become an increasing focus for both companies and countries. For example, 191 countries, including the United States and European Union, have signed the Paris Climate Agreement. The agreement aims to strengthen the global response to the threat of climate change by keeping a rise in global temperatures to well below 2°Celsius above pre-industrial levels this century, as well as pursue efforts to limit the temperature increase even further to 1.5°C degrees Celsius. As of 2020, according to one source, about two-thirds of S&P 500 companies have established a target for carbon emissions—a number that has nearly doubled over the past decade. Approximately one-fifth of these companies have science-based targets in-line with a 1.5 degree Celsius limit.

utilizes “GRI-Referenced” reports, which are not fully in accordance with the GRI standards. GRI-Referenced reports contain the GRI Content Index and reference certain disclosures.

Of the Russell 1000 reporting companies, 17% indicate that they are in alignment with the TCFD recommendations, while the other 13% simply mention the recommendations.

See White & Case and the Society for Corporate Governance: A Survey and In-Depth Review of Sustainability Disclosures by Small- and Mid-Cap Companies, available at https://www.whitecase.com/publications/article/survey-and-depth-review-sustainability-disclosures-small-and-mid-cap-companies (Among the firms reviewed, 41 firms [51%] provided some form of voluntary sustainability disclosure on their websites. Further, only nine of those 41 firms indicated the reporting standards with which they aligned their reporting, with the majority of the nine companies not following any one set of standards completely. Additionally, six firms followed the GRI, while three firms stated that they follow both the TCFD and SASB).


See Moody’s Analytics, TCFD-Aligned Reporting by Major U.S. and European Corporations, (2022), available at https://www.moodysanalytics.com/articles/pa/2022/tcfd aligned_reporting_by_major_us_and_european_corporations. To arrive at these statistics, Moody’s conducted an artificial intelligence (AI) based review of all public filings, including financial filings, annual reports, integrated reports, sustainability reports, and other publicly available reports that were associated with companies’ annual reporting on sustainability. Non-public disclosures, such as CDP reports, were not included in the analysis.


See Section I.

on global warming. In addition, a growing number of companies or organizations have signed on to the Climate Pledge, which indicates a commitment to achieve net-zero emissions by 2040. The trend in companies disclosing other climate-related targets (e.g., water usage) has also been increasing over time.

Despite the increasing prevalence in stated targets and goals, monitoring which firms are taking steps to implement them is difficult given the lack of required recurring standardized metrics for progress. Absent such a monitoring device, investors have insufficient information to gauge the credibility of the targets. Moreover, without knowing the specific strategy that registrants intend on adopting in pursuit of their targets, investors are unable to determine how the targets will impact the company’s financial position (e.g., a company that plans to only purchase offsets may face different risks and costs over time than a company that invests in renewable energy or carbon capture technology). Investors who purchase offsets may face different risks (e.g., inability to determine how the targets will be achieved) without knowing the specific strategy and associated monitoring device, investors have insufficient information to gauge the credibility of the targets. Moreover, insufficient information to gauge the monitoring device, investors have insufficient information to gauge the credibility of the targets. Besides, without knowing the specific strategy that registrants intend on adopting in pursuit of their targets, investors are unable to determine how the targets will impact the company’s financial position (e.g., a company that plans to only purchase offsets may face different risks and costs over time than a company that invests in renewable energy or carbon capture technology).

Consistent with this need for an oversight or monitoring mechanism, research suggests that the prevalence of “green bonds” and positive cumulative abnormal stock returns surrounding their announcements may arise, at least in part, because they help signal a company’s commitment to achieving its sustainability targets.

These findings suggest a demand for such an oversight or monitoring mechanism for targets and goals among investors that would facilitate their understanding of investors’ stated climate-related targets and progress and the impact on the registrant’s business.

B. Third-Party Assurance of Climate-Related Disclosures

Among the companies that provide climate-related disclosures, a considerable portion have some form of third-party assurance for these disclosures. The G&A study finds that 35% of Russell 1000 index firms, which are virtually all large accelerated filers, obtained third-party assurance for their sustainability reports in 2020, up from 24% in the year prior. The rate of assurance is concentrated among the larger half of the sample firms (i.e., the S&P 500 firms). Among the firms that obtained assurance, however, only 3% obtained assurance for the entire report. The remaining firms were evenly split between obtaining assurance on specified sections only and GHG emissions only. Regarding the level of assurance, the overwhelming majority (90%) obtained limited assurance while only 7% obtained reasonable assurance. Regarding service providers, 14% of firms received assurance from an accounting firm, 31% from small consultancy/boutique firms, and 55% from engineering firms. Because these firms generally lack the resources and staff to do how the targets will be achieved) without knowing the specific strategy and associated monitoring device, investors have insufficient information to gauge the credibility of the targets.

792 See 2021 Global Investor Statement to Governments on the Climate Crisis (2021) (this statement has been signed by 541 institutional investors collectively managing over US$5.2 trillion in assets, available at https://theinvestoragenda.org/wp-content/uploads/2021/09/2021-Global-Investor-Statement-to-Governments-on-the-Climate-Crisis.pdf); see also Alexander Karsner, Testimony Before the House Financial Services Subcommittee on National Security, International Development and Monetary Policy (Sept. 11, 2019), available at https://financialservices.house.gov/uploadedfiles/hhs-116-ba10-wstate-karsner-20190911.pdf. A recent report examined how climate change could affect 22 different sectors of the U.S. economy and found that if global temperatures rose 2.8 °C from pre-industrial levels by 2100, climate change could cost $336 billion each year. If global temperatures increased by 4.5 °C, the yearly costs would reach $520 billion. See Jeremy Martinich and Allison Crimmings, Climate Damages and Adaptation Potential Across Diverse Sectors of the United States, Nature Climate Change 9, 397–404 (2019); available at https://www.nature.com/articles/s41558-019-0444-6. Similarly, the Swiss Re Institute estimated how global warming could affect 48 countries—representing 90% of the world economy—and found that the decrease in GDP in North America could range from 4.1% if Paris Agreement targets are met to 9.5% if no mitigating actions are taken (3.2°C increase); The Economics of Climate Change: No Action Costs (2018), available at https://www.swissre.com/dam/jcr/73ec3e7c-fdc7-4a28-8f2a38d3312/swissre-institute-expertise-publication-economics-of-climate-change.pdf.

793 See, e.g., Emirhan Ilhan, Climate Risk Disclosure and Institutional Investors, Swiss Fin. Inst. Research Paper Series (Working Paper No. 19–66), (last revised Jan. 7, 2020), available at https://ssrn.com/abstract=3437178 (noting that a survey of 439 large institutional investors shows that 79% of respondents believe that climate risk reporting is as important as traditional financial reporting, and almost one-third consider it to be more important); See also Macquarie Asset Management 2021 ESG Survey Report (2021), available at https://www.macquarie.com/assets/mqm/our-approach/sustainability/mqm-esg-survey/mqm-2021-esg-survey-report.pdf (noting that in a survey of 180 global institutional real assets investors, including asset managers, banks, consultants and investment advisors, foundations and endowments, insurance companies, and pension funds, who combined represent more than $21 trillion of assets under management, more than half of investors selected climate change as their primary ESG concern).

Investors’ demand for climate-related information may also be related to the transition risks that companies face (e.g., changes in future regulation, shifts in investor, consumer, counterparty preferences or other market conditions, and other technological challenges or innovations). For example, the United States’ commitment to the Paris Agreement may have contributed to investors’ demand for information on registrants’ emissions and exposure to potential transition risk, as well as whether they have in place emissions targets with credible pathways of achievement.793 The 2021 Institutional Investors Survey solicited the views of 42 global institutional investors managing over $29 trillion in assets (more than a quarter of global assets under management (AUM)) and found that climate risk remains the number one investor engagement priority. A significant majority (85%) of surveyed investors cite climate risk as the leading issue driving their engagements with companies. These institutional investors also indicated that they consider climate risk to be material to their investment portfolios and are demanding robust and quantifiable disclosure around its impacts and the plan to transition to net zero.794 State Street Global Advisors (SSGA) and Blackrock, two of the world’s largest investment managers, recently announced the focus areas for their asset stewardship program for 2022, with climate change at the top of their priority list. One of the key expectations set by SSGA this year is a requirement for companies to provide disclosures aligned with TCFD recommendations, including reporting on board oversight on climate-related risks and opportunities, Scope 1 and 2 GHG emissions, and targets for emissions reduction.795 Similarly, Blackrock expects to continue encouraging companies to demonstrate that their plans are resilient under likely decarbonization pathways, and to ask that companies disclose a net zero-aligned business plan that is consistent with their business model to demonstrate how their targets are consistent with the long-term economic interests of their shareholders.796

Investors, including large institutional investors, have also formed initiatives aimed in part at improving corporate disclosures on climate-related risks. These initiatives include the Climate Disclosure Project, Climate Action 100+,797 the Global Investor Coalition on Climate Change (“GIC”),798 the Institutional Investors Group on Climate Change (“IIGCC”),799 and the Transition Pathway Initiative (“TPI”).800 With many of these groups seeing increasing membership in recent years,801 in addition to stated demand, revealed preferences from investment decisions and asset price responses to ESG-related news and climate change risk suggest substantive demand for information on climate-related risks.802 Investors have also demonstrated their interest in climate-related issues through an increase in climate-related shareholder proposals803 and increased flows into mutual funds with environmental goals in their investment mandates.804

2. Impediments to Voluntary Climate-Related Disclosures

a. General Impediments to Voluntary Climate-Related Disclosures

In practice, however, investors’ demand for climate-related information is often met by inconsistent and incomplete disclosures due to the considerable variation in the coverage, specificity, location, and reliability of information related to climate risk. Multiple third-party reporting frameworks and data providers have emerged over the years; however, these resources lack mechanisms to ensure compliance and can contribute to reporting fragmentation.805 Due to deficiencies in current climate-reporting practices, investor demands for reliable and robust information do not appear to have been met.806 As a result, investors may face difficulties locating and assessing climate-related information when making their investment or voting decisions.807


797 Climate Action 100+ is composed of 615 global investors across 33 markets with more than US$860 trillion in AUM. See Climate Action 100+, available at https://www.climateaction100.org/about/.


799 IIGCC has more than 330 members, mainly pension funds and asset managers, across 22 countries, with over $33 trillion in AUM. See The Institutional Investors Group on Climate Change, available at https://www.iigcc.org/.

800 The TPI is supported globally by 108 investors with more than $29 trillion combined AUM. See Transition Pathway Initiative, available at https://www.transitionpathwayinitiative.org/.

801 For example, Climate Action 100+ launched in 2017 with 225 investors with more than USD 26.3 trillion AUM to support the world’s highest emitting companies to reduce material climate risks. In 2021, Climate Action 100+ has grown to 615 investors, $80 trillion in assets, engaging with 167 companies that represent 80% of global industrial emissions.


803 A recent 2021 proxy season review by the Harvard Law School found that shareholder climate-related proposals have increased for the second consecutive year. The authors also note that, in 2021, environmental proposals were withdrawn at a meaningfully higher rate relative to the prior year. This is an indication of stronger commitments from companies to take actions towards the specified environmental goals, or at the very least provide the related disclosures. Many companies may prefer engaging with a proponent rather than taking the proposal to a vote. See 2021 Proxy Season Review: Shareholder Proposals on Environmental Matters, available at https://corpgov.law.harvard.edu/2021/08/11/2021-proxy-season-review-shareholder-proposals-on-environmental-matters/.


805 See Section IV.B.2.b.


807 See GAO, Climate-Related Risks (2018) available at https://www.gao.gov/assets/gao-18-1888.pdf (reporting that “investors may find it difficult to navigate through the filings to identify, compare, and analyze the climate-related disclosures across filings”).
Below we describe some key market failures with regard to disclosure, for example (1) disclosures are not costless; (2), there are agency problems; (3) managers may inaccurately present information; and (4) investor responses may be unpredictable and non-uniform. In addition, there may be other problems, e.g. a lack of consistency, that may indicate Commission action.

(1) Disclosures Are Not Costless

In practice, firms can still approach full disclosure voluntarily if there are costs to disclosure, as long as these costs are relatively low. This is not the case, however, if individual firms’ private benefits of disclosure are also small, yet those same disclosures provide positive informational externalities. For example, disclosures by one registrant may provide investors with useful information via inference with respect to peer firms. Consistent with this theory, research in the accounting literature has documented that earnings announcements by one firm can provide predictive signals about the earnings of other firms in the same industry. In these cases, disclosures can benefit investors in the aggregate (though not necessarily investors of a specific firm) by allowing them to make comparisons across firms, which can aid in their capital allocation decisions.

This illustrates how, theoretically, in the absence of mandated disclosure requirements, registrants fully internalize the costs of disclosure but not the benefits, which may lead them to underdisclose relative to what is optimal from the investors’ perspective. As a result, a tension can exist between investors (in the aggregate) and managers, where investors prefer more disclosure and managers prefer less. In such instances, there may be scope for regulation to substantially increase information provision since absent regulation, investors are not able to fully ascertain the risks and opportunities that firms face.

(2) Agency Problems

In order for voluntary disclosure to result in the complete revelation of all relevant private information, there would need to be no agency problems (i.e., no conflicts of interest between managers and shareholders) such that managers’ sole objective with respect to such disclosures would be to maximize shareholder information and, ultimately, shareholder value. However, if managers have other objectives and incentives for making voluntary disclosures (i.e., there exist agency problems), then the voluntary disclosures may not result in the same complete information. Moreover, when agency problems exist, investors can no longer be sure if the absence of disclosure under a voluntary regime reflects good or bad news for the firm, given that some managers may have self-serving incentives. For example, managers may have career concerns which could incentivize them to withhold disclosing information they expect to be favorably received until it is useful to balance out bad news. In contrast, when the disclosure requirements are mandatory, the relevant, complete information should be disclosed regardless of managers’ objectives or incentives, and investors would accordingly have more confidence in the completeness of the resulting disclosures. For these reasons, the benefits of a mandatory reporting regime may be more pronounced in settings in which disclosure-related conflicts of interests exist between managers and shareholders.

(3) Misrepresentation by Managers

If investors are unable to verify that managerial disclosures are complete and truthful (e.g., if investors have difficulty in determining the extent of managers’ selective disclosure of metrics or methods of computation, exaggeration, obfuscation, outright misreporting, etc.), then voluntary disclosures may not be fully revealing. For example, managers may be able to engage in misleading reporting (i.e., they can apply a favorable bias to their disclosures), but they incur a cost that increases with the magnitude of the misreporting. Under these circumstances, theoretical research suggests that, in equilibrium, they may not accurately report their private information. This is because investors would not be able to distinguish truthful disclosures from those that are misleading (i.e., favorably biased). In this setting, all managers would then have an incentive to misreport by providing disclosures with a favorable bias, the extent of which depends on the cost of misreporting. Furthermore, because misreporting comes at a cost, this would violate the assumption of costless disclosure, which can exacerbate the issue of incomplete disclosures.

If, on the other hand, misreporting has no costs for managers, then this results in what is referred to as a cheap talk equilibrium. In this setting, any misalignment of incentives between managers and investors could again result in a situation in which not all relevant private information is fully revealed. While this could be driven by agency problems stemming from managerial self-interest, it also occurs when investors have heterogeneous preferences that cause differing incentives or if managers are concerned with strategic disclosures that may be viewed by not only investors, but also competitors, regulators, and customers.

In this case, a mandatory reporting regime would be beneficial to investors to the extent that voluntary disclosures are unverifiable and possibly misleading. These include situations where managers obfuscate certain information in their disclosures, convey information in a complex or difficult manner, or conceal the discretionary choices with respect to what was reported. 

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808 Agency problems are those conflicts of interest between shareholders (i.e., the principals) and managers (i.e., the agents) of a firm.


812 It is worth noting that in some cases, undertaking costly signals can allow agents to credibly signal their type to investors. In these cases, costly disclosures can lead to a separating equilibrium where it may otherwise not exist. See, e.g., D. Kreps and J. Sobel, 21(1) Signaling, Handbook of Game Theory with Economic Applications, 849–867 (1994); J. Riley, Silver Signals: Twenty-Five Years of Screening and Signaling, 39(1) Journal of Economic Literature 432–478 (2001).


814 See E. Einhorn, and A. Ziv. Biased Voluntary Disclosure, Review of Accounting Studies 420–442 (2012) (Biases in reporting can be any number of costs in these models. These include not only inefficient actual investments associated with the cost of distorted reporting, but also the risk of litigation, reputation erosion, and/or future flexibility in reporting.).

815 If misrepresentation becomes sufficiently costly, then there may be no managers who find it advantageous to misrepresent, despite any potential benefits. In this case, purposeful misrepresentation would not occur, thereby fulfilling one of the assumptions of the standard full revelation argument. Clear guidelines for disclosure and imposed costs upon the discovery of misrepresentation are important mechanisms for enforcing and promoting the transmission of information to investors.

(4) Uncertain Investor Responses

Another condition necessary for voluntary reporting to be fully revealing is that managers must be certain of investor responses to disclosures. However, if there are heterogeneous prior beliefs, such that managers cannot determine whether investors will consider a given disclosure good or bad news, then not all managers will choose to disclose, resulting in certain private information remaining undisclosed. Similar to the voluntary disclosure literature, mandatory disclosure is more likely to benefit investors in settings where the types of disclosures are complex or divisive, such that managers may not be certain how they will be perceived by investors with differing prior beliefs and/or sophistication.

b. Climate-Specific Factors That Exacerbate Impediments to Voluntary Disclosure

In the context of climate-related disclosure, these impediments may be made worse due to agency problems arising from the potentially long-term nature of certain climate-related risks and other issues related to the complexity and uncertainty of climate-related factors. We explore each of these impediments in further detail.

Impediments to climate-related disclosures may be exacerbated due to agency problems related to potential conflicts between short-term profitability and long-term climate risk horizons. Physical and transition risks can materialize over time horizons ranging from the immediate future to several decades. Likewise, shareholders may have interests in maximizing their investment returns over both the short- and long-term. Agency problems can worsen to the extent that the investment horizons of a firm’s shareholders and its management

are misaligned. Management prioritizes short-term results due to pressures to perform along certain metrics. Management may fail to assess and provide relevant disclosures on certain climate-related risks, particularly those that are medium- or long-term in nature. Stock-based management compensation has the potential to mitigate this issue, provided that the stock price reflects the value of the company in the long-run. However, under the current regime, certain climate-related risks may be unobservable and hence and not fully reflected into stock prices, giving short-term-focused managers an incentive to initiate or continue projects exposed to these risks to maximize their compensation at the expense of long-term shareholder value.

Impediments to voluntary climate-related disclosures can also be exacerbated due to the uncertainty and complexity of climate-related risks and the multidimensional nature of the information being disclosed. First, this uncertainty and complexity may lead to misrepresentation of disclosures, which, as discussed previously, violates a condition for the full revelation of material information in a voluntary reporting environment. A stream of literature examines the association of climate-related disclosures with corporate governance structures and managerial characteristics. See, e.g., (2010).


Another condition necessary for the full revelation of material information in a voluntary reporting environment is more difficult to be verified by investors, managers may face lower costs for their misreporting. Moreover, the complex and multidimensional investor responses to climate-related disclosures may further impede investors’ abilities to detect misreporting. This could lead to a cheap-talk equilibrium, which, as previously discussed, could lead to climate-related information remaining undisclosed.

The uncertainty and complexity of climate-related risks may also be an impediment to voluntary disclosure if managers are less able to anticipate how investors may respond to such disclosures. As noted above, predictable investor responses can be one of the key assumptions necessary for the full revelation of material information in a voluntary reporting environment. Uncertainty in responses means mandatory disclosures have the potential to improve information provision to investors. The challenge in anticipating investor responses to climate-related disclosure may stem, in part, from the fact that the impact of these risks on registrants’ financial outcomes and operations can vary significantly. This can also be compounded by the uncertainty surrounding the future path of climate change and the evolving nature of the science and methodologies measuring their economic impacts. The uncertainty and complexity of climate-related risks are likely to cause substantial heterogeneity with respect to investors’ interpretation of related disclosures and their understanding of firms’ exposure to such risks, resulting in heterogeneous and unpredictable


Investor responses. In this circumstance, managers may prefer to withhold applicable disclosures.828

Due to these impediments, companies may not report (or may report only limited amounts of) relevant climate-related information, and hence, the stock price that investors observe may not reflect the companies’ true exposures to physical and transition risks.829 Even when companies assess and disclose climate-related risks, reporting fragmentation can present substantial obstacles to investors in processing this information.830 This is because disclosures currently vary considerably in terms of coverage, location, and presentation across companies, making it difficult for investors to navigate through different information sources and filings to identify, compare, and analyze climate-related information.831 Moreover, these disclosures are often vague and boilerplate, creating further challenges for investors.832 While it may seem that more information is always better, when the incentives of investors and managers diverge, evidence suggests such amorphous statements could reduce the quality of communication both in theory and in practice.833

The current regulatory regime leaves substantial uncertainty around the type of climate-related information that should be disclosed and how it should be presented. Multiple third-party climate reporting frameworks have emerged to try to fill this reporting gap.835 Due to the voluntary nature of third-party frameworks, however, companies often disclose some but not all components, and the components that are disclosed may not be the same across companies.836 The location, format, and granularity of the information provided may also vary, although the substance may be similar. This has resulted in considerable heterogeneity in firms’ existing disclosure practices.837 The wide range of reporting practices and frameworks makes it difficult to assess how much material climate-related information firms currently are disclosing and may leave opportunities for companies to omit unfavorable information.838 Some studies point to the potential for substantial underreporting of material climate-related information within the current voluntary reporting regime.839

The proposed rules aim to address these market failures by requiring more specificity around the way registrants disclose climate-related risks and their impacts on business activities and operations in the short, medium, and long-term. By requiring comprehensive and standardized climate-related disclosures along several dimensions, including disclosure on governance, business strategy, risk management, financial statement metrics, GHG emissions, and targets and goals, the proposed rules would provide investors with climate-related information that is more comparable, consistent, and reliable and presented in a centralized location.

C. Benefits and Costs

Below we discuss the anticipated economic effects that may result from the proposed rules. Where possible, we have attempted to quantify these economic effects, including the benefits and costs. In many cases, however, we are unable to reliably quantify these potential benefits and costs. For example, existing empirical evidence does not allow us to reliably estimate how enhancements in climate-related disclosure affect information processing by investors or firm monitoring. Nevertheless, there is a large body of studies examining the effects of corporate disclosure in general, as well as a subset focusing on sustainability-related disclosures (e.g. ESG- or CSR-related disclosures).840 We draw on existing empirical evidence and theoretical arguments from these studies to the extent they are applicable to disclosures on climate-related information specifically.

Similarly, we qualitatively describe the factors that may affect disclosure costs but we are unable to accurately quantify these costs. Costs related to preparing climate-related disclosures are generally private information known only to the issuing firm, hence such data are not readily available to the Commission. There is also likely considerable variation in these costs depending on a given firm’s size, industry, complexity of operations, and other characteristics, which makes comprehensive estimates difficult to obtain.

We encourage commenters to provide us with relevant data or empirical evidence related to the costs of preparing climate-related disclosures and, more generally, to provide us with

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832 The SASB reports that about 50% of SEC registrants provide generic or boilerplate sustainability information in their regulatory filings.


835 The TCFD, the SASB, the GRI, the Principles for Responsible Investment, the PCAF, and the CDP (among others), have all developed standards and systems that aim to help firms and investors identify, measure, and communicate climate-related information and incorporate that information into their business practices. Multiple frameworks have emerged, in part, because each seeks to provide different information or fulfill different functions when it comes to disclosing information related to climate-related risks or other ESG factors that may be important to investors.


837 See Section IV.A.5. A recent survey of members of the Society for Corporate Governance (SCG) regarding the state of U.S. climate risk disclosures reveals that companies are using many of the existing frameworks to present emissions, environmental data, and other information on ESG issues. Many of the respondents indicated that their companies are now reporting using CDP, GRI, SASB and other standards, with corporate registrants expressing a desire for greater clarity regarding how to make adequate climate disclosures. The survey results indicate that many companies are grappling with how best to provide useful information to investors regarding complex and interrelated risks. See Richard Mahoney and Diane Gargiulo, The State of Climate Risk Disclosure: A Survey of U.S. Companies (2019), available at https://www.dfisolutions.com/sites/default/files/documents/2019-10/TCFD_Report_FINAL_102119.pdf.


any type of data that would allow us to quantitatively assess the costs and benefits of the proposed rules.

1. Benefits

The primary benefit of the proposed rules is that investors would have access to more comparable, consistent, and reliable disclosures with respect to registrants’ climate-related risks. As discussed in the previous sections, investors currently face obstacles in accessing comparable, consistent, and reliable climate-related information due to a combination of registrants not disclosing this information at all, or registrants disclosing this information but with varying degrees of coverage and specificity and in varying formats and locations, including company websites, standalone reports, and SEC filings.

Investors are expected to benefit from the required disclosures given that material climate-related information would be provided to the market more consistently across registrants of different sizes and filer status, whether domestic or foreign issuers, and regardless of industry. Investors are also expected to benefit from the more consistent content of the disclosures. Specifically, the proposed rules would enhance comparability by requiring registrants to provide disclosures on a common set of qualitative and quantitative climate-related disclosure topics in their filings.

In addition to the standardized content, investors are expected to benefit from a common location of the disclosures in regulatory filings. The proposed rules would require registrants to place all relevant climate-related disclosures in Securities Act or Exchange Act registration statements and Exchange Act annual reports in a separately captioned “Climate-Related Disclosure” section, or alternatively, to incorporate by reference from another section, such as Risk Factors, Description of Business, or MD&A. By mandating that standardized climate-related information be disclosed, and requiring it to be placed in a centralized location within regulatory filings, the proposed rules could reduce investors’ search costs and improve their information-processing efficiency. These factors can also lead to positive information externalities—as more firms disclose how measures of climate risk affect their business operations, investors would gain a better understanding of how those same climate risks may affect other similar firms.841

Furthermore, by requiring this information to be filed with the Commission as opposed to posted on company websites or furnished as exhibits to regulatory filings, the proposed rules are expected to improve the reliability of information provided to investors moving forward.842 Several commentators indicated that the treatment of climate-related disclosures as filed would help improve investor confidence in the accuracy and completeness of such disclosures.843 Recent academic work provides evidence of firms’ engagement in obfuscation and other misleading efforts (so-called “greenwashing”)844 to manipulate the set of information available on corporate websites and sustainability reports with the goal of attaining higher ESG ratings, which are relied upon, in particular, by unsophisticated investors for the value of institutional certification.845 Direct disclosures may also reduce reliance on these ESG ratings, which are not necessarily standardized or fully transparent with respect to their methodologies. In fact, several studies found low correlations of classifications across ESG providers.846 Additionally, a study suggested that models and metrics used by ESG providers for appropriately classifying funds are not always transparent and consistent across ESG providers.847

As discussed in Section IV.B.1, surveys of institutional investors indicate that climate risk is one of the most prominent issues driving their investment decisions and engagements with companies. Evidence from the stock market response appears consistent with this, with increased mandatory ESG disclosure being associated with aggregate stock price movement.848 Such stock price effects tend to display cross-sectional heterogeneity with, for example, firms disclosing large GHG emissions experiencing price declines.849 Similar effects have also been observed in derivatives markets.850 Investor responses in real estate markets potentially affected by physical risks,851 as well as revealed preferences from flows into mutual funds with environmental goals in their investment mandates,852 provide further evidence of investors’ interest in disclosures pertaining climate risks. Taken together, the mandatory and standardized nature of the proposed climate-related disclosures could benefit investors by improving their ability to assess these risks and their impact on registrants’ financial condition and operations, thereby allowing investors to make better-informed investment decisions and enhancing investor protection.

841 One study documents how investors can use information from one firm to make inferences of other similar firms in the context of earnings announcements. See supra note 812.

842 By proposing to treat the proposed required climate-related disclosures as “filed,” we are therefore subjecting them to potential liability under Exchange Act Section 18, except for disclosures made on Form 6–K. The proposed filed climate-related disclosures would also be subject to potential Section 11 liability if included in or incorporated by reference into a Securities Act registration statement. See Section II.C.4 (discussions within).

843 See Section II.H.1.

844 A review of several academic papers reveal that there is no universally accepted definition of “greenwashing.” Though the term “greenwashing” is often used in industry discussions regarding ESG, the Commission does not define “greenwashing” in this proposal, and the term is generally used by ESG providers for appropriately classifying funds are not always transparent and consistent across ESG providers.


846 Florian Berg, Julian Kölbl, Roberto Rigobon, Aggregate Confusion: The Divergence of ESG Ratings, MIT Sloan School (Working Paper 5822–19) (May 17, 2020), available at https://ssrn.com/abstract=3438533 or http://dx.doi.org/10.2139/ssrn.3438533. Authors found that the correlations between six different ESG ratings are on average 0.54 and range from 0.38 to 0.71, while the correlations between credit ratings were 0.99. See also OECD, OECD Business and Finance Outlook 2020, Sustainable and Resilient Finance (Sept. 29, 2020), available at https://www.oecd.org/daf/oecd-business-and-finance-outlook-26172577.htm. OECD analyzed different rating providers, such as Bloomberg, MSCI and Refinitiv and found wide differences in the ESG ratings assigned, with an average correlation of 0.4. When OECD analysis then compared ESG ratings with the issuer credit rating by major providers, it found that credit scores for selected issuers vary much less. See also International Monetary Fund, Global Financial Stability Report (Oct. 2018), available at https://www.imf.org/en/Publications/GFSR/Issues/2018/10/01/global-financial-stability-report-october-2019. It found that only 37% of Lipper ethical funds also carry a sustainable designation by Bloomberg.


851 See supra note 802.

852 See supra note 804.
Improving and standardizing climate disclosures also could mitigate adverse selection problems that may arise in the presence of asymmetric information by making more accurate and standardized information available to the general public. Improved disclosure could make it easier for investors to process information more effectively and improve the estimation of a firm's future cash flows, leading to more accurate firm valuation. In particular, the enhanced disclosures may further benefit the disclosures of financial firms. Because financial firms can have significant exposures to climate-related risks through their portfolio companies, any enhancements in the portfolio companies' disclosures can subsequently be leveraged by these financial firms in assessing the risks to their portfolios and to the firm as a whole.

Another benefit of the proposed rules is that it would allow firm's shareholders to better monitor management's decisions and mitigate certain agency problems stemming from management's discretionary choices with respect to climate disclosure. Agency problems could occur when management act opportunistically in their own self-interest at the expense of shareholders by disclosing only certain climate-related information at their discretion. As previously discussed in Section IV.B.2.h, management may be motivated to selectively disclose only climate-related information, while omitting disclosures cherry-pick to report primarily non-material climate risk information. See World Economic Forum, How to Set Up Effective Climate Governance on Corporate Boards: Guiding Principles and Questions (2019), available at https://www.weforum.org/docs/WEF_Creating_Effective_climate_governance_on_corporate_boards.pdf. In addition, there are a number of academic studies examining the association of climate-related disclosures with corporate governance structures and managerial characteristics. See, e.g., M. Kilic and C. Kuzey, The Effect of Corporate Governance on Carbon Emission Disclosures: Evidence from Turkey, 11 J. Int. J. of Climate Change Strategies and Management 35–53 (2019); S. Yunus, E.T. Evangelene, and S. Abhayawansa, Determinants of Carbon Management Strategy Adoption: Evidence from Australia’s Top 200 Publicly Listed Firms, 31–2 Managerial Auditing Journal 156–179 (2016); Caroline Flammer, Michael W. Toffel, and Kala Viswanathan, Shareholder Activism and Firms Voluntary Disclosure of Climate Change Risks, 42–10 Strategic Management Journal 1850–1879 (Oct. 2021).

Physical and transition climate risks can materialize over time horizons ranging from the immediate future to several decades. Long horizons, for example, tend to involve changes in chronic physical risks—sea-level rise, drought, etc.—while short-term horizons, be relevant for increase in acute physical risks such as hurricanes, wildfires, and heatwaves. See ING Climate Risk Report 2020, available at https://www.ing.com/2021-Climate-Report.htm.

A report by the Environmental Audit Committee of the UK House of Commons on Greening Finance, issued in June 2018, found that short-termism is a pervasive problem in corporate decision making and leaves business ill-equipped to consider and incorporate long term risks, such as climate change and sustainability. See Envtl. Aud:\n

These benefits would stem from reductions in information asymmetries brought about by the required disclosure of climate-related information, both among investors and between firms and their investors. In the first case, less information asymmetry among investors could mitigate adverse selection problems by reducing the informational advantage of informed traders. This is likely to improve stock liquidity which, in turn, can attract more investors, thereby reducing the cost of capital. In the second case, less information asymmetry between firms and their investors could allow investors to better estimate future cash flows, which could reduce investors’ uncertainty, as well as the risk premium they demand, thus lowering the costs of capital for registrants. Economic theory illustrates how, all else equal, a drop in the cost of capital leads to a boost in equity valuation, which can further benefit investors.

a. Disclosure Regarding Climate-Related Risks and Their Impacts on Strategy, Business Model, and Outlook

The proposed rules would require registrants to identify their climate-related risks that are reasonably likely to have a material impact on the registrant’s business or consolidated financial statements over the short, medium, and long-term and describe the actual and potential impacts of those risks on its strategy, business model, and outlook. Registrants would specifically be required to disclose impacts on, or any resulting significant changes made to, their: (i) Business operations, including the types and locations of its operations; (ii) products or services; (iii) supply chain or value chain; (iv) activities to mitigate or adapt to climate-related risks; and (v) expenditures for research and development.

If, as part of its net emissions reduction strategy, a registrant uses carbon offsets or RECs, the proposed rules would require it to disclose specific information about the role that such offsets or RECs play in the registrant’s climate-related business strategy. If a registrant uses an internal carbon price, the proposed rules would require it to disclose information around the boundaries for measurement of overall CO₂-e, the price per metric ton of CO₂-e, as well as how the total price is estimated to change over time, if applicable. Similarly, to the extent that the registrant uses analytical tools such as scenario analysis, the proposed rules would require a description of those analytical tools, including the assumptions and methods used.

The specific disclosures required by the proposed rules are expected to improve investors’ understanding of what the registrant considers to be the relevant short-, medium-, and long-term climate-related risks that are reasonably likely to have a material impact on its business, taking into consideration the useful life of the organization’s assets or infrastructure and the fact that climate-related risks may manifest themselves over the medium and longer terms. Compared to the baseline, investors would be better able to identify and assess how climate-related risks may affect a registrant’s businesses, strategy, and financial planning in several areas, including products and services, supply chain and/or value chain, adaptation and mitigation activities, investment in research and development, operations (including types of operations and location of facilities), acquisitions or divestments, and access to capital. Investors would gain insight into how climate-related risks may serve as an input to the registrant’s financial planning process and the time period(s) used for this process.

For example, investors may gain better insights into the registrant’s estimated costs of any operational changes expected to be implemented to achieve emission reduction targets. Alternatively, investors may gain valuable information on how certain climate events may impact the useful lives and/or valuation reserves of balance sheet assets. For example, sea level increases and other climate-related patterns may adversely impact the estimated useful lives of coastal facilities. Similarly, more extreme weather patterns may adversely impact agricultural regions and the value of related equipment and lands. This information is expected to be useful for investors in assessing how climate-related risks are managed, and whether and how these risks may affect a registrant’s financial condition and results of operations. The required disclosure around the role that carbon offsets or RECs play in the registrant’s climate-related business strategy could also help investors better understand that strategy, including how resilient it is to changes in market cost or the availability or value of offsets or RECs over the short, medium and long-term. The required disclosures around internal carbon price, when used by a registrant, could provide investors with more standardized and detailed information regarding how the registrant developed a particular business strategy and how investors assess whether a registrant’s internal carbon pricing practice is reasonable and whether its overall evaluation and planning regarding climate-related factors is sound. The required disclosure around the assumptions and methods used by a registrant when employing analytical tools or conducting scenario analysis can improve investors’ assessment of the resiliency of a registrant’s strategy and business model in light of foreseeable climate-related risks and improve investors’ ability to compare said resiliency among registrants.

The proposed requirement to identify material climate-related risks over the short-, medium-, and long-term could also help mitigate agency problems deriving from the potential misalignment of planning horizons between the firm’s shareholders and its managers. The information required to be disclosed about the firm’s business operations, products or services, supply or value chain, activities to mitigate or adapt to climate-related risks, and expenditure for research and development could allow investors to assess how climate-related issues may impact the registrant’s financial performance (e.g., revenues, costs) and financial condition (e.g., assets, liabilities). These disclosures should allow investors to understand insights on how resources are being used by management to mitigate climate-related risks and to facilitate investors’ evaluation of whether managers are taking appropriate steps to address such risks.

b. Governance Disclosure

The proposed rules would require a registrant to disclose information concerning the board’s oversight of climate-related risks as well as management’s role in assessing and managing those risks. The proposed rules would require a registrant to disclose whether any member of its board of directors has expertise in climate-related matters and the processes and frequency by which the board discusses climate-related factors. When describing management’s role in assessing and managing climate-related factors, a registrant would be required to disclose whether certain management positions are responsible for assessing and managing climate-related factors and the processes by which the responsible managers are informed.

See Section IV.D for more information on capital market benefits.
about and manage climate-related factors.

The disclosures required by the proposed rules should enable investors to better understand how the firm is informed about climate-related factors and how frequently the firm considers such factors as part of its business strategy, risk management, and financial oversight. Investors would be expected to gain better information around whether the organization has assigned climate-related responsibilities to management-level positions or committees and, if so, whether those responsibilities include assessing and/or managing climate-related risks. As a result, investors may be better able to understand and evaluate the processes by which management is informed about and monitors climate-related risks. For example, investors may be better positioned to assess whether and how the firm’s board and management consider climate-related risks when reviewing and guiding business strategy and major plans of action, when setting and monitoring implementation of risk management policies and performance objectives, and when reviewing and approving annual budgets.

With detailed information about climate expertise among the registrant’s directors, investors could more effectively evaluate the firm’s governance practices related to the identification and management of climate-related risks. In particular, investors may be able to exercise closer oversight of management’s actions as they assess implementation of risk management policies and performance objectives, review and approve annual budgets, and oversee major capital expenditures, acquisitions, and divestitures.

c. Risk Management Disclosure

The proposed rules would require registrants to describe their processes for identifying, assessing, and managing climate-related risks. This includes disclosure on how registrants assess materiality, whether they consider likely future regulatory actions, how they prioritize, mitigate, or adapt to climate-related risks, and overall how climate-related factors are integrated into the registrants’ risk management systems or processes. Registrants would also be required to provide detailed descriptions on any transition plans.

867 Transition plans would be defined as a registrant’s strategy and implementation plan to reduce climate-related physical and transition risks and increase climate-related opportunities, including by reducing its own emissions. If the registrant has made a public commitment to reduce its GHG emissions by a certain date, it must disclose such date and its plan to achieve its public commitment.

868 See Section IV.C.1.f for a more detailed discussion of the potential benefits of targets and goals disclosure.

869 The choice of a one percent threshold is consistent with what the Commission currently uses in other contexts for disclosure of certain items within the financial statements and without (e.g., §§ 210.5–03.1(a), 210.12–13, and 229.404(d)).

The disclosures required by the proposed rules would inform investors regarding how proactive and diligent registrants may be with respect to climate-related risks. Investors can use this information to acquire a more detailed understanding of how resilient registrants’ risk management systems may be towards climate-related risks, which could contribute to better-informed investment or voting decisions. These disclosures could allow investors to better monitor and assess whether registrants have in place adequate risk management systems and whether they are aligned with investor preferences.

Conversely, investors may be better able to detect whether certain registrants’ risk management systems would fail to account for certain types of climate factors, such as change in consumer preferences, adjustments of business models, and technological challenges or innovations, which may have implications on companies’ operations and financial conditions. These disclosures may also allow investors to assess whether registrants are evaluating these risks over specific time horizons, which may be particularly relevant in cases in which management may be more concerned with short-term performance while neglecting longer term risks.

Accordingly, this provision could help address agency problems related to the misalignment of planning horizons. These disclosures may also allow investors to assess whether registrants are evaluating these risks over specific time horizons, which may be particularly relevant in cases in which management may be more concerned with short-term performance while neglecting longer term risks. Accordingly, this provision could help address agency problems related to the misalignment of planning horizons.

d. Financial Statement Metrics

The proposed rules would require registrants to disclose certain disaggregated climate-related metrics in its financial statements under the following categories: (i) Financial impact metrics; (ii) financial expenditure metrics; and (iii) financial assumptions. The proposed rules would require a registrant to disclose the impact of climate-related events (severe weather events and other natural conditions and physical risks identified by the registrant) and transition activities (including transition risks identified by the registrant) on its consolidated financial statements, if the disclosure threshold is met. For each type of metric, the provisions would require the registrant to disclose contextual information to enable the reader to understand how it derived the metric, including a description of significant inputs and assumptions used to calculate the specified metrics, thus providing the necessary transparency for facilitating investors’ understanding and peer comparisons. To avoid potential confusion and to maintain consistency with the rest of the financial statements, the proposed financial statement metrics would be required to be calculated using financial information that is consistent with the scope of the rest of the registrant’s consolidated financial statements included in the filing. The proposed rules would specify the basis for calculation for the climate-related financial statement metrics and clarify how to apply these accounting principles when calculating the climate-related financial statement metrics.

With respect to financial impact metrics, the proposed rules would require a registrant to disclose the impacts arising from climate-related events, including physical risks identified by the registrant and severe weather events and natural conditions, such as flooding, drought, wildfires, extreme temperatures, and sea level rise. In addition to physical risks, registrants also would be required to disclose the financial impact of transition activities (including transition risks identified by the registrant), such as efforts to reduce GHG emissions or otherwise mitigate exposure to transition risks on any relevant line items in the registrant’s consolidated financial statements. The proposed rule would require registrants to reflect the impact of the climate-related events or transition activities on each line item of the registrant’s consolidated financial statements (e.g., line items of the consolidated income statement, balance sheet, or cash flow statement) unless the aggregate impact of the events and transition activities is less than one percent of the total line item. By exempting such line item reporting when the aggregate impact of the events is less than one percent, the proposed rule would reduce overall costs for firms associated with disclosures for instances where the impact is likely to be quite small, while providing assurance to investors that more significant impacts are reflected in line item reporting.

We expect that the proposed financial statement metrics impact would provide additional transparency into the nature...
of a registrant’s business and the significance of many of the climate-related risks and impacts on its overall financial condition. Such disclosures are expected to provide investors with valuable insights into potential changes to, among others, revenue or costs from disruptions to business operations or supply chains; impairment charges and changes to the carrying amount of assets due to the assets being exposed to physical risks; revenue or cost due to new emissions pricing or regulations resulting in the loss of a sales contract and; operating, investing, or financing cash flow from changes in upstream costs, such as transportation of raw materials. Separately reporting the financial statement impacts from the specified climate-related events and transition activities could improve comparability of both the registrant’s year-to-year disclosure and between the disclosures of different registrants. Because the risks presented by the climate-related events and transition activities may be correlated across different registrants and across time, future climate-related risks could manifest in such a way that a large subset of registrants are affected, making them potentially a non-diversifiable risk. In this case, separate financial impact disclosures could inform investors of their exposure to these risks not just for a single registrant, but across all the registrants in their portfolios. Such disclosures could be beneficial as they would be informative of both individual registrant exposures to climate-related risks, and the level of climate-related risks in the aggregate, thus allowing investors to more effectively evaluate and manage the risk of their entire portfolio. Moreover, to the extent that registrants are not aware of climate-related risks in the aggregate, these disclosures would allow for a greater understanding of the climate-related risks they face, providing them the opportunity to make more informed investment decisions taking into account such risks.

With respect to financial expenditure metrics, the proposed rules would require a registrant to disclose the positive and negative impacts associated with the same climate-related events and transition activities as the proposed financial impact metrics. The expenditure metrics would require a registrant to separately aggregate amounts of expenditure expensed or capitalized costs incurred during the fiscal years presented. For each of those categories, a registrant would be required to disclose separately the amount incurred during the fiscal years presented toward positive and negative impacts associated with the specified climate-related events and to mitigate exposure to transition risks. The expenditure metrics would also be subject to the same disclosure threshold as the financial impact metrics, which should promote consistency and clarity. Together, these disclosures are expected to provide investors with information about the total expenditure toward or capitalized costs incurred for specified climate-related events. As such, they are expected to increase the resilience of assets or operations, reduce the estimated useful lives of impacted assets, relocate assets or operations at risk, or otherwise reduce the future impact of severe weather events and other natural conditions on business operations. The proposed rules also would provide investors with information about the amount of expenditure expensed or capitalized costs incurred for climate-related transition activities related, among others, to research and development of new technologies, purchase of assets, infrastructure, or products that are intended to reduce GHG emissions, increase energy efficiency, or improve other resource efficiency. With respect to financial assumptions, the proposed rules would require registrants to disclose whether the estimates and assumptions used to produce the consolidated financial statements were impacted by risks and uncertainties associated with, or known impacts from, severe weather events and other natural conditions, such as flooding, drought, wildfires, extreme temperatures, and sea level rise. If so, the registrant would be required to provide a qualitative description of how such events have impacted the development of the estimates and assumptions used to prepare such financial statements. Similarly, if the estimates and assumptions were impacted by potential transition risks, the registrant would be required to provide a qualitative description of how the development of the estimates and assumptions were impacted by such a transition. We expect that the proposed disclosures would provide transparency to investors on the impact of climate-related events and transition activities on the estimates and assumptions used by the registrant to prepare the financial statements and allow investors to evaluate the reasonableness of the registrant’s estimates and assumptions. Prior evidence shows that existing climate-related disclosures often contain boilerplate language or are “cherry-picked” to present information that is favorable to the company. Accordingly, registrants under the current regulatory regime may choose to provide only brief, qualitative descriptions of certain climate-related factors while omitting concrete, quantitative information on how climate-related factors can impact individual financial statement line items. The proposed rule may mitigate these types of agency problems by requiring registrants to disclose specific, quantitative metrics according to standardized scopes and methodologies, thereby helping investors processing information more effectively.

The proposed financial metrics would be part of the financial statements and thus audited by an independent public accounting firm in accordance with existing Commission rules and PCAOB auditing standards. Subjecting these climate-related disclosures to reasonable assurance pursuant to an audit would require the auditor to assess the risk of material misstatement related to the estimates and judgments, including through evaluation of the method of measurement and reasonableness of the assumptions used, and to understand management’s risk management processes, including the accuracy of the proposed disclosure, thereby alleviating possible concerns about the data’s reliability and comparability, and improving investor confidence in such disclosure. Academic research finds that assurance procedures can increase the relevance and reliability of disclosures, particularly for those involving significant estimation uncertainties.

e. GHG Emissions Metrics

The proposed rules would require all registrants to disclose Scope 1 and Scope 2 GHG emissions. Given the
possibility of a transition to a lower-carbon economy, investors and other market participants may be concerned about registrants that have high GHG emissions since these registrants may be more exposed to certain transition risks, such as regulations that restrict emissions or the potential impacts of changing consumer preferences or market conditions. Should a transition to a low-carbon economy gain momentum, registrants with higher amounts of Scope 1 and 2 emissions may be more likely to face sharp declines in cash flows, either from greater costs of emissions or the need to scale back on high-emitting activities, among other reasons, as compared to firms with lower amounts of such emissions.

Understanding the extent of this potential exposure to transition risks could help investors in assessing their risk exposures with respect to the companies in which they invest. Greater consistency in emissions disclosures can further benefit investors as it can facilitate comparisons between the registrants and their peers and assist in understanding the overall risk of their portfolios. As described below, emissions disclosures would also help inform investors about the extent to which a company has been or is following through with its disclosed strategies and transition plans. As further discussed in Section IV.D, we expect this provision to lower uncertainty for investors, thereby reducing the cost of capital. This may make it easier to raise equity and debt, or to obtain loan financing.

Besides the direct risk to cash flows through cost of emissions or the need to scale back on high-emitting activities, such a transition could also cause a registrant’s assets to suffer from unanticipated or premature write-downs, devaluations, and/or adverse adjustments in reserves. The proposed Scope 1 and 2 emission disclosures would allow investors to identify registrants whose assets may be more likely to become obsolete or underperforming or lose economic value ahead of their anticipated useful life due to a potential transition to a lower-carbon economy, and more generally allow investors to discern whether certain investments are unlikely to earn the anticipated economic return due to such transition. The proposed disclosures would also allow investors to more closely monitor whether a firm’s management is properly accounting for the impairment of such stranded assets to ensure that they are recorded on the balance sheet as a loss of profit and are not carried at more than their recoverable amount. Given the significant possibility that Scope 1 and 2 emissions will affect the valuation of the registrant through impacts on earnings, cost of capital, investor demand, or potentially some other channel, investor protection would be enhanced by requiring disclosure of this information.

Moreover, by specifying that the information should be provided by all registrants, investors would benefit from having access to a more comprehensive set of emissions data against which to measure a registrant’s progress in meeting any stated emissions goals or otherwise managing its climate-related risks, as a part of assessing the registrant’s overall business and financial condition. In the absence of the proposed rules, some registrants may choose to selectively omit quantitative emissions metrics. The resulting state of disclosures is less meaningful and less transparent, making it significantly more difficult for investors to assess the degree of risk in individual firms, to compare across firms, and to value securities.

As discussed in Section IV.A, some registrants currently report emissions via the EPA’s 2009 mandatory Greenhouse Gas Reporting Program.874 However, the nature of the reporting requirements and the resulting data is more suited to the purpose of building a national inventory of GHG emissions, not of assessing emissions-related risks to individual registrants. Specifically, direct emitters must report their emissions at the facility-level (not registrant-level) and suppliers of certain products must report their “supplied emissions,” conditional on these emissions exceeding a specified threshold.875 In addition, as previously discussed, the EPA emissions data does not allow a clean disaggregation across the different scopes of emissions for a given registrant.876 From the point of view of an investor seeking greater information regarding a registrant, the EPA’s emissions data may be difficult for investors to use, because the data are made public by facility and not by company. While each facility is matched to its parent company, this company may not be the entity registered with the SEC and thus of interest to investors. Taken together, the EPA emissions data is not well suited to enabling investors to fully assess the degree to which each registrant is exposed to transition risks.

The proposed rules would result in more comprehensive and tailored emissions information by requiring disclosure of Scope 1, Scope 2, and in some cases Scope 3 emissions by registrants in SEC filings. Prior evidence has shown that when information that is already publicly available elsewhere is included within SEC filings, the public becomes more aware of the information.877 While there are numerous differences with regard to EPA reporting, this evidence suggests that even were these differences not to exist, and the only change were to be inclusion in SEC filings, there would nonetheless be an advantage in improving consistency and reliability and decreasing search costs.

The proposed rules would also provide informational benefits beyond the voluntary disclosure of emissions in sustainability reports. While currently disclosed information reflects investor demand, the overall information disclosed to the market may be biased due to its voluntary nature, in that companies that have more favorable data (e.g., lower emissions) may be more likely to make these voluntary disclosures. Requiring all registrants to provide consistent disclosures, as proposed, would reduce the bias that can result from a voluntary regime. Moreover, as discussed above, locating the information in SEC filings may make it more accessible to investors and contribute to greater consistency and reliability.

Specific provisions are designed to facilitate comparability across registrants and industries. For example, requiring the disclosure of GHG intensity in terms of metric tons of CO₂e per unit of total revenue and per unit of production would allow investors to directly assess the efficiency of the registrant’s operations and compare across different industries and firms of varying size. Increased standardization in the reporting of these metrics may allow investors to assess more effectively a registrant’s transition risk against that of its competitors. As another example, the proposed rules would require a registrant to set the organizational boundaries for its GHG emissions disclosure using the same scope of entities, operations, assets, and other holdings within its business organization structure as those included in its consolidated financial statements. Requiring a consistent approach would

874 See Section IV.A.3.
875 See supra note 737.
876 See Section IV.A.3.
avoid potential investor confusion about the reporting scope used in the financial statements and enhance comparability across registrants, helping investors in assessing a registrant’s transition risk against that of its competitors.

The proposal would also require non-SRC registrants to disclose Scope 3 emissions if material or if the registrant has a target or goal related to Scope 3. In addition, specified registrants would also be required to disclose the methodology used to compute emissions, the breakdown of the different GHGs, as well as upstream and downstream activities, and data quality. Scope 3 emissions GHG emissions can represent the majority of the carbon footprint for many companies, in some cases as high as 85% to 95%. For example, according to Morgan Stanley Capital International (MSCI), the Scope 3 emissions of the integrated oil and gas industry are more than six times the level of its Scope 1 and 2 emissions. Companies may have indirect control over their Scope 3 emissions. These downstream emissions can come from industries with the highest percentage of Scope 3 control/ownership represented about 49% of global emissions-seeing/02092372761.

Registrants with significant Scope 3 emissions may be more likely to face disruptions not only in their cash flows, but also in their business models or value chains to the extent that these registrants are making changes in their products, suppliers, distributors, or other commercial partners. Moreover, if consumer demand changes to favor less carbon intensive products, companies with high Scope 3 emissions may see a marked reduction in demand for their products, and companies that are not aware of these risks could be less profitable relative to those that understand these risks and are prepared to mitigate them. Alternatively, companies that can source inputs that involve less GHG emissions could achieve potential cost savings and those that could produce products that generate less GHG emissions by the end user could potentially enjoy higher demand. Some registrants may plan to shift their activities to capitalize on these changes and thus may need to allocate capital to invest in lower emissions equipment or to create new types of products. Investors would need information about the registrants’ full GHG emissions footprint and intensity to determine and compare how exposed a registrant is to the financial risks associated with a transition to lower-carbon economy.

Over the last few years, a number of studies have shown that firms try to reduce their local carbon footprints by outsourcing their carbon emissions to suppliers in states or countries with weaker environmental policies. These studies provide evidence of the substitutability relationship between direct and outsourced GHG emissions. Recent studies have also analyzed the substitution effects between Scope 1 and Scope 3 GHG emission activities of U.S. firms. The findings show that the relative share of Scope 1 emissions out of a firm’s total emissions tend to fall at the expense of the rising proportion of its supplier-generated Scope 3 emissions and that a firm’s imports further augment the substitutional relationship between its Scope 1 and Scope 3 emissions.

In addition to the outsourcing incentives related to regulatory arbitrage, the authors of these studies posit that firms may also be outsourcing emissions abroad to exploit investors’ current difficulties in assessing the firm’s carbon emissions through imports along the upstream supply chain. By requiring the disclosure of Scope 3 GHG emissions, the proposed rules would make it more difficult for non-SRC registrants to avoid investors’ scrutiny by outsourcing all or part of their activities abroad.

Finally, as described in Section IV.A.5.d, many companies have set emissions targets, and it is not always clear whether these targets pertain to Scope 3 emissions or not. As explained in Section IV.C.1.g, registrants would be required to disclose whether the targets pertain to Scope 3 emissions, and as described above, if they do, they would need to report such emissions. Without reporting of Scope 3 emissions amounts and categories, investors would not have the information they need to understand the scale and scope of actions the company may need to take to fulfill its commitment, and thus the overall financial implications of a registrant’s targets. For example, a registrant’s disclosure of its Scope 3...
emissions, together with the proposed financial statement metrics, could allow investors to assess the potential (additional) investments the registrant may need to make to meet a certain goal. Moreover, as described further below, reporting of Scope 3 emissions gives a quantitative metric for investors to track, thus reducing opportunities for misleading claims on the part of the registrant. Because the value of a firm’s equity is largely derived from expected future cash flows, disclosure of Scope 1, 2, and 3 emissions can help investors incorporate risks associated with such future cash flows into asset values today. Indeed, the academic literature indicates that equity is a long-term asset, meaning that even risks related to regulatory changes in the distant future could be priced today. Thus, for many registrants, reasonable investors may view GHG emissions as necessary to assess the registrants’ exposure to climate-related risks, particularly transition risks, and whether they have developed strategies to reduce their carbon footprint in the face of potential regulatory, policy, and market constraints. This may be particularly important in light of the investor demand documented in IV.B.1 and the potential price impact, as discussed in IV.D.

f. Assurance of GHG Scopes 1 and 2 Emissions Disclosures for Large Accelerated Filers and Accelerated Filers

The proposed rules would require registrants that are large accelerated filers and accelerated filers to provide an attestation report for the registrant’s Scope 1 and 2 GHG emissions disclosures. Large accelerated filers constitute approximately 31% of the universe of registrants that filed annual reports during calendar year 2020 (1,950 out of 6,220), but account for 93.6% of market cap within the same universe. Accelerated filers constitute approximately 10% of the universe of registrants that filed annual reports during calendar year 2020 (645 out of 6,220) and account for 0.9% of market cap within the same universe.

The proposed rules provide specific transition periods for obtaining attestation reports. Large accelerated filers would be required to provide Scopes 1 and 2 emissions disclosures in the fiscal year immediately following rule adoption. Next, they would be required to obtain limited assurance over these disclosures in fiscal years 2 and 3 after adoption. They would then be required to obtain reasonable assurance over these disclosures in fiscal year 4 after adoption and going forward. Accelerated filers would follow the same timeline but with a delay of one fiscal year. Specifically, accelerated filers would be required to provide Scopes 1 and 2 emissions disclosures in fiscal year 2 after adoption. Next, they would be required to obtain limited assurance over these disclosures fiscal years 3 and 4 after adoption. They would then be required to obtain reasonable assurance over these disclosures in fiscal year 5 after adoption and going forward.

The proposed transition periods for assurance over large accelerated filers’ and accelerated filers’ Scopes 1 and 2 GHG emission disclosures are intended to provide these registrants time to familiarize themselves with the GHG emissions disclosure requirements, develop the relevant DCP, and provide the market with an opportunity to develop enough expertise to satisfy the increased demand for GHG emission assurance services. We expect that during the proposed transition periods, the market for assurance services would further mature with respect to institutional knowledge, procedural efficiency, and overall competition, thus lowering costs for registrants and improving the quality of service. Although Scope 3 GHG emissions can constitute a large portion of a registrant’s total emission, the proposed rules would exclude Scope 3 GHG emission disclosures from the attestation requirement due to the unique challenges associated with their measurement, which is based on data sources not owned by the registrant, as well as the potential higher costs associated with their verification. Section IV.A.5.e above discusses survey evidence on the frequency with which firms obtain assurance in sustainability reports. This evidence suggests that a significant fraction of large companies already obtain some form, albeit limited, of assurance. Practices appear to be fragmented with respect to the levels of assurance provided, the assurance standards used, the types of service providers, and the scope of disclosures covered by the assurance. One consequence of such fragmentation has been a lack of clarity about the nature of assurance provided, which can lead to confusion for investors when assessing the quality of disclosures. Moreover, as noted above, the voluntary nature of the reporting could result in biased or incomplete data. The fact, however, that a significant proportion of large companies already obtain some form of assurance from over this information is indicative of investors’ and companies’ need for such disclosures to be reliable.

The importance of assurance for climate-related information also is highlighted by the International Federation of Accountants, which recently published its Vision for High-Quality Sustainability Assurance. As discussed earlier, contrary to other quantitative information that is provided outside of the financial statements, and which is typically derived from the same books and records that are used to generate a registrant’s audited financial statements, GHG emissions disclosures are not developed from information that is included in the registrant’s books and records. Accordingly, such quantitative disclosure is not subject to audit procedures as part of the audit of the financial statements in the same filing. Because of this, the proposed requirement of a third-party attestation report may be particularly beneficial to verify the reliability and quantitative information and enhance its accuracy. In general, subjecting climate-related disclosures to assurance would require the assurance provider to assess the risk of material misstatements related to the estimates and judgments, including through evaluation of the method of measurement and reasonableness of the assumptions used, and an understanding of management’s risk management processes, including the risks identified and the actions taken to address those risks. Moreover, by specifying minimum standards for the assurance provided with respect to GHG Scope 1 and 2 emissions disclosures, we expect the proposed rules to promote accuracy and consistency in the reporting of this information, while also providing investors with a baseline level
of reliability against which to evaluate the disclosures. Academic research finds that assurance procedures can increase the relevance and reliability of disclosures, particularly for those involving significant estimation uncertainties. While most of this academic evidence focuses on the effects of reasonable assurance procedures, we cannot preclude the possibility that such findings may have implications for limited assurance as well. Experimental evidence has found that both limited and reasonable assurance can increase perceived reliability of sustainability reports, but those same studies do not find a statistically significant difference between limited and reasonable assurance.

Obtaining assurance for sustainability reports, which as noted above is typically limited assurance, has also been associated with firms with lower costs of capital, increased analyst coverage, and decreased analyst forecast errors and forecast dispersion. The proposed rules would require the attestation report to identify the criteria against which the subject matter was measured or evaluated, the level of assurance provided, the nature of the engagement, and the attestation standard used. In particular, the proposed rules would require the attestation report to include a description of the work performed as a basis for the attestation provider’s conclusion and for that conclusion to be provided pursuant to standards that are established by a body or group that has followed due process procedures, including the broad distribution of the framework for public comment. We expect this provision would help ensure that the standards upon which the attestation report is based were the result of a transparent and reasoned process. In this way, the requirement should help to protect investors who may rely on the attestation report by limiting the standards used to those that are appropriate for the subject matter and purpose. Further, we expect this provision to enhance the transparency of the GHG emissions attestation report for investors by providing them with additional information about the general procedures undertaken by the attestation provider. For example, under the proposed rules, an attestation report providing limited assurance would need to state that the procedures performed vary in nature and timing from, and are less extensive than, a reasonable assurance engagement, thus helping investors understand the level of assurance provided.

The GHG emissions attestation report would also be required to include a statement that describes any significant limitations associated with the measurement or evaluation of the subject matter against the criteria. The provision would require disclosure about the estimation uncertainties inherent in the quantification of GHG emissions, driven by reasons such as the state of the science and assumptions used in the measurement and reporting processes. By eliciting disclosure with respect to the procedures undertaken by the attestation provider, such as inquiries and analytical procedures, and the methodology used in the attestation process, the provision would help enhance the transparency of the GHG emissions attestation quality, thus allowing investors to gain a better understanding of the emission related information. This could help investors process emission related information more effectively. More informed investment decisions by investors also may benefit registrants by lowering their cost of capital.

The proposed rules would also require registrants to disclose whether the attestation provider has a license from any licensing or accreditation body to provide assurance and whether the GHG emissions attestation engagement is subject to any oversight inspection program and record-keeping requirements with respect to the work performed for the GHG emissions attestation. These requirements are expected to benefit investors by helping them to better understand the qualifications of the GHG emissions attestation provider, which in turn would allow them to make better informed decisions about the reliability of such information.

Finally, the proposed rules would require that the GHG emissions attestation report be prepared and signed by a provider that is an expert in GHG emissions and independent with respect to the registrant, and any of its affiliates, for whom it is providing the attestation report. These qualification and independence requirements should help ensure that the attestation provider is capable of exercising informed, objective and impartial judgment. Academic research has found that the independence of assurance providers can be important in certain settings for disclosure quality. Academic research has also found that equity prices respond to analyst forecast even after management has released the exact same information, highlighting more generally the perceived value of external evaluations of firm disclosures and resulting investor confidence in the related disclosures.

g. Targets and Goals Disclosure

The proposed rules would require a registrant to disclose whether it has set any climate-related targets or goals and, if so, how it intends to meet those targets and goals. Such climate-related targets or goals might relate to the reduction of GHG emissions or address energy usage, water usage, conservation or ecosystem restoration. Associated disclosure would include the scope of activities and emissions included in the target, the unit of measurement, and the defined time horizon. Additionally, disclosures include the baseline emissions for measuring progress, any interim targets, how it intends to meet these targets or goals, and data showing any progress toward achieving these targets, including how that progress was
achieved, and details about any carbon offsets of RECs that have been used.

For example, in 2019 Amazon and Global Optimism co-founded The Climate Pledge, a commitment to net zero carbon by 2040. Since then, a growing list of major companies and organizations have signed on to the Climate Pledge, which indicates a commitment to the following three principles: (i) Measure and report greenhouse gas emissions on a regular basis; (ii) Implement decarbonization strategies in line with the Paris Agreement; (iii) Neutralize any remaining emissions with additional offsets to achieve net zero annual carbon emissions by 2040. The proposed rules would help to make such commitments more transparent by requiring disclosure on the unit of measurement, time horizon, and baseline for measuring progress, including how that progress was achieved (e.g., through efficiency improvements, renewable energy adoption, materials reductions, and other carbon emission elimination strategies).

Such standardized reporting as a form of an oversight or monitoring mechanism might be critical in overcoming agency problems in the presence of asymmetric information. Investment in achieving targets could be value-enhancing in the long-run, but reduce cash flow in the short-run. Companies may decide that it is an optimal strategy to bear the costs up front of shifting its operations to those that have fewer emissions or upgrading their equipment, rather than bearing the risk that these costs will be borne in an unpredictable and possibly disorderly way in the future. In the absence of a means to credibly convey that efforts to achieve these long-term targets are being undertaken diligently, however, investors might be unable to observe which registrants are actually following through on such actions. For example, if registrants are incurring costs in the short-run to undertake investments to reduce Scope 1, 2, and 3 emissions, reducing short-run profitability, but are unable to convey to investors that they are meaningfully following through on achieving potential long-term value-enhancing strategies, there could be a disincentive for investors to invest in the firm, thus undermining its value in the long-run. This has been put forth as one potential explanation for some private sector attempts at addressing these problems, such as green bonds, which commit firms to recurring, more standardized disclosure requirements for progress in achieving stated targets and goals. The proposed rules would provide enhanced transparency about targets and goals so that investors can identify registrants with credible goals and track their progress over time. This can not only reduce incentives for misleading goal disclosures, but can also allow investors to recognize goals that generate long-term value despite short run costs, which can attract capital and increase firm value.

As explained above, the pursuit of targets could have a material impact, either in the short-term or long-term, on a registrant’s operations or financial condition. At this time, however, there is little consistency with respect to the extent of disclosure and the relevant details concerning such climate-related targets and goals. This can result in insufficient information for investors’ monitoring or decision-making needs. The proposed disclosure could provide more comparable, consistent, and reliable metrics of any climate-related targets or goals. It would require a registrant to clearly define baselines for targets, the scope of activities and emissions covered by the target, the unit of measurement, the defined time horizon, and how progress is made towards the targets. For example, the disclosure would require the registrant to state whether or not the targets pertain to Scope 3 emissions. If targets do include Scope 3 emissions, disclosure of Scope 3 emission sources and amounts would be required so that investors would understand the scale and scope of changes the company would need to undertake, and thus the full financial impact of meeting the target. Such disclosures would also enable investors to monitor progress firm management has made and plans to make towards achieving climate-related targets or goals, assess the credibility of its goal, and evaluate the effectiveness of the company’s investments to achieve its goals. As described above, this required disclosure is aimed at making targets more credible and serves as an oversight or monitoring mechanism.

h. Structured Data Requirement

Under the proposed rules, the new climate-related disclosures would be tagged in the Inline XBRL structured data language. The provision requiring Inline XBRL tagging of climate-related disclosures would benefit investors by making those disclosures more readily available for aggregation, comparison, filtering, and other enhanced analytical methods. These benefits are expected to reduce search costs and substantially improve investors’ information-processing efficiency. XBRL requirements for public company financial statement disclosures have been observed to reduce information-processing costs, thereby decreasing information asymmetry and increasing transparency by incorporating more company-specific information into the financial markets. In addition, the proposed Inline XBRL requirement for the climate-related disclosures may further limit agency problems, as XBRL requirements for financial statement tagging have been observed to facilitate external monitoring of firms through the aforementioned reduction of information processing costs.

See supra Sections II.G.1.b. and III.C.1.e.


703 See supra Section II.G.1.b. and III.C.1.e. See id.

704 For example, structuring climate-related disclosures would enable more advanced analyses than those described in the aforementioned Commission staff review that used keyword searches and NLP. See supra IV.A.5.a.

705 The findings on XBRL cited in the following paragraphs are not necessarily focused on climate-related disclosures and metrics, but we expect the findings to be generally applicable and to result in similar benefits for investors.

Investors with access to XBRL analysis software may directly benefit from the availability of the climate-related disclosures in Inline XBRL, whereas other investors may indirectly benefit from the processing of Inline XBRL disclosures by asset managers and by information intermediaries such as financial analysts. In that regard, XBRL requirements for public company financial statement disclosures have been observed to increase the number of companies followed by analysts, decrease analyst forecast dispersion, and, in some cases, improve analyst forecast accuracy. Should similar impacts on the analysts’ informational environment arise from climate-related disclosure tagging requirements, this would likely benefit retail investors, who have generally been observed to rely on analysts’ interpretation of financial disclosures rather than directly analyzing those disclosures themselves.

2. Costs

Below we discuss the anticipated direct and indirect costs of the proposed rules. Direct costs would include compliance burdens for registrants in their efforts to meet the new disclosure requirements. These direct costs could potentially be significant; however, the incremental costs would be lower to the extent that registrants already provide the required disclosures. Indirect costs may include heightened litigation risk and the potential disclosure of proprietary information. Proceed by discussing these various costs.

a. Direct Costs

The primary direct costs that the proposed rules would impose on registrants are compliance costs. To the extent that they are not already gathering the information required to be disclosed under the proposed rules, registrants may need to re-allocate in-house personnel, hire additional staff, and/or secure third-party consultancy services. Registrants may also need to conduct climate-related risk assessments, collect information or data, measure emissions (or, with respect to Scope 3 emissions, gather data from relevant upstream and downstream entities), integrate new software or reporting systems, seek legal counsel, and obtain assurance on applicable disclosures (i.e., Scopes 1 and 2 emissions). In addition, even if a registrant already gathers and reports the required information, some or all of this information may be in locations outside of SEC filings (such as sustainability reports posted on company websites or emissions data reported to the EPA). These registrants may face lower incremental costs by virtue of already having the necessary processes and systems in place to generate such disclosures; however they may still incur some additional costs associated with preparing this information for inclusion in SEC filings.

(1) General Cost Estimates

In this section, we review sources that provide insight into the magnitude of the potential costs associated with the proposed rules. With some exceptions discussed in further detail, these sources provide information at the level of general costs for climate disclosures. We acknowledge that these sources are limited in scope or representativeness and thus may not directly reflect registrants’ compliance costs. For instance, some third-party sources may present cost estimates that do not include all items required under the proposed rules (e.g., assurance costs), or else they may aggregate the costs of multiple items (including those not required under the proposed rules) into a single cost figure. However, these sources may serve as useful references to the extent that they overlap with specific disclosure elements required in the proposed rules. For example, third-party cost estimates of preparing TCFD reports or completing the CDP questionnaire can offer a rough approximation of potential compliance costs due to their similarity with the proposed rules. Below, we request further data to assist us in estimating potential costs.

As discussed in Section V, for purposes of the Paperwork Reduction Act of 1995 ("PRA"), we estimate the annual costs over the first six years of compliance with the proposed rules. For non-SRC registrants, the costs in the first year of compliance are estimated to be $460,000 ($180,000 for internal costs and $460,000 for outside professional costs), while annual costs in subsequent years are estimated to be $530,000 ($130,000 for internal costs and $380,000 for outside professional costs). For SRC registrants, the costs in the first year of compliance are estimated to be $490,000 ($140,000 for internal costs and $350,000 for outside professional costs), while annual costs in subsequent years are estimated to be $420,000 ($120,000 for internal costs and $300,000 for outside professional costs). These costs are expected to decrease over time for various reasons, including increased institutional knowledge.
operational efficiency, and competition within the market for relevant services.

One commenter provided cost estimates for their services in assisting client companies prepare TCFD-aligned disclosures.913 For companies that have no prior experience in GHG analysis or climate-related disclosures, the commentator estimates initial costs to range from $150,000 to $200,000 to prepare TCFD-aligned disclosures.914 Companies that have already calculated their carbon footprints and only need assistance with TCFD reporting may expect costs of $50,000 to $200,000, with the average cost of approximately $100,000. Ongoing costs for their services are expected to be zero conditional upon the TCFD requirements remaining unchanged,915 however the reporting company may still incur internal costs in preparing these disclosures on an annual basis.

Another source presents survey results of climate-related disclosure costs for three unnamed companies, which consist of a European-based multinational large-cap financial institution, a US-based large-cap industrial manufacturing company, and a US-based mid-cap waste management company.916 The survey reports that each firm has “historically established robust in-house climate disclosure systems that can easily be leveraged to comply with any new disclosure rule,” as evidenced by their concurrent reporting under multiple climate disclosure frameworks (e.g., TCFD, CDP, SASB, GRI, etc.). The respondents indicate that anticipated incremental costs of a mandatory climate disclosure rule are therefore expected to be minimal.917 All respondents disclose Scopes 1, 2, and 3 emissions, while none of them obtain third-party assurance for their climate-related disclosures.

The mid-cap waste management company estimates that the cost of producing their first TCFD report was less than $10,000. The company’s reported annual costs consist of employee costs ($12,600)918 and third-party costs ($60,000 to $160,000).919 However, the reported annual costs may be less applicable to potential compliance costs as they combine additional costs associated with several other activities not necessarily required in the proposed rules, including its adherence to multiple climate disclosure frameworks (e.g., TCFD, GRI, SASB, and CDP) and designing its annual sustainability report and associated web page.920 Overall, the company reports that its total costs related to producing climate-related disclosures across these multiple frameworks are less than 5% of its total SEC compliance costs.

The large-cap industrial manufacturing company reports that the costs of preparing its first CDP questionnaire was no more than $50,000. Additionally, the combined costs of producing its first TCFD, SASB, and GRI disclosures were between $200,000 and $350,000. Reported annual costs include internal costs (between $200,000 and $350,000)921 and the cost for auditors and consultants ($400,000).922 These cost estimates, however, may overestimate potential compliance costs to the extent that they include disclosure items or activities not required in the proposed rules. The company reports that their annual costs of producing its voluntary climate-related disclosures are less than 0.1% of their revenues.

The multinational financial institution reports that the cost of producing its first TCFD report, SASB report, and CDP questionnaire were each less than $100,000 given that such information overlaps with what the company already discloses under the EU’s Prospectus Regulation (Regulation (EU) 2017/1129). The company estimates annual costs ranging from $250,000 and $500,000 to produce these disclosures, but as before, this range may combine the costs of activities that are not required in the proposed rules.923 Similar to the industrial manufacturing company, this company also notes that the annual costs of producing its voluntary climate-related disclosures are less than 0.1% of their revenues.

Some commenters also provided estimates of climate-related disclosure costs for individual firms. One commenter provided a breakdown of such costs for seven unnamed large cap firms across six different industries.924 Headcount requirements ranged from two to 20 full-time equivalent employees. One large-cap firm in the energy industry reported that its TCFD reporting process involved 40 employees and six months of nearly full-time participation by 20 core team members. Employee hours spent on climate reporting ranged from 7,500 to 10,000 annually. Fees for external advisory services ranged from $50,000 to $1.35 million annually, which generally included legal counsel and consulting services related to environmental engineering, emissions, climate science, modeling, or sustainability reporting. Another commenter, a Fortune 500 energy infrastructure firm, reported that it employs a full-time, management level director that spends about 25% of his time developing sustainability reports and other ESG initiatives. This commenter also reported that it pays a third-party consulting firm more than [$2,500,000 to $7,500,000].

913 See memorandum, dated Feb. 4, 2022, concerning staff meeting with representatives of S&P Global.
914 This cost range pertains to clients’ use of the company’s “TCFD Suite”, which consists of the following modules: Benchmarking/gap assessment, management interviews, physical risk assessment, and various transition risk assessments, including policy risk analysis, market risk assessment, technology risk assessment, and reputation risk assessment. This range excludes the costs of additional services, such as target-setting ($20,000 to $30,000) and calculating GHG footprints ($75,000 to $125,000 for Scopes 1, 2, and 3), the latter of which is discussed in further detail in the following subsection.
915 The commentator reports that should the TCFD requirements change based on new science, projections, and business changes, costs of the TCFD Suite in future years may range from $125,000 to $175,000.
917 Incremental costs would be minimal to the extent that the mandatory disclosure rule overlaps with their current reporting practices. The respondents acknowledge that actual incremental costs would depend on the contents of the final rule.
918 The company allocates three employees to produce climate-related disclosures. Two employees in Legal and Compliance devote a combined 80 hours per year on this task, while one employee in Management and Administration devotes two hours per year.
919 This company reports that approximately one-third of these third-party costs is associated with designing the annual sustainability report and associated web page, while the remaining two-thirds is associated with report writing and consulting work on the voluntary frameworks.
920 These annual costs reflect a larger scope of climate-related disclosures (e.g., multiple frameworks, sustainability report, etc.) relative to the initial cost, which is specific to TCFD reporting only. Nevertheless, because these estimates aggregate the costs of reporting under the TCFD in addition to other climate disclosure frameworks, these estimates can serve as an upper bound of what annual costs may be specific to TCFD reporting only.
921 Internal costs include the cost of approximately 20 employees working part-time on climate-related disclosures from Nov. until Mar. and one full-time consultant.
922 Auditors review data quality and data collection procedures, while consultants help
923 The company notes that the bulk of its annual costs comes from producing chapter 7 of its Universal Registration Document, issued under the EU’s Prospectus Regulation (Regulation (EU) 2017/1129). Chapter 7 pertains to the extra-financial performance statement of the consolidated firm.
924 See Letter from Society for Corporate Governance (June 11, 2021).
$250,000 annually to assist in its ESG and sustainability report process.

The UK’s Department for Business, Energy & Industrial Strategy, as part of its Green Finance Strategy, has released a final stage impact assessment (the “UK impact assessment”) of their proposed rules that would also require certain TCFD-aligned disclosures from firms and asset managers listed on UK financial markets. The UK impact assessment provides a breakdown of estimated average compliance costs per affected entity. Under the assumption that affected entities have no pre-existing climate-related disclosure practices or expertise, the UK impact assessment estimates that first-year one-time costs would include familiarization costs ($17,300 plus $2,600 per subsidiary, as applicable) and legal review ($4,400). They also estimate recurring annual governance disclosure costs ($12,500), strategy disclosure costs ($17,900), risk management disclosure costs ($14,900), metrics and targets disclosure costs ($104,400 in the first year and $80,500 in subsequent years), internal audit costs ($30,300), and signposting costs ($100).

For companies with subsidiaries, the costs of collecting information from subsidiaries and processing this information are expected to be $4,300 for the parent company and $1,700 for each subsidiary. In total, the study estimates that a company with no pre-existing climate-related disclosure practices or expertise could incur costs of $201,800 in the first year and $177,900 in subsequent years, plus additional costs due to subsidiaries, as applicable. This cost estimation methodology is conditional upon assumptions regarding the number of required staff, the rank or title of the staff, and the required labor hours, which are then matched with local wage data to estimate final costs.

It is important to note that all of these cost estimates are conditional on specific assumptions and can vary significantly depending on firm characteristics, such as firm size, industry, business model, the complexity of the firm’s corporate structure, starting level of internal expertise, etc. As such, the estimates cited above for the sake of brevity. In addition, we note that, in certain cases, these cost estimates may represent a registrant’s optimal response to investor demand, and thus may exceed the minimum cost necessary to fulfill mandatory reporting of climate-related risks. We are accordingly requesting comments regarding compliance costs, including cost data that can be used to generate more accurate, granular, and reliable cost estimates that are more representative of the full set of affected registrants.

(2) Cost Estimates Specific to Emissions

In this section, we review the available evidence, which provides some insight into the scope of the compliance costs associated with reporting GHG emissions. We are cognizant of the type of costs that registrants will incur to report GHG emissions, e.g. resources, systems, design and implementation of DCP, external consulting services. In light of the limited information available, however, we are unable to fully and accurately quantify these costs. Accordingly, we are requesting comments regarding cost data for GHG emissions reporting. One commenter reports that their services in calculating client companies’ GHG footprints (Scopes 1, 2, and 3 emissions) would initially cost $75,000 to $125,000 if the client company has no prior experience in this area. Ongoing costs amount to approximately $40,000 assuming no material changes in Scope 3 emissions (i.e., assess Scopes 1 and 2 only). If there are material changes to Scope 3 emissions, ongoing costs would range from $75,000 to $125,000 (i.e., assess Scopes 1, 2, and 3).

Another commenter, a climate management and accounting platform, provided cost estimates of the measurement and reporting of emissions. This commenter’s estimates are disaggregated across scopes of emissions as well as “low maturity” vs “high maturity” companies with respect to emissions reporting. Low maturity companies are defined as those that have no formal understanding of GHG emission calculations and have no related policies or programs in place. Accordingly, these companies have not organized or collected any data for such a calculation. High maturity companies are defined as those that have the aforementioned understanding, policies, programs, and data. Therefore, high maturity companies are expected to face lower incremental costs. The commenter estimates that the average first-year startup cost of assessing Scopes 1 and 2 emissions amount to $45,000 and $25,000 for companies of low and high maturity, respectively. Including the assessment of Scope 3 emissions would increase the costs by $80,000 and $25,000 for companies of low and high maturity, respectively. The commenter indicated that it expects these costs to decrease over time as software solutions simplify the process and reduce the burden on companies.

Additional cost estimates are provided by another commenter, which is an organization that assists companies, communities, and other organizations in accurately assessing emissions data across all scopes of emissions. According to their pricing structure, initial one-time costs amount to $10,000, which includes identifying data input needs, developing the design and organization of user interfaces, establishing software and IT systems, and reporting emissions from prior years to the extent that historic data is available. Ongoing costs, which includes a subscription fee and data management fee, amount to $12,000 plus $1,200 per building that is covered.

925 See Letter from Williams Companies, Inc. (June 12, 2021).


927 We note that these numbers do not include the costs of measuring and reporting Scope 3 emissions since this is not required under the UK proposed rules.

928 This number excludes the cost of scenario analysis since this is not required under the proposed rules.

929 We note that these numbers do not include the costs of measuring and reporting Scope 3 emissions since this is not required under the UK proposed rules.

930 The UK’s climate-related disclosure consultation final stage impact assessment includes a subscription fee and data to estimate final costs.

931 See supra note 783. Legal and audit fees are included in these cost estimates.

in the calculation of emissions. Another organization that offers similar services, among others, indicates that their fees for GHG accounting for Scopes 1, 2, and 3 can range from $11,800 to $118,300.933 Their fees for applying the PCAF method on investment and lending portfolios range from $11,800 to $35,500. They note that the assessment process take approximately 1–3 months depending on the complexity and availability of data.

The EPA has also sought to quantify the costs of measuring and reporting emissions in accordance with the mandatory Greenhouse Gas Reporting Program, which generally requires facility-level reporting of emissions from large emitters and from large suppliers of certain products (e.g., entities that produce gasoline that will eventually be consumed downstream by the end-user).934 The EPA estimated that the rule would impose small reporting requirements. The EPA notes that several facility registrants in electronic filings since Jan. 1, 2000.935

For small entities, most sectors, the costs represent at most 0.1% of sales.936 For small entities, the EPA estimated that, for that the rule would impose small reporting requirements, as discussed above, may elicit some of the information required under our proposed rules, given that the requirements are different, the actual compliance costs would differ accordingly.

A survey conducted by PCAF provides some estimates of the costs of assessing financial emissions.937 Financed emissions, which can be one component of Scope 3 emissions for certain financial institutions, can be described as the emissions generated by companies in which a financial institution invests or to which it otherwise has exposure. The PCAF survey of 18 unnamed financial institutions938 found that typical staff time ranged between 50 and 100 days and the costs for contracting external support was less than $20,000 for the majority of respondents. These estimates may provide some sense of the costs that may be incurred by those financial institutions that would be required to report Scope 3 emissions under the proposed rules.

(3) Cost Estimates of Assurance for Scopes 1 and 2 Emissions Disclosures

Registrants that are accelerated filers and large accelerated filers will incur additional costs in obtaining assurance of Scopes 1 and 2 emissions disclosures. The Commission estimates these costs starting with data on these filers’ median audit fees in fiscal year 2020, which is $909,566 and $2,781,962 for accelerated and large accelerated filers, respectively.939 Next, an academic study suggests that assurance costs for sustainability reports (which serve as a common location for climate-related information, in addition to other non-financial topics) may range from 5% to 10% of total audit fees.940 We take the minimum, median, and maximum percentages (5%, 7.5%, and 10%, respectively) and apply further adjustments based on (i) emissions disclosures typically compromising only a portion of CSR reports, (ii) the potential fee premium related to attestation report included in SEC filings, and (iii) the average pricing difference between limited and reasonable assurance. For limited assurance, we estimate that accelerated filers will incur costs ranging from $30,000 to $60,000 (with a median of $45,000), while large accelerated filers will incur costs ranging from $75,000 to $145,000 (with a median of $110,000). For reasonable assurance, we estimate that accelerated filers will incur costs ranging from $50,000 to $100,000 (with a median of $75,000), while large accelerated filers will incur costs ranging from $115,000 to $235,000 (with a median of $175,000).

On the one hand, these estimates may underestimate actual costs as they are based on relative costs of assurance for financial statements, and assurance on emissions may differ in important ways. On the other hand, the costs may be lower in the future to the extent that the market for assurance services matures with respect to institutional knowledge, procedural efficiency, and overall competition. We request additional data that may assist in accurately assessing the costs of obtaining assurance over emissions disclosures.

(4) Factors That Affect Direct Costs

Incremental compliance costs may be relatively lower for registrants that already meet some of the disclosure and tagging requirements. For instance, registrants that are currently subject to the EPA’s Greenhouse Gas Reporting Program would face lower incremental costs in reporting certain scopes of emissions relative to a firm that has no emissions measurement systems in place.941 Similarly, registrants that already provide extensive qualitative disclosures on climate-related risks, which tend to be large accelerated filers and registrants in high emission industries,942 may face lower incremental costs in meeting certain disclosure requirements. As discussed in Section IV.A.5.a, the Commission’s staff reviewed 6,644 recent annual reports (Forms 10–K, 40–F, and 20–F) and found that 33% of them contained disclosures related to climate change, the majority of which discussed information related to business impact, emissions, international climate accords, and physical risks. Registrants with operations in foreign jurisdictions943 where disclosure requirements are based on the TCFD’s framework for climate-related financial reporting, would also face lower incremental costs.944 Moreover, costs may also be mitigated by the proposed transition period, which would allow firms to more gradually transition to the new reporting requirements.

Several industry reports also document how a sizeable portion of U.S. 933 See memorandum, dated Jan. 14, 2022, concerning staff meeting with representatives of South Pole. These numbers have been converted from EUR based on the 2021 average exchange rate of $1.183 USD/EUR, rounded to the nearest $100.

934 See Section IV.A.3 for more information on the EPA mandatory Greenhouse Gas Reporting Program.

935 See Section IV.A.5.a.

936 The 18 survey respondents consist of 2 insurance companies, 13 banks (commercial, investment, or development), 1 asset owner, and 2 asset managers. Respondents’ asset size ranges from less than a $1bn USD to $500bn USD. The average asset covered by this disclosure activity was approximately $5–20bn USD.

937 See Section IV.C.1.e for more information on how the proposed rules compare to the EPA’s emissions reporting requirements.

940 Data on audit fees is from Audit Analytics, which provides all fee data disclosed by SEC registrants in electronic filings since Jan. 1, 2000.

941 See Section IV.A.4 for a discussion on International Disclosure Requirements.

942 E.g., Morningstar reports that over 35% of S&P 500 revenues came from foreign markets, while this percentage is around 20% for the revenues coming from companies belonging to the Russell 2000 index. See, https://www.morningstar.com/articles/918437/your-us-equity-fund-is-more-global-than-you-think.

944 See Section IV.A.5.a for more information on the mandatory Greenhouse Gas Reporting Program (Sept. 2009), available at https://www.epa.gov/sites/ default/files/2015-07/documents/regulatoryimpact analysis.pdf. The EPA notes that several facility types do not currently report emissions (or the existence of such disclosure practices cannot be confirmed), therefore the cost estimates for these facility types reflect full start-up costs to meet the reporting requirements.

945 The corporate field is defined as small entity as (1) a small business, as defined by SBA’s regulations at 13 CFR part 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district, or special district with a population of less than 50,000; or (3) a small organization that is any not-for-profit enterprise that is independently owned and operated and is not dominant in its field.

companies report climate-related information under one or more third-party frameworks that are either fully or partially aligned with the TCFD disclosure elements. For example, the CCMC survey (G&A study) reports that among its sample of U.S. public companies, 44% (53%) use the SASB, 31% (52%) use the GRI, 29% (30%) use the TCFD, and 24% (40%) use the CDP. Moody's analytics provides a detailed view for a sample of 659 U.S. companies of the existing disclosure rate across the different TCFD disclosure elements that range from a high of 45% disclosure rate for Risks and Opportunities—Strategy (a), to a low of 5% for Risks and Opportunities—Strategy (c) (see Table 4). Since the proposed rules are broadly consistent with the TCFD framework, we would expect lower incremental compliance costs for registrants that provide most or all disclosures according to the TCFD or related frameworks, including the CDP, which has fully integrated the TCFD disclosure elements into its disclosure questionnaire, and other frameworks and/or standards partly aligned with the TCFD recommendations. Similarly, registrants in the insurance industry may also face lower incremental costs due to their existing disclosure practices. As discussed in Section IV.A.3, a large subset of insurance firms are required to disclose their climate-related risk assessment and strategy via the NAIC Climate Risk Disclosure Survey. A comment by a state insurance commissioner stated that because this survey overlaps extensively with the TCFD recommendations, these firms should be able to easily switch to reporting via the TCFD disclosure framework.945 This is because the proposed rules are broadly consistent with the TCFD. We expect that registrants in the insurance industry may also be able to adapt more easily to providing disclosure under these rules.

Section IV.A.5.e reports survey evidence on the frequency with which firms obtain assurance in sustainability reports. This evidence suggests that a significant fraction of large companies already obtain some form, albeit limited, of assurance. To the extent that large accelerated filers and accelerated filers already voluntarily obtain some form of assurance over their GHG emissions, these registrants would face lower incremental costs associated with complying with the proposed rules’ assurance requirements. These registrants tend to bear proportionately lower compliance costs than smaller issuers due to the fixed cost components of such compliance.946 Additionally, as the market for assurance matures, the Commission staff expects these costs to decrease over time.

Incremental costs may be higher for smaller firms considering that they are less likely to have climate-related disclosure systems and processes already in place.947 If smaller firms were to face higher proportional fixed costs in meeting the disclosure requirements, this may potentially put them at a competitive disadvantage to larger firms.948 Conversely, incremental costs for smaller firms may be lower to the extent that they have less complexity with respect to their assets and operations, which may allow them to assess climate-risk exposures or measure emissions at lower cost. With respect to the Inline XBRL tagging requirements, various preparation solutions have been developed and used by operating companies to fulfill their structuring requirements, and some evidence suggests that for smaller companies, XBRL compliance costs have decreased over time.949 The incremental compliance costs associated with Inline XBRL tagging of climate-related disclosures would also be mitigated by the fact that filers that would be subject to the proposed requirements would also be subject to other Inline XBRL requirements for other disclosures in Commission filings, including financial statement and cover page disclosures in certain periodic reports and registration statements.950 As such, the proposal would not impose Inline XBRL compliance requirements on filers that would otherwise not be subject to such requirements, and filers may be able to leverage existing Inline XBRL preparation processes and/or expertise in complying with the proposed climate-related disclosure tagging requirements.

We expect that the number of registrants committed to preparing climate-related disclosures will increase in the future, independently of our proposed rules. As discussed in Section IV.B.1, a sizeable and growing portion of global investors consider climate change as the leading issue driving their engagements with companies and is demanding robust disclosure around its impacts and the plan to mitigate climate-related risks. Consistent with this increasing demand for climate-related information, recent trends showed an uptick in climate-related disclosures, particularly within samples of larger firms, though not necessarily through their regulatory filings.951 Furthermore, the market for related services (e.g., GHG accounting services, auditors, and other consultants, etc.) may become more competitive, driving down costs. To the extent that these trends continue in the future, we would expect that the incremental costs for complying with the proposed rules would become lower for an increasing number of firms.

b. Indirect Costs

In addition to the direct costs of preparing climate-related disclosures, the proposed rules could also lead to indirect costs. For example, the proposed rules may result in additional litigation risk since the proposed climate-related disclosures may be new.
and unfamiliar to many registrants.\textsuperscript{952} The proposed rules would significantly expand the type and amount of information registrants are required to provide about climate-related risks. Registrants unfamiliar preparing these disclosures may face significant uncertainty and novel compliance challenges. To the extent this leads to inadvertent non-compliance, registrants may face additional exposure to litigation or enforcement action. However, certain factors may mitigate this concern. First, existing and proposed safe harbors\textsuperscript{953} would provide protection from liability for certain statements by registrants, including projections regarding future impacts of climate-related risks on a registrant’s consolidated financial statements and climate-related targets and goals. Second, the proposed rules would include phase-in periods after the effective date to provide registrants with sufficient time to become familiar with and meet the proposed disclosure requirements.\textsuperscript{954}

Another potential indirect cost is the possibility that certain provisions of the proposed rules may force registrants to disclose proprietary information.\textsuperscript{955} Under the proposed rules, registrants would be required to disclose a wide range of climate-related information, including potential impacts on its business operations or production processes, types and locations of its operations, products or services, supply chain and/or value chain. Registrants would be further required to disclose whether they have emissions-related targets and metrics or an internal carbon price, and if they do, what they are. To the extent that a registrant’s business model or strategy relies on the confidentiality of such information, the required disclosures may put the registrant at a competitive disadvantage.

c. Other Cost Considerations

Although the proposed rules may impose significant compliance costs, we expect these costs to decrease over time, both from firm-specific and market-wide contexts. From the firm-specific context, registrant disclosing climate-related information for the first time is likely to incur initial fixed costs to develop and implement the necessary processes and controls.\textsuperscript{956} Once the firm invests in the institutional knowledge and systems to prepare the disclosures, the procedural efficiency of these processes and controls should subsequently improve, leading to lower costs in following years.\textsuperscript{957}

Establishing a framework for standardized climate-related disclosures could also reduce uncertainty for registrants over the specific content to disclose and could mitigate disclosure burdens to the extent that it reduces information requests from third parties. Before registrants can take any tangible steps toward preparing climate-related disclosures, they must first determine which specific climate-related discussions, metrics, and analyses are most appropriate to disclose—a process that, under the current regime, can involve significant uncertainty. Furthermore, the uncertain, complex, and multidimensional nature unique to climate-related risks, combined with the unpredictability of investor responses to such disclosures,\textsuperscript{958} can also make it costly for management to determine the risks which meet the materiality threshold.

By implementing a standardized climate disclosure framework, the proposed rules could potentially reduce the burden that registrants may face in the environment of diverging voluntary frameworks and help clarify for registrants what they should disclose, where and when to make their disclosures, and what structure or methodology to use.\textsuperscript{959} While a more principles-based approach would provide additional flexibility for registrants, it also may impose certain costs if they are unsure of what climate-related disclosures are needed to satisfy legal requirements. Such an approach could entail additional judgment on the part of management, or result in registrants erring on the side of caution in complex matters such as climate-related disclosures. This could ultimately translate into spending more resources to determine appropriate compliance with the Commission’s applicable reporting standards. The proposed rules should provide legal certainty around climate-related disclosure and therefore mitigate the compliance burdens associated with the existing regulatory framework.

Furthermore, some registrants currently receive multiple, diverse requests for climate-related information from different parties, such as investors, asset managers, and data service providers. Responding to such third-party requests can be costly and inefficient\textsuperscript{960} and may put significant and sometimes competing demands on registrants.\textsuperscript{961} A standardized climate disclosure framework could potentially reduce information requests from third parties to the extent that such requests overlap with the disclosures required under the proposed rules. We acknowledge, however, that registrants that currently use third-party frameworks to disclose climate-related information may incur certain costs of switching from their existing practice to our proposed disclosure framework.

From a market-wide context, mandated climate disclosures may heighten demand for certain data or third-party services related to preparing the required disclosures, including assistance with the reporting of emissions data. In the short term, there could be a potential increase in the prices of such services to extent that the initial growth in demand exceeds the supply. In the long term, however, this heightened demand is expected to spur competition, innovation, and other economies of scale that could over time lower associated costs for such services and data and improve their availability. Moreover, the aggregate accumulation of institutional knowledge may lead to a broad convergence of disclosure-related best practices, which could further reduce the costs of the proposed disclosures.

Overall, the market effects deriving from competition and innovation could enhance the efficiency and availability of relevant data and services, thereby

\textsuperscript{952} See supra note 841.

\textsuperscript{953} As previously noted, registrants would be able to use the existing safe harbors for forward-looking statements that were added to the Securities Act and Exchange Act pursuant to the PSLRA assuming all conditions of those safe harbor provisions are met. See supra note 219.

\textsuperscript{954} Compliance would be required in a registrant’s fiscal year ending no earlier than two years after the effective date of any adopted rules. An additional one year phase-in would be provided for registrants that are not large accelerated filers, while complying with those emissions-related targets and metrics or an internal carbon price, and if they do, what they are. To the extent that a registrant’s business.


\textsuperscript{956} See Letter from Financial Executives International’s (FEI) Committee on Corporate Reporting (CCR) (June 10, 2021).

\textsuperscript{957} The assumption that first year’s costs are greater than subsequent years’ is consistent with the cost estimation models of the EPA’s Greenhouse Gas Reporting Program and the UK’s proposal of mandatory TCFD-aligned disclosure.

\textsuperscript{958} See Section IV.B.2.a.(4).

\textsuperscript{959} See supra note 806.

\textsuperscript{960} Id.

lowering costs. These positive externalities from standard reporting practices can provide additional market-wide cost savings to the extent that they reduce duplicative effort in the production and acquisition of information.962

D. Anticipated Effects on Efficiency, Competition, and Capital Formation

1. Efficiency

As discussed in Section IV.B.2, the complexity, uncertainty, and long-term nature of climate risks make it unlikely that voluntary disclosure of such risks would be fully revealing. Therefore, as detailed in Section IV.C.1, mandating that climate-related disclosures be presented in a comparable and consistent manner and in a machine-readable language (Inline XBRL) is likely to enhance the information environment for investors. In doing so, the proposed rules are expected to improve market efficiency and price discovery by enabling climate-related information to be more fully incorporated into asset prices. Improved efficiency could inform the flow of capital and allow climate-related risks to be borne by those who are most willing and able to bear them.963

These expected improvements in market efficiency are broadly consistent with empirical research. If climate-related information is relevant for asset prices, and therefore market efficiency, then the effective disclosure of climate-related information would be expected to cause differential asset price/financing cost responses across firms and settings. Empirical evidence is largely consistent with this expectation. Academic studies have found evidence that among firms that voluntarily report emissions via the CDP questionnaire, those with higher emissions (relative to their size and industry peers) pay higher loan spreads.964 A recent report from Lazard Ltd. also found a significant relationship between carbon dioxide emissions and a company’s price-to-earnings ratio.965 Even in settings with mandatory disclosure, evidence is consistent with abnormally positive stock returns on announcement date for low-emitters and negative returns for high-emitters.966

While the disclosure of climate-related information can improve market efficiency, investor response to such disclosures can vary depending on specific circumstances, thereby highlighting the limitations of the aforementioned studies.967 For example, if increased disclosure causes investors to realize that their portfolios are more exposed to climate risk than previously known, valuations may fall and costs of capital may increase as investors reallocate capital to balance this risk. Further, aggregate pricing effects could also be due to a better understanding of future regulatory risks firms face.968 Studies find, however, that cumulative abnormal stock returns around the announcement date are negatively correlated with firms’ mandatorily disclosed emission levels. This consistent with mandatory reporting of climate-related information improving price discovery and market efficiency. Empirical research has also documented evidence of market inefficiencies with respect to climate-related risks. For example, one study finds that stock prices of food companies (i.e., food processing and agricultural companies) may exhibit mispricing with respect to drought exposure.969 The study documents that drought-exposed firms report reduced future profitability, indicating that drought exposure is a financial risk. In an efficient market, this risk should result in trading activity that decreases the current stock price and increases the expected return (to compensate investors for bearing this risk). The study, however, finds that drought-exposed firms deliver lower future returns relative to firms with less exposure, suggesting that the market initially under-reacts to drought exposure. In other words, the market may fail to sufficiently incorporate the risk of drought exposure into the current stock price, resulting in investors holding mispriced assets and bearing risk for which they are not appropriately compensated. Another study finds, through similar reasoning, that stock prices may exhibit mispricing with respect to temperature changes induced by climate change.970 According to survey evidence of global institutional investors, respondents believe that equity valuations do not fully reflect climate-related risks.971 Mandatory disclosures may help address these inefficiencies as it would provide investors with the information necessary to better incorporate climate-related risks into asset prices.

These capital market benefits can be further strengthened by an effort to tag the climate-related disclosures in Inline XBRL, as XBRL requirements have been observed to reduce informational advantages of informed traders, increase stock liquidity, and reduce cost of capital.972 These benefits

962 See supra note 841.
963 A recent study by McKinsey found that 85% of investors either agreed or strongly agreed that “more standardization of sustainability reporting” would help them allocate capital more effectively, and 83% either agreed or strongly agreed that it would help them manage risk more effectively. See Sara Bernow et al., More Than Values: The Value-Based Sustainability Reporting That Investors Want, McKinsey & Company (Aug. 7, 2019), available at https://www.mckinsey.com/~/media/McKinsey/Industries/Financial%20Sectors/Research/Sustainability/Our%20Insights/More%20than%20Values%20The%20Value%20Based%20Sustainability%20Reporting%20That%20Investors%20Want/More%20Than%20Values-VF.pdf.
965 See Lazard Climate Center (2021), available at https://www.lazard.com/media/451920/lazard-climate-center-presentation-december-2021.pdf. The report examined more than 16,000 companies from 2016 through 2020 and found that investors are actively and directly pricing some transition risk into valuations, however the effects vary significantly across different types of Firms, market cap, and sectors. Large cap companies ($550 billion) experience greater valuation discounts, while big emitters, such as energy companies, showed the starkest correlation. On average, a 10% decrease in a large U.S. energy company’s emissions corresponded with a 3.9% increase in its price-to-earnings ratio.
966 See supra note 850 (Jouvenout and Kruger, 2021).
967 Id. See also J. Grewal, E.J. Riedl, and G. Serafeim, Market Reaction to Mandatory Nonfinancial Disclosure, 65 (7) Management Science 3061–3084 (2019). See supra note 850 (Bolton and Kacperczyk, 2020). The first paper in particular finds a negative aggregate stock market response to the passage of a mandatory ESG disclosure rules in the EU. These results, however, should be interpreted with caution. For one, the empirical design is based on matching, but there are reasons to believe that the treatment and control groups differ along important dimensions. Further, there is no event study plot, and results are not shown for cumulative abnormal returns after controlling for firm-specific risk factors like the Fama-French 3-factor model. It is therefore difficult to discern whether the passage of the disclosure rules is actually driving the aggregate market response.
968 For example, the passage of disclosure rules may signal more stringent enforcement of emissions rules going forward, leading to an increase in the risk of regulation. Therefore, it is difficult to disentangle the pure effect of disclosure rules on stock performance and the cost of capital.
may also have valuation implications. The discounted cash flow model illustrates how, all else equal, a drop in the cost of capital leads to a boost in equity valuation, which can further benefit investors.

There are also important efficiency implications in relation to systemic risks.973 The increasing frequency and severity of climate events can potentially lead to destabilizing losses for insurance companies,974 banks,975 and other financial intermediaries with direct and indirect exposures to different affected industries and assets. Some commentators state that, in addition to physical risks, the financial system could be destabilized also by potentially rapid and unexpected losses to carbon-intensive assets caused by a disorderly transition to a low-carbon economy or a shift in the market’s perception of climate risks.976 With insufficient and inconsistent disclosures, asset prices may not fully reflect climate-related risks. Consequently, market participants may inadvertently accumulate large exposures to such risks, leaving them vulnerable to considerable unexpected and potentially sudden losses.977

In the face of such losses, financial intermediaries may be forced to sell off assets at fire-sale prices to generate enough cash to pay claims or to otherwise meet the time-sensitive cash demands of creditors and counterparties. This fire-sale dynamic could push down asset prices as well as the value of firms holding similar assets due to mark-to-market losses, potentially increasing risk premia and correlations across asset classes.978 Stress from large, complex, and interconnected financial institutions, or correlated stress across smaller market participants, could be transmitted and propagate through the financial system,979 causing disruptions in the provision of financial services.980 A more efficient allocation of capital brought about the disclosure required by the proposed rules could reduce the probability and magnitude of disorderly price corrections or dislocations, thereby strengthening financial system resilience.981


979 Physical risks can have immediate and direct effects on asset values, but they also present long-term indirect risks. By damaging assets that serve as collateral for loans or that underpin other investments, reducing property values, increasing insurance premiums or decreasing insurance coverage, diminishing agricultural capacity, and causing labor forces to migrate, the physical consequences of climate change could have profound and long-term effects on financial markets more generally. See, e.g., J. Cong, J. Hao, and L. Zou, The Impact of XBRL Reporting on Market Efficiency, 28(2) Journal of Information Systems 181–207 (2014).


2. Competition

The provisions included in the proposed rules are expected to increase comparability among registrants by demanding climate-related information in a consistent manner and with machine-readable data language (Inline XBRL). More standardized climate reporting could improve competition among registrants as it could reduce their costs for both producing such information due to enhanced efficiencies of scale across the economy and the cost for acquiring and processing said information by investors.

As discussed in Section IV.C.2, positive externalities from standard reporting practices can provide market-wide cost savings to registrants in the long-term, to the extent that they reduce duplicative efforts in registrants’ production and acquisition of information (e.g. certain data or third-party services related to preparing the required disclosures, including the reporting of emissions data, may become cheaper in the long run as the heightened demand spur competition, innovation, and other economies of scale). These cost savings could be particularly helpful for smaller registrants, or those that are capital constrained, which otherwise may not be able to provide the same amount, or level of detail, of climate-related disclosures as registrants with greater resources.

More standardized reporting should also reduce investors’ costs for acquiring and processing climate-related information by facilitating investors’ analysis of a registrant’s disclosure and assessing its climate-related risks against those of its competitors. The placement of climate-related information in SEC filings with machine-readable data language (Inline XBRL), rather than external reports or company websites, should also make it easier for investors to find and compare this information.

Overall, we expect that by standardizing reporting practices, the proposed rules would level the playing field among firms, making it easier for investors to assess the climate-related risks of a registrant against those of its competitors. The effects of peer benchmarking can contribute to increased competition for companies in search for capital both across and within industries, whereby firms can be more easily assessed and compared by investors against alternative options. Failure to implement the proposed rules could lead to an informational gap between U.S. registrants and companies.
operating in foreign jurisdictions which require climate-related disclosures. For example, such a gap may increase investors’ uncertainty when assessing climate-related risks of U.S. registrants vis-à-vis foreign competitors and place U.S. registrants at a competitive disadvantage, with the potential to deter investments and hence increase U.S. registrants’ cost of capital. This informational gap may also pose obstacles to U.S. companies transacting with counterparts and businesses in their supply-chain operating in foreign jurisdictions which require Scope 3 emission disclosures. According to Morningstar, more than 35% of S&P 500 firms’ total revenues came from foreign markets, while this percentage is around 20% for the revenues of Russell 2000 firms. Lack of standardized disclosures around Scope 1 and 2 GHG emission by U.S. companies, which may in part be due to the aforementioned impediments to voluntary disclosure, may obstruct foreign counterparts from accurately assessing their Scope 3 GHG emissions, thus putting U.S. registrants at a competitive disadvantage over other foreign companies which may be publicly disclosing such information.

3. Capital Formation

More consistent, comparable, and reliable disclosures could lead to capital-market benefits in the form of improved liquidity, lower costs of capital, and higher asset prices (or firm valuations). Enhanced disclosures (e.g., accurate GHG emissions disclosures) can reduce the time necessary for processing registrant’s relevant information, thus increasing efficiency for registrants in their access to capital and allowing the market to more efficiently assess its cost. These benefits would stem from reductions in information asymmetries brought about by the required disclosure of climate-related information. More comparable, consistent, and reliable climate-related disclosures could reduce information asymmetries, both among investors and between firms and their investors.

In the first case, less information asymmetry among investors could mitigate adverse selection problems by reducing the informational advantage of informed traders. This is likely to improve stock liquidity (i.e., narrower bid-ask spreads), which could attract more investors and reduce the cost of capital. In the second case, less information asymmetry between firms and their investors could allow investors to better estimate future cash flows, which could reduce investors’ uncertainty, as well as the risk premium they demand, thus lowering the costs of capital.

Recent studies provide some supporting empirical evidence of these effects within the context of ESG- or climate-related disclosure. These studies have found that, when firms voluntarily provide material sustainability disclosures, they also experience improvements in liquidity (e.g., smaller bid-ask spreads). In addition, firms that choose to disclose emissions have lower costs of equity and loan spreads. While firms’ decisions about whether and when to disclose emissions data may be correlated with other factors as well asset prices/financing costs, this would be consistent with such disclosures reducing the costs of capital for firms (to the extent that some of these effects are driven by the disclosures themselves).

E. Other Economic Effects

The proposed rules may have some effects on firm behavior. Prior empirical evidence supports the notion that, in response to mandatory ESG-related disclosure rules, firms tend to report actions that appear more “favorable” with respect to the corresponding disclosures. These decisions would be made by a firm’s management with the goal of maximizing firm value in response to the new disclosure mandate. To the extent that these actions reduce firms’ exposures to physical and transition risks, this could lower the return that investors require for investing in these firms, hence facilitating capital formation. This could reduce volatility of stock returns due to enhanced resiliency against such risks.

Empirical evidence shows that mandatory reporting of GHG emissions results in reduced aggregate reported emissions among affected firms. Academic research shows that mandatory ESG-related disclosure often contributes, not only to increased monitoring by investors or other stakeholders, but also to enhanced peer benchmarking by firms as they can more easily compare themselves with their competitors. These changes may reflect market responses by companies and investors to the newly disclosed information. Accordingly, registrants may change their behavior in response to the proposed disclosure requirements by reducing exposures to certain physical or transition risks. However, this could also come with the potential cost of lower productivity, profitability, or market share in the short-term.

Registrants might respond to the proposed disclosures by devoting more resources to climate-related governance and risk management in an effort to address indirect effects on their business arising from the disclosures. For example, the proposed rules require disclosure of members of the board or management that have prior climate expertise. Some registrants may respond by giving more weight to climate expertise when searching for directors, which may lead them to deviate from the board composition that would have been in place absent the proposed rules. Similarly, the proposed rules would require disclosure on how climate-related risks can impact registrants’ consolidated financial statements, among others. Registrants may respond by taking measures to minimize
negative impacts in order to put forth more favorable metrics. For example, registrants may move assets or operations away from geographic areas with higher physical risk exposures or may seek to decrease GHG emissions. The provision on GHG Emissions would also require scope 1, 2, and 3 (if material or the registrant has set a target or goal for scope 3) emission disclosures. These emission disclosures may induce firms to use peer benchmarking to decide whether to investigate and reevaluate their energy usage or otherwise reduce emissions based on anticipated market reactions to the disclosed information. This process may provide certain registrants with incentives to search for alternative energy sources or find different suppliers, which could increase costs. Conversely, it could also prompt certain firms to reduce nonessential activities and improve operational efficiency, which could lead to lower operating costs.

The provision requiring assurance of GHG Scopes 1 and 2 emissions disclosures would only apply to accelerated filers. Non-accelerated filers would, instead, be required only to state whether any of their GHG emissions disclosures were subject to third-party assurance, and if so, at what level. By asking all registrants, including non-accelerated filers, to disclose climate-related information within SEC filings, however, the proposed rules may motivate more non-accelerated filers to voluntarily seek assurance over these types of data than if the same information had been disclosed on companies’ websites or sustainability reports. Certain non-accelerated filers may also voluntarily decide to attain assurance over their GHG emission disclosures in order to enhance their reliability and prevent these disclosures from being perceived by investors as less reliable compared to those provided by accelerated filers.

As another example, the proposed rules would require the disclosure of the location (via ZIP code) of firm assets or operations, which could allow investors to assess firms’ exposures to physical risk at a more granular level. This may allow investors to more easily diversify these geographic-driven risks or expose themselves to such risks, if they choose to, more deliberately. This may cause some firms to relocate assets or operations to geographical areas less exposed to physical risks and/or give preferences to such areas for future business activity. It may also cause some firms with higher geographic

exposures to physical risks to alter overall operational risk and strategies. The proposed rules might also affect the networks firms choose to operate in. For example, a firm may choose to change some suppliers or disengage with certain clients due to the effect that they may have on the firm’s Scope 3 emissions. This may be particularly relevant for certain financial institutions that are impacted by their portfolio firms’ emissions or climate-related risks. These financial institutions may be less willing to extend credit to firms for which it is difficult to measure climate risk exposure information, potentially increasing the cost of capital for these firms.

However, there are certain factors that may mitigate this effect. First, the proposed rules establish a phase-in period, which is intended to give financial institutions and their prospective borrowers sufficient time to prepare the required disclosures. Second, analytical tools, data, and related metrics (such as those related to measuring/reporting GHG emissions) are developing rapidly and increasing in availability. Finally, frameworks like the PCAF to measure financed emissions would allow financial institutions to compute proxies for the emissions of their clients in a systematic and comparable manner even in the absence of actual emissions data. The proposed rules could also cause some firms to pursue avoidance strategies. The provision on Targets and Goals would require a registrant to disclose whether it has set any climate-related targets or goals and the specific plans in place to achieve those objectives and metrics to monitor progress. This may disincentivize certain firms from making such commitments and providing the associated disclosures in SEC filings. Risk of litigation or enforcement actions, could result in registrants being more cautious in their decision to set climate-related targets. Other firms, however, may find the existence of mandatory disclosures around climate-related targets and goals to be beneficial for signaling credible value-enhancing commitments to investors. More credible and standardized disclosures on climate-related targets and goals could make registrants’ communication more effective and facilitate investors’ understanding of related progress, hence providing additional incentives for making such commitments.

More generally, if compliance costs with the proposed rules are high, this could influence the marginal firm’s decision to exit public markets or refrain from going public in the first place in order to circumvent the disclosure requirements. Firms may choose this strategy if they believe the potential compliance costs from the proposed rules outweigh the benefits of being registered public company. Uptake of this avoidance strategy may widen the transparency gap between public and private firms, negatively affecting capital markets’ information efficiency, and potentially reduce the size of the stock market. However, it is unlikely that a significant number of firms would pursue this avoidance strategy given that it would come with significant disadvantages, such as higher costs of capital, limited access to capital markets, and limits to their growth potential. Moreover, recent trends in private markets indicate that industry’s top leaders are working toward a standard set of metrics for tracking their portfolio companies’ ESG progress. The pressure on private companies to disclose information on climate-related risks is rapidly escalating within the private industry, hence diminishing the potential incentive for registrants to go private in order to avoid climate-related disclosure requirements. For example, since its launch in September 2021, the ESG Data Convergence Project, which seeks to standardize ESG metrics and provide a mechanism for comparative reporting for the private market industry, has announced a milestone commitment of over 100 leading general partners and limited partners to its partnership representing $8.7 trillion USD in AUM and over 1,400 underlying portfolio companies across the globe. The initial data for the project includes, among others, greenhouse gas emissions and renewable energy metrics.

F. Reasonable Alternatives

1. Requirements Limited to Only Certain Classes of Filers

One alternative would be to require the proposed disclosures only from larger registrants, such as large accelerated filers or non-SRCs. While the proposed rules already provide certain exemptions for SRCs (e.g., Scope 3 emissions disclosures and assurance requirements), this alternative would exempt smaller registrants from the entirety of the proposed rules. The main benefit of this alternative is that it

See supra note 841.

Both scenario analysis methodologies and climate science, however, continue to advance and develop, which may pose significant challenges for some registrants. Specifically, the required data may be unavailable or costly to obtain. Furthermore, some registrants may lack the necessary expertise, requiring them to hire external consultants to conduct the analysis. These challenges may pose undue burdens with respect to difficulty and/or costs to some registrants, such as smaller companies and those that otherwise have no prior experience in scenario analysis. For these reasons, the Commission is not proposing to mandate scenario analysis and related disclosure at this time.

3. Require Specific External Protocol for GHG Emissions Disclosure

Another alternative would be to require registrants to follow an external protocol (e.g., GHG protocol) for reporting emissions. Requiring a specific protocol may potentially benefit investors by providing a more consistent and comparable framework in reporting emissions, thus facilitating investors’ information processing. However, there may also be certain drawbacks. First, the organizational boundaries adopted by external protocols may create inconsistencies with the way companies would report information about their GHG emissions vis-à-vis the rest of their financial statements. The GHG Protocol, for example, requires that a company base its organizational boundaries on either an equity share approach or a control approach, which may differ from the way registrants set their scope for the purpose of reporting information in their financial statements. The proposed rules would require a registrant to set the organizational boundaries for its GHG emissions disclosure using the same scope of entities, operations, assets, and other holdings as those included in its consolidated financial statements. Requiring a consistent scope of consolidation and reporting between financial data and GHG emissions data would help avoid potential investor confusion about the reporting scope used in determining a registrant’s GHG emissions and the reporting scope used for the financial statement metrics.

Furthermore, requiring companies to follow a specific external protocol might limit flexibility for registrants and thus reduce their ability to report emissions in a manner that is tailored to their specific circumstances. For example, registrants following an existing but different protocol, which nevertheless provides relevant emissions information, would be required to switch protocols, incurring additional cost.

Requiring compliance with a specific protocol could also reduce the scope for innovation in driving the most appropriate forms of disclosure within these overarching guidelines (e.g., the methodologies pertaining to the measurement of GHG emissions, particularly Scope 3 emissions, are still evolving). Additionally, requiring compliance with a specific external protocol as of the date of the adoption of any final rules may become problematic in the future to the extent that the external protocol’s methodologies shift or evolve such that the version incorporated by reference into the final rules becomes outdated or inconsistent with improving methodologies. While we expect that many registrants will choose to follow many of the standards and guidance provided by the GHG Protocol when calculating their GHG emissions, not requiring compliance with the GHG Protocol would provide some flexibility to the Commission’s climate-related disclosure regime and enable registrants to follow new and potentially less costly methodologies as they emerge.

4. Permit GHG Emissions Disclosures To Be “Furnished” Instead of “Filed”

Another alternative would be to permit Scopes 1, 2, and 3 emissions disclosures to be considered “furnished” instead of “filed,” which may limit the incremental risk of being held liable under Section 18 of the Exchange Act for these disclosures. This may also benefit some registrants as their Scopes 1 and 2 emissions disclosures would not be automatically incorporated into Securities Act registration statements and thereby not be subject to Section 11 liability. We note that this could have a lower incremental impact on Scope 3 emissions disclosures since Scope 3 emissions disclosures are covered under a proposed safe harbor provision and hence already afforded other liability protections. However, the lack of liability in general may lead to the applicable disclosures being perceived as less reliable by investors, which could have adverse effects on registrants’ stock liquidity or costs of capital. For these reasons, the Commission is not proposing to permit emissions disclosures to be furnished at this time.

5. Do Not Require Scope 3 Emissions for Registrants With a Target or Goal Related to Scope 3

Another alternative would be to not require Scope 3 emissions disclosures if...
such emissions are part of a target or goal from any registrant. This would allow certain registrants to avoid the potentially significant costs and difficulties associated with measuring and reporting Scope 3 emissions. This could potentially deprive investors of important information necessary to assess registrants’ exposures to certain risks associated with trying to achieve targets or transition plans. Scope 3 emissions can provide investors with a more complete picture of how targets or transition plans might impact risks (e.g., future regulations restricting emissions or changes in market conditions that disfavor high emissions products or services) of the registrant through the value chain. This can be particularly important considering that Scope 3 emissions can make up the vast majority of total emissions for many registrants. Furthermore, some firms of total emissions for many services) of the registrant through the value chain. This can be particularly important considering that Scope 3 emissions can make up the vast majority of total emissions for many registrants. Furthermore, some firms can give the appearance of low (direct) emissions by shifting high-emission activities elsewhere in their value chain. Mandatory disclosure of Scope 3 emissions for registrants with a target or goal related to Scope 3 emissions can help prevent such misrepresentation.

6. Exempt EGCs From Scope 3 Emissions Disclosure Requirements

Another alternative would be to retain the exemption for SRCs, as currently proposed, but also extend it to EGCs. EGCs may similarly face resource constraints related to company size or age, hence this alternative would allow EGCs to avoid the costs of Scope 3 emissions measurement and reporting. Given that the designations of SRC and EGC are not mutually exclusive, however, EGCs that are also SRCs would be covered under the exemption as currently proposed. Conversely, EGCs that are not SRCs are relatively less resource-constrained since they, by definition, have greater revenues and/or public float, and therefore may be better positioned to provide Scope 3 emissions disclosures.

7. Eliminate Exemption for SRCs From Scope 3 Reporting

Another alternative would be to eliminate the exemption for SRCs. Because SRCs make up approximately half of domestic filers in terms of numbers (though considerably less in terms of market cap), this alternative could address data gaps with respect to Scope 3 emissions, with the potential to benefit all investors. As discussed in Section II.G.3, however, this alternative may pose fixed costs (e.g., data gathering and verification), that would fall disproportionately on SRCs. Also, because SRCs are a small fraction of the market, the overall benefit to investors would be limited.

8. Remove Safe Harbor for Scope 3 Emissions Disclosures

The proposed rules provide a safe harbor for Scope 3 emissions disclosures. An alternative would be to remove this safe harbor for Scope 3 emissions disclosures. This alternative would strengthen accountability for Scope 3 emissions disclosures. It also would significantly increase registrants’ exposure to litigation over the accuracy of such disclosures. While rigorous liability in many contexts can provide incentives that promote reliable disclosures, an accommodation may be warranted for Scope 3 emissions due to the challenges associated with their measurement and disclosure.

9. Require Large Accelerated Filers and Accelerated Filers To Provide a Management Assessment and To Obtain an Attestation Report Covering the Effectiveness of Controls Over GHG Emissions Disclosures

The proposed rules would require assurance over Scopes 1 and 2 emissions disclosure from large accelerated filers and accelerated filers. In addition to such assurance, we could require these filers to also obtain either a separate assessment by management and disclosure on the effectiveness of controls over GHG emissions disclosures or an attestation report specifically covering the effectiveness of controls over GHG emissions disclosures, or both. Specifically, management could be required to include a statement in the annual report on their responsibility for the design and evaluation of controls over GHG emission disclosures, as well as to disclose their conclusion regarding the effectiveness of controls over GHG emissions disclosures, in addition to the existing DCP evaluation and disclosure. In addition, we could require a GHG emissions attestation provider to obtain reasonable assurance on whether material weaknesses exist regarding management’s assessment of the effectiveness of controls over GHG emissions disclosures as of the measurement date. The GHG emissions attestation provider could also be required to issue an attestation report on the effectiveness of controls over GHG emissions disclosures. By requiring GHG emissions attestation providers to assess not just the disclosures, but also the controls over GHG emissions disclosures (i.e., the underlying mechanisms, rules, and procedures associated with generating such disclosures), this alternative could further strengthen the integrity of the disclosed information. In the context of emissions, GHG emissions attestation providers may evaluate and test the effectiveness of registrants’ controls related to the collection, calculation, estimation, and validation of GHG emissions data and disclosure. These processes could strengthen disclosure credibility as they reduce the likelihood of errors or fraud and their ensuing misstatements. Investors would benefit from any resulting improvement in disclosure reliability for reasons discussed in prior sections: It would allow investors to make better-informed investment decisions, allow applicable information to be better incorporated into asset prices, and contribute to a more efficient allocation of capital. Registrants may also benefit via reduced costs of capital and increased stock liquidity.

However, this alternative would also impose additional assurance costs. Given that GHG emissions measurement and disclosure are developing areas, it is unclear what exact controls are or would be in effect, making it difficult to anticipate precisely what such attestation would entail. These uncertainties pose further difficulties in obtaining informative cost estimates and, accordingly, accurate assessments of how burdensome such a requirement would be to registrants. This leaves the


Potentially consistent with this, though in a different setting, academic evidence surrounding Section 404 of the Sarbanes-Oxley Act (SOX) finds lower accruals and discretionary accruals for small firms whose 2002 float (prior to when firms could have known and therefore tried to alter their float to avoid the regulation) made them likely to be just above the requirements for compliance, relative to those just below. Iliev, Peter (2010). The effect of SOX Section 404: Cost, earnings quality and stock prices. Journal of Finance, 65, 1163–1196.

possibility that the costs could outweigh the incremental benefits given that the proposed rules already require assurance for Scopes 1 and 2 emissions disclosures for applicable registrants. For these reasons, the Commission is not proposing at this time to require an attestation report on the effectiveness of controls over GHG emissions disclosures.

10. Require Reasonable Assurance for Scopes 1 and 2 Emissions Disclosures From All Registrants

Another alternative would be to require reasonable assurance for Scopes 1 and 2 emissions disclosures from all registrants. As described above, requiring assurance can benefit investors in several ways, including enhanced reliability of disclosures, which would allow investors to make better-informed investment decisions.

However, because costs increase with the level of assurance, requiring reasonable assurance may be particularly burdensome for affected registrants (i.e., smaller firms) as they would be more likely to incur proportionately higher compliance costs due to the fixed cost components of such compliance, regardless of whether or not there is a transition period before this requirement takes effect. While the benefits of assurance could be approximately proportional to registrant’s market value, the costs are not. In an effort to arrive at an appropriate balance between these factors, the proposed rules would require reasonable assurance (after a specified transition period) only from large accelerated filers and accelerated filers because the benefits to investors are more likely to justify the costs for these firms.

11. Require Limited, Not Reasonable, Assurance for Large Accelerated Filers and/or Accelerated Filers and/or Other Filers

Obtaining reasonable assurance generally costs more than obtaining limited assurance. Current market practice appears to favor obtaining limited assurance over sustainability reports, if assurance is obtained at all. Experimental evidence suggests assurance (relative to none) may increase perceived reliability of sustainability reports, but it is yet to provide evidence that reasonable assurance increases perceived reliability of sustainability reports relative to limited assurance. We acknowledge, however, that experimental findings from lab settings may not necessarily reflect the behavior or preferences of experienced investors in actual financial markets. Furthermore, other research often exhibits a selection bias (i.e., companies that voluntarily decide to obtain a higher-than-required level of assurance are systematically different across several dimensions), making it difficult to determine the causal effect of the different levels of assurance.

One possibility to mitigate the additional costs of reasonable assurance would be to maintain the requirement that large accelerated filers obtain reasonable assurance, but allow accelerated filers to obtain limited assurance without any scaling up to a reasonable assurance. Another possibility would be to require limited assurance, but expand the assurance requirement to a broader scope of registrants including non-accelerated filers and smaller reporting companies. However, these possibilities have the disadvantage of lack of consistency, which could lead to confusion among investors.

12. In Lieu of Requiring Assurance, Require Disclosure About Any Assurance Obtained Over GHG Emissions Disclosures

Another alternative would be to require all registrants to disclose what type of assurance they are receiving, if any, in lieu of requiring assurance. This would potentially allow affected registrants to avoid the costs of obtaining limited assurance and/or reasonable assurance. Additionally, registrants would have the flexibility to choose any level of assurance (i.e., none, limited, or reasonable assurance) but still be required to disclose their choice for transparency. This alternative, however, may reduce the reliability and comparability of these disclosures relative to the standardized assurance requirements within the proposed rules. In addition, as it does not set any minimum requirements for the assurance, this alternative would not address the fragmentation and selective disclosure issues that characterize the current, voluntary reporting regime.

13. Permit Host Country Disclosure Frameworks

Another alternative would be to permit alternative compliance using host country disclosure frameworks that the Commission deems suitable. Such an alternative would be beneficial for registrants that already comply with another country’s disclosure requirements since they could avoid incurring additional costs to comply with the Commission’s rules. This flexibility, however, may fail to address or may even exacerbate growing concerns from investors that climate-related disclosures lack comparability and consistency. While it might be individually optimal for a given firm to use their existing host country disclosure frameworks, the potential lack of consistency and comparability of the disclosure between these firms and other registrant might impose costs on investors. Investors might not be able to compare across firms using different disclosure presentations, or may have to incur additional costs in order to do so.

14. Alternative Tagging Requirements

With respect to Inline XBRL tagging, one alternative is to change the scope of disclosures required to be tagged. We could, for example, remove the tagging requirements for climate-related disclosures for all or a subset of registrants (such as smaller reporting companies). As another alternative, we could require only a subset of proposed climate-related disclosures, such as the quantitative climate-related metrics, to be tagged in Inline XBRL. Narrowing the scope of climate-related disclosures to be tagged could provide some incremental cost savings for registrants compared to the proposal, because incrementally less time would be required to select and review the particular tags to apply to the climate-related disclosures.

We expect this incremental cost savings to be low because all affected registrants are or in the near future will be required to tag certain of their disclosures (including both quantitative and qualitative disclosures) in Inline XBRL. Moreover, narrowing the scope of tagging requirements would

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1002 See Section IV.C.2.(3) for cost estimates of assurance over emissions disclosures.
diminish the extent of informational benefits that would accrue to investors by reducing the volume of climate-related information that would become less costly to process and easier to compare across time and registrants. For example, an alternative whereby only quantitative climate-related disclosures would be tagged would inhibit investors from efficiently extracting/searching climate-related disclosures about registrants’ governance; strategy, business model, and outlook; risk management; and targets and goals, thus creating the need to manually run searches for these disclosures through entire documents. Such an alternative would also inhibit the automatic comparison/redlining of these disclosures against prior periods, and the performance of targeted artificial intelligence or machine learning assessments (tonality, sentiment, risk words, etc.) of specific narrative climate-related disclosures outside the financial statements rather than the entire unstructured document.

G. Request for Comment

We request comment on all aspects of our economic analysis, including the potential costs and benefits of the proposed rules and alternatives thereto, and whether the proposed rules, if adopted, would promote efficiency, competition, and capital formation or have an impact on investor protection. In addition, we also seek comment on alternative approaches to the proposed rules and the associated costs and benefits of these approaches.

Commenters are requested to provide empirical data, estimation methodologies, and other factual support for their views, in particular, on costs and benefits estimates. Specifically, we seek comment with respect to the following questions:

- Are there any costs and benefits to any entity that are not identified or misidentified in the above analysis?
- Are there any effects on efficiency, competition, and capital formation that are not identified or misidentified in the above analysis?
- Are there any other alternative approaches to improving climate-related disclosure that we should consider? If so, what are they and what would be the associated costs or benefits of these alternative approaches? For example, what would be the costs and benefits of implementing a new, comprehensive system, for reporting and transferring GHG emissions across corporate supply and distribution chains, as described by Kaplan and Ramanna (2021)?
- Are there any sources of data that could provide a more precise estimation of the potential compliance costs that registrants may incur if the proposed rules are adopted?
- Have we accurately estimated the costs of disclosing Scopes 1 and 2 emissions? If not, please provide alternative estimates of these costs.
- Have we accurately estimated the costs of disclosing Scope 3? If not, please provide alternative estimates of these costs.
- Are there any additional sources of information to estimate the costs of complying with the Scopes 1, 2, and 3 GHG emissions disclosure requirements and the costs of obtaining limited and reasonable assurance for these disclosures?
- Would any data sources allow these compliance cost estimates to be apportioned to separate provisions of the proposed rules? Furthermore, how would these cost estimates vary across time horizons? For example, the first year of implementation may come with higher start-up costs while subsequent years may come with lower costs.
- Have we accurately characterized the cost of limited assurance and reasonable assurance over Scopes 1 and 2 emissions? If not, please provide an estimate of these costs. Similarly, is there data that can show how the costs of limited assurance and reasonable assurance differ for large accelerated, accelerated and non-accelerated filers?
- How are the costs of obtaining limited assurance and reasonable assurance likely to change over time (e.g., over the five years following adoption or compliance with a specified level of assurance)?
- What would be the costs and benefits of providing a longer transition period for obtaining assurance over Scopes 1 and 2 emissions disclosures?

V. Paperwork Reduction Act

A. Summary of the Collections of Information

Certain provisions of our rules and forms that would be affected by the proposed amendments contain ‘‘collection of information’’ requirements within the meaning of the Paperwork Reduction Act of 1995 (‘‘PRA’’). The Commission is submitting the proposal to the Office of Management and Budget (‘‘OMB’’) for review in accordance with the PRA. The hours and costs associated with preparing and filing the forms and reports constitute reporting and cost burdens imposed by each collection of information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information requirement unless it displays a currently valid OMB control number. Compliance with the information collections is mandatory.

Responses to the information collections are not kept confidential and there is no mandatory retention period for the information disclosed. The titles for the affected collections of information are:

- Form S–1 (OMB Control No. 3235–0065);
- Form F–1 (OMB Control No. 3235–0258);
- Form S–4 (OMB Control No. 3235–0324);
- Form F–4 (OMB Control No. 3235–0325);
- Form S–11 (OMB Control No. 3235–0067);
- Form 10 (OMB Control No. 3235–0064);
- Form 10–K (OMB Control No. 3235–0063);
- Form 10–Q (OMB Control No. 3235–0070);
- Form 20–F (OMB Control No. 3235–0288); and
- Form 6–K (OMB Control No. 3235–0116).

The proposed amendments would require U.S. registrants filing Securities Act registration statements on Forms S–1, S–4, and S–11 to include the climate-related disclosures required under proposed subpart 1500 of Regulation S–K and proposed Article 14 of Regulation S–X. The proposed amendments would also require foreign private issuers to include the proposed climate-related disclosures when filing Securities Act registration statements on Forms F–1 and F–4. The proposed amendments would further require U.S. registrants and foreign private issuers to include

1004 To illustrate, using a search string such as “climate change” or “greenhouse gas” to search through the text of all filings from a particular filer population so as to determine the trends in narrative climate-related disclosure among that population over time, could return many narrative disclosures outside of the climate-related disclosures. Examples of this would be a description of pending environmental litigation, existing government regulations and agency names, and broader regulatory risk factors.


1006 See 44 U.S.C. 3501 et seq.

1007 44 U.S.C. 3507(d) and 5 CFR 1320.11.

1008 The proposed amendments would also indirectly affect Forms S–3 and F–3. Registrants filing Forms S–3 and F–3 are able to incorporate by reference their annual reports filed on Forms 10–K or 20–F. Because the proposed amendments would affect Forms 10–K and 20–F, and are not expected to affect Forms S–3 and F–3 except when Forms 10–K and 20–F are incorporated by reference into those Securities Act forms, we are not separately accounting for the PRA burden related to Forms S–3 and F–3.
the proposed climate-related disclosures in their Exchange Act annual reports filed, respectively, on Forms 10–K and 20–F and in Exchange Act registration statements filed, respectively, on Forms 10 and 20–F. Registrants would be required to include the climate-related information required under proposed subpart 1500 in a part of the registration statement or annual report that is separately captioned as Climate-Related Disclosure. Registrants would be required to include the climate information required under Article 14 in a note to the financial statements, which would be subject to audit. Further, as described below, accelerated filers and large accelerated filers would be required to include an attestation report covering their Scopes 1 and 2 emissions disclosure, subject to phase-ins. In addition, U.S. registrants and foreign private issuers would be required to report material changes to the climate information disclosed in their Exchange Act reports on, respectively, Forms 10–Q and 6–K. A description of the proposed amendments, including the need for the climate information and its proposed use, as well as a description of the likely respondents, can be found in Section II above, and a discussion of the economic effects of the proposed amendments can be found in Section IV above.

B. Summary of the Proposed Amendments’ Effects on the Collections of Information

Our estimates of the paperwork burden associated with the proposed amendments are based primarily on climate-related reporting cost estimates from six sources: A comment letter from the Society for Corporate Governance (“Society”) that provided some hour and cost estimates for climate reporting by large-cap companies;1009 a report by the Climate Risk Disclosure Lab at Duke University School of Law’s Global Financial Markets Center that presents survey results of climate-related disclosure costs for three unnamed companies;1010 an assessment conducted by the United Kingdom’s Department for Business, Energy, and Industrial Strategy for a rule that, similar to the Commission’s proposed rules, would require TCFD-aligned disclosures from all listed firms;1011 two cost estimates from a data analytics firm—one that covered primarily risk assessment and analysis pursuant to the TCFD framework, and the other for calculating GHG emissions;1012 and cost estimates for GHG emissions measurement and reporting from two climate management firms.1013

In response to Acting Chair Lee’s request for public input about climate disclosures,1014 Society submitted the results of a survey it had conducted on a small number of public large-cap companies about the costs of their current climate reporting. According to this commenter, two companies estimated that the number of employee hours spent on climate reporting ranged from 7,500 to 10,000 annually, while a third company estimated the number of annual employee hours spent on climate reporting to be 2,940 hours.1015 The average annual employee hours spent on climate reporting for these large-cap companies was 6,813 hours.1016

The Climate Risk Disclosure Lab’s report presents the results of its survey of one European large-cap financial institution, one US large-cap industrial manufacturing company, and one US mid-cap waste management company about their climate-related disclosure costs.1017 The European financial institution reported annual climate-related disclosure costs ranging from $250,000 to $500,000, which averages to $375,000 annually.1018 For PRA purposes, we have converted this dollar cost average to 6,818 burden hours using a metric of $55/hour.1019 The US industrial manufacturing company disclosed annual climate-related disclosure costs for its employees and one full-time consultant ranging from $200,000 to $350,000, which averages to $275,000 annually. We have similarly converted this dollar cost average to 5,000 burden hours.1020 The US waste management company reported that its employees spent 62 hours annually to produce its climate-related disclosures. The average annual internal burden hours spent on climate reporting for these three companies comes to 3,967 hours.1021

The UK Impact Assessment estimated on an ongoing, annual basis the number of hours and costs that it would take in-house personnel1022 to gather data and prepare and provide disclosure for each of the following TCFD-aligned topics: Governance, strategy, risk management, and metrics and targets.1023 The impact assessment also estimated on an annual, ongoing basis the number of hours and costs that it would take a parent company’s personnel to collect and process climate-related data from its subsidiaries.1024 The impact assessment further estimated on a one-time basis the number of hours and costs that it would take in-house personnel to become familiar with and review the new climate-related reporting requirements and related guidance.1025

1009 See letter from Society for Corporate Governance.


1012 See memorandum, dated Feb. 4, 2022, concerning staff meeting with representatives of SAP Global. This and the other staff memoranda referenced below are available at https://www.drafty.see.gov/comments/s7-10-22/571022.htm.

1013 See memorandum, dated Nov. 30, 2021, concerning staff meeting with representatives of Perseroloni; and memorandum, dated Jan. 14, 2022, concerning staff meeting with representatives of South Pole.

1014 See supra Section I.B.

1015 See letter from Society for Corporate Governance. This commenter also stated that fees for external climate advisory services ranged from $50,000 to $1.35 million annually.

1016 7,500 hrs. + 10,000 hrs. + 2,940 hrs. = 20,440 hrs.; 20,440/3 = 6,813 hrs.

1017 See supra Section IV.C.2 for a more detailed discussion of these reported costs.

1018 $250,000 + $500,000 + $750,000 = $750,000/2 = $375,000.

1019 This metric is based on a reported national annual average salary for a climate specialist of $114,463. See glassdoor, How much does a Climate Change Specialist make? (Dec. 2021), available at https://www.glassdoor.com/Salaries/climate-change-specialist-salary-SRCH_K0625.htm. $375,000/3 = $125,000. $55/hr. = $3,618.18 hrs. (rounded to nearest dollar).

1020 $200,000 + $350,000 = $550,000. $550,000/2 = $275,000. $275,000/$55/hr. = 5,000 hrs.

1021 6,818 hrs. + 5,000 hrs. + 82 hrs. = 11,900 hrs.; 11,900 hrs./3 = 3,967 hrs.

1022 Unlike this PRA analysis, which assumes that some of the paperwork burden will be borne by in-house personnel and some by outside professionals, the UK Impact Assessment assumed all of the work would be done by in-house personnel.

1023 The UK Impact Assessment’s estimated number of hours for each TCFD-aligned disclosure topic per company was: 225 hrs. for governance; 295 hrs. for strategy; 245 hrs. for risk management; and (in Year 1) 2,272 hrs. for metrics and targets, which included one in-house climate-related expert working full-time.

1024 This estimate was 85 hrs.

1025 The primary difference between the Initial Impact Assessment and Final Impact Assessment concerned the estimated “familiarization” costs. The Final Impact Assessment assumed that the rule would require scenario analysis and added additional hours for in-house personnel to become familiar with scenario analysis methodology. Continued
The total number of hours that the Impact Assessment estimated it would take a company to comply with the TCFD-aligned disclosure requirements in the first year came to 3,447 hours, of which 977.5 hours pertained to qualitative, TCFD-aligned disclosure and 2,469.5 hours pertained to GHG emissions metrics and targets disclosure.1026

We also have considered cost estimates from S&P Global, a data analytics firm that provides ESG consulting services, including climate-related data collection and analysis, among other services. This firm provided one cost estimate for preparing TCFD-aligned disclosures primarily covering physical risk and transition risk assessment and analysis, which, for a company lacking any experience in climate reporting, ranged from $150,000 to $200,000 (an average of $175,000) in the first year of reporting. 1027 For a company with prior experience in GHG emissions reporting but requiring assistance with TCFD-aligned reporting, the firm estimated the cost is $100,000.1028 This results in an average cost estimate for all companies for TCFD-aligned disclosures, excluding GHG emissions calculation and reporting, of $137,500 in the first year of TCFD-aligned reporting.1029 For PRA purposes, we have converted this dollar cost average to 2,500 burden hours.1030 This results in an average dollar cost average to 2,500 burden hours. 1031 For the initial calculation of a company’s GHG emissions, including all three scopes, the cost estimate ranged from $75,000 to $125,000 (an average of $100,000).1032 The firm also estimated that the setting and reporting of GHG emissions targets would on average add an additional $25,000, resulting in an average first-year cost estimate for GHG emissions metrics and targets of $125,000.1033 For PRA purposes, we have converted this dollar cost average to 2,273 burden hours.1034 This results in a total incremental burden increase (for both TCFD-aligned disclosures and GHG emissions calculation) in the first year of climate-related reporting of 4,773 burden hours.1035

We also considered the cost estimates for GHG emissions measurement and reporting provided by two climate management firms, Persefoni and South Pole. Persefoni estimated that, depending on the maturity of a company’s emissions reporting program, a company’s average first-year costs for measuring and reporting Scopes 1, 2, and 3 emissions ranged from $50,000 to $125,000, which averages to $87,500, or 1,591 hours.1036 South Pole estimated annual costs for measuring and reporting Scopes 1, 2, and 3 emissions as ranging from $11,800 to $118,300, which averages to $65,050, or 1,183 hours.1037

The UK Impact Assessment estimated that the calculation and reporting of GHG emissions metrics and related targets would take the greatest amount of time, constituting approximately 72 percent of the total incremental burden. 1038 The data analytics firm, however, estimated that GHG emissions metrics and targets would constitute approximately 48 percent of the total material, this cost estimate is relevant for determining the upper bound of the proposed rules’ estimated PRA burden.1039

Because our proposed rules do not require scenario analysis, we are using the familiarization estimate of the Initial Impact Assessment (123 hrs.) when totaling the estimated hours required to comply with the UK’s proposed climate disclosure rules. We have added to the familiarization estimate the number of hours (77 hrs.) that the Final Impact Assessment estimated the one-time legal review of the new climate disclosure requirements by in-house personnel.1026 400 hrs. (familiarization and review) + 295 hrs. (strategy) + 245 hrs. (risk management) + 2,227 hrs. (metrics and targets) + 85 hrs. (parent co. processing) = 3,447 hrs. For purposes of the PRA, we have allocated approximately half of the hours pertaining to familiarization and review and parent company processing between the qualitative TCFD-aligned disclosure and the GHG emissions metrics and targets disclosure. This results in 977.5 hrs. allocated to the qualitative TCFD-aligned disclosure and 2,469.5 hrs. allocated to the GHG emissions metrics and targets disclosure.1027

We also considered the cost estimates provided by the above sources’ burden estimates for TCFD-aligned disclosure would include financial statement metrics. Based on staff experience reviewing financial statements, we estimate that preparation of the financial statements to present the proposed financial statement metrics would require 70 additional burden hours per filing. To ensure that our PRA estimates cover the burden associated with the proposed climate-related financial statement metrics, we have included this amount, in addition to the burden estimate for GHG emissions metrics and targets, in the estimated overall PRA burden of the proposed rules. The proposed rules would require a registrant to present the climate-related financial statement metrics and associated disclosures in a note to its financial statement. Based on the above sources, we estimate that the proposed qualitative TCFD-aligned disclosures would result in an average incremental burden hour increase of 2,217 hrs. for each affected collection of information for the first year of climate reporting.1041 We estimate that the proposed GHG emissions metrics and targets disclosure would result in an average incremental burden hour increase of 2,151 hours for each affected collection of information for the first year of reporting.1042

In addition to GHG emissions metrics, the proposed rules would also require the disclosure of certain climate-related financial statement metrics. Although the TCFD recommends the disclosure of metrics pertaining to the financial impacts of climate-related events and conditions, it is unclear whether the above sources’ burden estimates for TCFD-aligned disclosure would include financial statement metrics. Based on staff experience reviewing financial statements, we estimate that preparation of the financial statements to present the proposed financial statement metrics would require 70 additional burden hours per filing.
financial statements, which would be audited. Because the audit of such information would be part of the registrant’s overall audit of its financial statements, we expect the incremental audit costs associated with these climate-related financial statement metrics and disclosures to be modest. 1043 We are conservatively estimating that auditing the note pertaining to the climate-related financial statement metrics and associated disclosures would add audit fees of $15,000 to the overall costs associated with the audit of the registrant’s financial statements. We derived this estimate by first estimating costs as an average percentage of total audit fees (1.5%). 1044 and then applying that percentage to median audit fees of $600,000 1045 which results in $10,350. To be conservative, we have increased this amount to $15,000 for estimated audit fees. We believe that this estimate represents the average cost of the incremental efforts that may be incurred, taking into consideration factors such as the scale and complexity of different registrants and the extent of impact by climate-related events (e.g., location of operations, nature of business). This cost also takes into consideration the need to understand and evaluate the registrants’ processes and internal controls associated with the reporting of the climate-related financial statement metrics and associated disclosures.

The proposed rules would require a registrant that is a large accelerated filer 1046 or an accelerated filer 1047 to include, in the relevant filing, an attestation report covering the disclosure of its Scope 1 and Scope 2 emissions and to provide certain related disclosures. Following a one-year phase-in period in which no attestation report would be required, for filings made for the second and third fiscal years following the compliance date for the GHG emissions disclosure requirement, large accelerated filers would be required to obtain an attestation report for their Scopes 1 and 2 emissions disclosure, at minimum, at a limited assurance level. We estimate the cost of a limited assurance attestation report covering a large accelerated filer’s Scopes 1 and 2 emissions to be $110,000. 1048 Commencing with the fourth fiscal year following the compliance date and thereafter, a large accelerated filer would be required to obtain an attestation report covering its Scopes 1 and 2 emissions disclosure at a reasonable assurance level. We estimate the cost for such a reasonable assurance attestation report to be $175,000. 1049 This results in an initial six-year average 1050 assurance cost for a large accelerated filer’s Scopes 1 and 2 emissions of $124,167. 1051

Following a one-year phase-in period in which no attestation report would be required, for filings made for the second and third fiscal years following the compliance date for the GHG emissions disclosure requirement, accelerated filers would be required to obtain an attestation report for their Scopes 1 and 2 emissions disclosure, at minimum, at a limited assurance level. We estimate the cost of a limited assurance attestation report covering an accelerated filer’s Scopes 1 and 2 emissions to be $45,000. 1052 Commencing with the fourth fiscal year following the compliance date and thereafter, an accelerated filer would be required to obtain an attestation report covering its Scopes 1 and 2 emissions disclosure at a reasonable assurance level. We estimate the cost for such a reasonable assurance attestation report to be $75,000. 1053 This results in an initial six-year average assurance cost for an accelerated filer’s Scopes 1 and 2 emissions of $52,500. 1054

The proposed rules would require a registrant that is not required to include a GHG emissions attestation report to state whether any of the registrant’s GHG emissions disclosures were subject to third-party attestation or verification. If so, the registrant would be required to identify the provider of assurance or verification and disclose certain additional information, such as the level and scope of assurance or verification provided, among other matters. 1055 The burden and costs for this disclosure are encompassed within the estimated overall internal burden and costs for the proposed GHG emissions disclosure.

The UK Impact Assessment assumed a 25 percent reduction in hour and cost estimates for the work required to comply with the GHG emissions metrics and targets disclosure requirement in Year 2 compared to Year 1 because initial implementation of the metrics and targets framework would not need to be repeated. We believe this assumption is reasonable and have made a similar reduction after the first year of compliance when calculating the four-year average for the estimated paperwork burden hour effect of the proposed rules. We also have assumed a 10 percent reduction in the hour and cost estimates for preparing and providing the disclosures for the other TCFD-aligned topics in Years 2 through 6 compared to Year 1. We believe that this assumption is reasonable because the burden hours and costs associated with becoming familiar with the other TCFD disclosure topics would not need to be repeated. 1056 We believe that the reduction in the compliance burden and costs for the metrics and targets disclosure requirement would be greater.

1043 This belief is based on post-implementation review observations and activities from accounting standards that provided further disaggregation of information and that are analogous to the proposed financial statement metrics requirements, as discussed supra Section II.F.2.a. (e.g., segment reporting and disaggregation of revenue). See FASB’s post-implementation review report on FASB’s Accounting standards for Segments of an Enterprise and Related Information (Dec. 2012), 11, (“Preparers’ incremental costs to implement and comply with Statement 131 generally were not significant and were in line with expectations”), available at https://www.accountingfoundation.org/cs/Satellite?c=Document_C&cid=1176160821900&pagename=Foundation%2FDocument_C%2FDocumentPage. See also FASB’s Board Meeting handout, post-implementation review of Topic 606, Revenue with Contracts with Customers Our (July 28, 2021) (While the post-implementation review is still ongoing, most users agreed that the disaggregated [revenue] disclosure is helpful) (par. 16) and users noted that although they incurred costs to become familiar with the new standard, update models, or maintain dual models during the transition period, most of those costs were nonrecurring. For users that are generalists or that cover sectors that did not have significant revenue recognition measurement or timing under Topic 606, the costs were not significant. (par. 20), available at https://www.fasb.org/cs/ContentServer?c=Document_C&cid=1176160821900&pagename=FASB%2FDocument_C%2FDocumentPage.

1044 The staff estimated a range of 0.5% to 2.5%, which averages to 1.5%.

1045 This is based on staff review of Audit Analytics data for 2020.

1046 Based on staff review of filings made in 2020, large accelerated filers filed approximately 31% of domestic forms and approximately 37% of Form 20-Fs in 2020. For PRA purposes, we have used 37% as a proxy for the percentage of all foreign private issuer forms filed by large accelerated filers in 2020.

1047 Based on staff review of filings made in 2020, accelerated filers filed approximately 11% of domestic forms and 15% of Form 20-Fs in 2020.

1048 See supra Section IV.C.2.a.3, for the basis of this limited assurance cost estimate.

1049 See id.

1050 In order to capture three years of the cost of a reasonable assurance attestation report requirement, for accelerated filers and large accelerated filers, which requirement does not commence until the fourth fiscal year following the proposed rules’ compliance date, we have used a six-year average when calculating the estimated paperwork burden effects of the proposed rules.

1051 0 + $110,000 + $110,000 + $175,000 + $175,000 + $75,000 = $745,000; $745,000/6 = $124,167

1052 See supra Section IV.C.2.a.3, for the basis of this limited assurance cost estimate.

1053 See id.

1054 0 + $45,000 + $45,000 + $75,000 + $75,000 + $75,000 + $315,000; $315,000/6 = $52,500.

1055 See proposed 17 CFR 229.1505(e).

1056 See supa Section IV.C.2.a.3, for the basis of this limited assurance cost estimate.
than the reduction for the other TCFD-aligned disclosure topics because the initial work to implement a climate data collection and reporting framework to comply with the metrics and targets requirement would be greater than the initial framework required for the other disclosure requirements.

SRCs, which comprise 50 percent of domestic filers, and 45 percent of total affected registrants,\(^{1057}\) would bear a lesser compliance burden because those registrants would not be subject to the proposed disclosure requirement pertaining to Scope 3 emissions, which, of the three types of GHG emissions, poses the greatest challenge to calculate and report. We accordingly estimate that the increase in the PRA burden pertaining to the GHG emissions requirement for SRCs filing on domestic forms would be approximately 50% less than the increased burden for the GHG emissions requirement for non-SRC registrants.\(^{1058}\) Smaller foreign private issuers that file on the foreign private issuer forms would not be eligible for this adjustment because those foreign private issuers are excluded from the definition of, and therefore cannot be, SRCs.\(^{1059}\)

In addition to requiring the annual climate disclosures, the proposed rules would require a registrant to disclose any material change to its climate-related disclosures reported in its annual Exchange Act annual report (Form 10–K or 20–F) on a Form 10–Q (if a domestic filer) or a Form 6–K (if a foreign private issuer filer). We would not expect a registrant to report such a material change until its second year of compliance, at the earliest. Based on the staff’s assessment of the amount of time it would take to determine that there has been a material change in the previously reported climate disclosure, particularly concerning its GHG emissions metrics, and to prepare disclosures regarding the material change, if any, we estimate a burden hour increase of 40 hours per form, or an initial six-year average of 33 hours per form.\(^{1060}\)

The following table summarizes the estimated paperwork burden effects of the proposed amendments for non-SRC and SRC registrants associated with the affected collections of information.

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\(^{1057}\) In 2020, there were 6,220 domestic filers + 740 foreign private issuer (fpi) filers = 6,960 affected filers. 3,110 domestic filers + 740 fpi filers = 3,850 non-SRC filers. 3,850/6,960 = 55%. 3,110 filers were SRCs in 2020. 3,110/6,960 = 45%. See supra Section IV.B.

\(^{1058}\) This is generally consistent with some of the cost estimates obtained for calculating and reporting Scopes 1, 2, and 3 emissions. For example, Persefoni indicated that the annual GHG emissions costs for a company having experience calculating and reporting GHG emissions would double if it included Scope 3 emissions after calculating Scopes 1 and 2 emissions. See supra note 1020. In addition, S&P Global indicated that a company’s annual ongoing reporting costs of Scopes 1 and 2 emissions would, at a minimum, increase from $40,000 to $75,000 if it included Scope 3 emissions. See supra note 1019.

\(^{1059}\) See, e.g., Instruction 2 to the definition of smaller reporting company under 17 CFR 230.405.

\(^{1060}\) 0 + (40 hrs. x 5) = 200 hrs.; 200 hrs./6 = 33 hrs. (rounded to nearest whole number).
### PRA Table 1—Estimated Paperwork Burden Effects of the Proposed Amendments for Non-SRC and SRC Registrants

<table>
<thead>
<tr>
<th>Collections of information</th>
<th>Proposed disclosure item</th>
<th>Estimated PRA burden hour effect for non-SRC registrants (year 1) (hrs)</th>
<th>Estimated PRA burden hour effect for SRC registrants (year 1) (hrs)</th>
<th>Estimated PRA burden hour effect for non-SRC registrants (for each year 2 through 6) (hrs)</th>
<th>Estimated PRA burden hour effect for SRC registrants (for each year 2 through 6) (hrs)</th>
<th>Estimated PRA burden hour effect for non-SRC registrants (6 year average) (hrs)</th>
<th>Estimated PRA burden hour effect for SRC registrants (6 year average) (hrs)</th>
<th>Estimated average annual assurance costs for climate-related financial statement metrics (6 year average)</th>
<th>Estimated average annual assurance costs for Scopes 1 and 2 emissions disclosure by AFs 2 (6 year average)</th>
<th>Estimated average annual assurance costs for Scopes 1 and 2 emissions disclosure by LAFs 3 (6 year average)</th>
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<tbody>
<tr>
<td>Forms S–1, S–4, S–11, 10, and 10–K.</td>
<td>Climate-related disclosures regarding governance, strategy, and risk management.</td>
<td>+2,217</td>
<td>+2,217</td>
<td>+1,995</td>
<td>+1,995</td>
<td>+2,032</td>
<td>+2,032</td>
<td>+$15,000</td>
<td>+$52,500</td>
<td>$124,167</td>
</tr>
<tr>
<td></td>
<td>Financial statement metrics</td>
<td>+70</td>
<td>+70</td>
<td>+63</td>
<td>+63</td>
<td>+64</td>
<td>+1,703</td>
<td>+64</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>GHG emissions metrics and targets.</td>
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<td>+1,076</td>
<td>+1,613</td>
<td>+807</td>
<td>+852</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Total</td>
<td></td>
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<td>+3,363</td>
<td>+3,671</td>
<td>+2,865</td>
<td>+3,799</td>
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<td>+$52,500</td>
<td>$124,167</td>
</tr>
<tr>
<td>Forms F–1, F–4, and 20–F.</td>
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<td>+2,217</td>
<td>NA</td>
<td>+1,995</td>
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<td>NA</td>
<td>+$15,000</td>
<td>+$52,500</td>
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<td></td>
<td>Financial statement metrics</td>
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<tr>
<td></td>
<td>GHG emissions metrics and targets.</td>
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<td>+1,076</td>
<td>+1,613</td>
<td>+807</td>
<td>+852</td>
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<tr>
<td>Total</td>
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<td>+3,363</td>
<td>+3,671</td>
<td>+2,865</td>
<td>+3,799</td>
<td>+2,948</td>
<td>+$15,000</td>
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<td>$124,167</td>
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1. All numbers rounded to nearest whole number.
2. Accelerated Filers.
3. Large Accelerated Filers.
C. Incremental and Aggregate Burden and Cost Estimates for the Proposed Amendments

Below we estimate the incremental and aggregate increase in paperwork burden resulting from the proposed amendments. These estimates represent the average burden for all issuers, both large and small. In deriving our estimates, we recognize that the burdens will likely vary among individual registrants based on a number of factors, including the nature of their business, the size and complexity of their operations, and whether they are subject to similar climate-related disclosure requirements in other jurisdictions or already preparing similar disclosures on a voluntary basis. For purposes of the PRA, the burden is to be allocated between internal burden hours and outside professional costs. The table below sets forth the percentage estimates we typically use for the burden allocation for each affected collection of information. We also estimate that the average cost of retaining outside professionals is $400 per hour.\textsuperscript{1061}

<table>
<thead>
<tr>
<th>Collection of information</th>
<th>Internal (%)</th>
<th>Outside professionals (%)</th>
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<tbody>
<tr>
<td>Forms S–1, F–1, S–4, F–4, S–11, 10, and 20–F</td>
<td>25</td>
<td>75</td>
</tr>
<tr>
<td>Forms 10–K, 10–Q, and 6–K</td>
<td>75</td>
<td>25</td>
</tr>
</tbody>
</table>

We estimate that the proposed amendments would change the burden per response, but not the frequency, of the existing collections of information. The burden increase estimates for each collection of information were calculated by multiplying the number of responses by the increased estimated average amount of time it would take to prepare and review the disclosure required under the affected collection of information (using the estimated three-year average increase). Since 50 percent of the domestic filers in 2020 were non-SRCs and 50 percent were SRCs, we assume for purposes of our PRA estimates that 50 percent of each domestic collection of information was filed by non-SRCs and 50 percent by SRCs. The table below illustrates the incremental change to the annual compliance burden of the affected collections of information, in hours and costs.

\textsuperscript{1061} We recognize that the costs of retaining outside professionals may vary depending on the nature of the professional services, but for purposes of this PRA analysis, we estimate that such costs would be an average of $400 per hour.
<table>
<thead>
<tr>
<th>Collection of information</th>
<th>Filed by</th>
<th>Number of estimated affected respondents</th>
<th>Burden hour annual increase per affected respondent</th>
<th>Increase in burden hours for affected respondents</th>
<th>Increase in internal burden hours for affected respondents</th>
<th>Climate-related financial statement metrics</th>
<th>GHG emissions assurance costs for AFs¹</th>
<th>GHG emissions assurance costs for LAFs¹</th>
<th>Increase in professional costs for affected respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-SRCs</td>
<td>447</td>
<td>3,799</td>
<td>1,698,153</td>
<td>2,691,932</td>
<td>$13,410,000</td>
<td>$5,145,000</td>
<td>$34,934,259</td>
<td>$957,722,059</td>
</tr>
<tr>
<td></td>
<td>SRCs</td>
<td>447</td>
<td>2,948</td>
<td>1,317,756</td>
<td>1,261,932</td>
<td>$13,410,000</td>
<td>$5,145,000</td>
<td>$34,934,259</td>
<td>$957,722,059</td>
</tr>
<tr>
<td>S–1 (Total)</td>
<td>Non-SRCs</td>
<td>894</td>
<td>3,799</td>
<td>3,015,909</td>
<td>753,977</td>
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<tr>
<td></td>
<td>SRCs</td>
<td>894</td>
<td>2,948</td>
<td>1,317,756</td>
<td>1,261,932</td>
<td>$13,410,000</td>
<td>$5,145,000</td>
<td>$34,934,259</td>
<td>$957,722,059</td>
</tr>
<tr>
<td>S–4 (Total)</td>
<td>Non-SRCs</td>
<td>588</td>
<td>3,799</td>
<td>1,983,618</td>
<td>495,950</td>
<td>$13,410,000</td>
<td>$5,145,000</td>
<td>$34,934,259</td>
<td>$957,722,059</td>
</tr>
<tr>
<td></td>
<td>SRCs</td>
<td>588</td>
<td>2,948</td>
<td>866,712</td>
<td>2,261,932</td>
<td>$13,410,000</td>
<td>$5,145,000</td>
<td>$34,934,259</td>
<td>$957,722,059</td>
</tr>
<tr>
<td>S–11 (Total)</td>
<td>Non-SRCs</td>
<td>34</td>
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<td>129,166</td>
<td>1,487,714</td>
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<td>$5,145,000</td>
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<tr>
<td></td>
<td>SRCs</td>
<td>33</td>
<td>2,948</td>
<td>97,284</td>
<td>820,000</td>
<td>$13,410,000</td>
<td>$5,145,000</td>
<td>$34,934,259</td>
<td>$957,722,059</td>
</tr>
<tr>
<td>S–11 (Total)</td>
<td>Non-SRCs</td>
<td>67</td>
<td>3,799</td>
<td>226,450</td>
<td>169,838</td>
<td>$13,410,000</td>
<td>$5,145,000</td>
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</tr>
<tr>
<td></td>
<td>SRCs</td>
<td>67</td>
<td>2,948</td>
<td>97,284</td>
<td>820,000</td>
<td>$13,410,000</td>
<td>$5,145,000</td>
<td>$34,934,259</td>
<td>$957,722,059</td>
</tr>
<tr>
<td>10 (Total)</td>
<td>Non-SRCs</td>
<td>188</td>
<td>3,799</td>
<td>728,676</td>
<td>182,169</td>
<td>3,240,000</td>
<td>$8,319,189</td>
<td>231,421,989</td>
<td>856,205,450</td>
</tr>
<tr>
<td></td>
<td>SRCs</td>
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<td>2,948</td>
<td>318,384</td>
<td>126,000</td>
<td>1,260,000</td>
<td>8,319,189</td>
<td>231,421,989</td>
<td>856,205,450</td>
</tr>
<tr>
<td>10–K (Total)</td>
<td>Non-SRCs</td>
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<td>3,799</td>
<td>15,750,654</td>
<td>546,507</td>
<td>3,240,000</td>
<td>$8,319,189</td>
<td>231,421,989</td>
<td>856,205,450</td>
</tr>
<tr>
<td></td>
<td>SRCs</td>
<td>4,146</td>
<td>2,948</td>
<td>12,222,408</td>
<td>1,260,000</td>
<td>1,260,000</td>
<td>$8,319,189</td>
<td>231,421,989</td>
<td>856,205,450</td>
</tr>
<tr>
<td>10–K (Total)</td>
<td>6,292</td>
<td>3,799</td>
<td>27,973,062</td>
<td>20,979,797</td>
<td>6,993,266</td>
<td>4,780,000</td>
<td>319,233,357</td>
<td>3,288,799,757</td>
<td>886,652,400</td>
</tr>
<tr>
<td>10–Q (Total)</td>
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<td>378,279</td>
<td>378,279</td>
<td>378,279</td>
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</tr>
<tr>
<td></td>
<td>SRCs</td>
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<td>2,948</td>
<td>148,161</td>
<td>129,166</td>
<td>148,161</td>
<td>75,652</td>
<td>0</td>
<td>0</td>
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<td>10–Q (Total)</td>
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<td>567,394</td>
<td>189,131</td>
<td>189,131</td>
<td>75,652</td>
<td>0</td>
<td>0</td>
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<tr>
<td>F–1 (Total)</td>
<td>Both</td>
<td>66</td>
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<td>250,734</td>
<td>62,684</td>
<td>108,051</td>
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<td>F–4 (Total)</td>
<td>Both</td>
<td>39</td>
<td>3,799</td>
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<td>37,040</td>
<td>111,121</td>
<td>585,000</td>
<td>315,000</td>
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<td>20–F (Total)</td>
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<td>2,769,471</td>
<td>692,368</td>
<td>2,077,103</td>
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<td>881,023,790</td>
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<tr>
<td>6–K (Total)</td>
<td>Both</td>
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<td>3,799</td>
<td>1,482,202</td>
<td>861,152</td>
<td>287,051</td>
<td>33,525,090</td>
<td>881,023,790</td>
<td>114,820,400</td>
</tr>
</tbody>
</table>

¹All numbers rounded to nearest whole number.
²We have not assumed assurance costs for Form 10–Q or Form 6–K because these forms typically have only marginal assurance costs. We expect these forms to be filed in the 2nd year, at the earliest.
³AFs filed 11% of domestic forms and 15% of foreign private issuer forms in 2020.
⁴LAFs filed 31% of domestic forms and 37% of foreign private issuer forms in 2020.
The table below illustrates the program change expected to result from the proposed rule amendments together with the total requested change in reporting burden and costs.
## PRA Table 4—Requested Paperwork Burden Under the Proposed Amendments

<table>
<thead>
<tr>
<th>Collection of Information</th>
<th>Current burden</th>
<th>Program change</th>
<th>Requested change in burden</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current annual responses</td>
<td>Current internal burden hours</td>
<td>Current external cost burden</td>
</tr>
<tr>
<td></td>
<td>(A)</td>
<td>(B)</td>
<td>(C)</td>
</tr>
<tr>
<td>S–1</td>
<td>894</td>
<td>146,067</td>
<td>$178,922,043</td>
</tr>
<tr>
<td>S–4</td>
<td>588</td>
<td>562,362</td>
<td>677,255,579</td>
</tr>
<tr>
<td>S–11</td>
<td>67</td>
<td>12,229</td>
<td>14,943,768</td>
</tr>
<tr>
<td>10</td>
<td>216</td>
<td>11,855</td>
<td>14,091,488</td>
</tr>
<tr>
<td>10–K</td>
<td>8,292</td>
<td>14,188,040</td>
<td>1,893,793,119</td>
</tr>
<tr>
<td>10–Q</td>
<td>22,925</td>
<td>3,182,333</td>
<td>421,490,754</td>
</tr>
<tr>
<td>F–1</td>
<td>66</td>
<td>26,707</td>
<td>32,293,375</td>
</tr>
<tr>
<td>F–4</td>
<td>39</td>
<td>14,049</td>
<td>17,073,825</td>
</tr>
<tr>
<td>20–F</td>
<td>729</td>
<td>479,261</td>
<td>576,824,025</td>
</tr>
<tr>
<td>6–K</td>
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<td>227,031</td>
<td>30,270,780</td>
</tr>
<tr>
<td>Total</td>
<td>18,849,934</td>
<td>3,856,958,756</td>
<td>24,689,099</td>
</tr>
</tbody>
</table>
D. Request for Comment

We request comment in order to:
• Evaluate whether the proposed collections of information are necessary for the proper performance of the functions of the agency, including whether the information would have practical utility;
• Evaluate the accuracy of our estimate of the burden of the proposed collections of information, including any assumptions used;
• Determine whether there are ways to enhance the quality, utility, and clarity of the information to be collected;
• Evaluate whether there are ways to minimize the burden of the collections of information on those who are to respond, including through the use of automated collection techniques or other forms of information technology; and
• Evaluate whether the proposed amendments would have any effects on any other collections of information not previously identified in this section.

Any member of the public may direct us any comments about the accuracy of these burden estimates and any suggestions for reducing these burdens. Persons submitting comments on the collection of information requirements should direct the comments to the Office of Management and Budget, Attention: Desk Officer for the Securities and Exchange Commission, Office of Information and Regulatory Affairs, Washington, DC 20503, and should send a copy to Vanessa A. Countryman, Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549–1090, with reference to File No. S7–10–22. Requests for materials submitted to OMB by the Commission with regard to these collections of information should be in writing, refer to File No. S7–10–22, and be submitted to the Securities and Exchange Commission, Office of FOIA Services, 100 F Street NE, Washington, DC 20549–2736. OMB is required to make a decision concerning the collection of information between 30 and 60 days after publication of this release. Consequently, a comment to OMB is best assured of having its full effect if OMB receives it within 30 days of publication.

VI. Initial Regulatory Flexibility Act Analysis

This Initial Regulatory Flexibility Act Analysis (“IRFA”) has been prepared, and made available for public comment, in accordance with the Regulatory Flexibility Act (“RFA”). It relates to the proposal to add new subpart 1500 to Regulation S–K and new Article 14 to Regulation S–X, which would require registrants to provide certain climate-related disclosures in their Securities Act and Exchange Act registration statements and Exchange Act reports. As required by the RFA, this IRFA describes the impact of these proposed amendments of Regulations S–K and S–X on small entities.

A. Reasons for, and Objectives of, the Proposed Action

We are proposing to require registrants to provide certain climate-related information in their registration statements and annual reports, including certain information about climate-related financial risks and climate-related financial metrics in their financial statements. The disclosure of this information would provide consistent, comparable, and decision-useful information to investors to enable them to make informed judgments about the impact of climate-related risks on current and potential investments. Information about climate-related risks can have an impact on public companies’ financial performance or position and may be material to investors in making investment or voting decisions. For this reason, many investors—including shareholders, investment advisors, and investment management companies—currently seek information about climate-related risks from companies to inform their investment decision-making. Furthermore, many companies have begun to provide some of this information voluntarily in response to investor demand and in recognition of the potential financial effects of climate-related risks on their businesses. We are concerned that the existing voluntary disclosures of climate-related risks do not adequately protect investors. For this reason, mandatory disclosures may be necessary or appropriate to improve the consistency, comparability, and reliability of this information. The reasons for, and objectives of, the proposed amendments are discussed in more detail in Section II above.

B. Legal Basis

We are proposing the amendments contained in this release under the authority set forth in Sections 7, 10, 19(a), and 28 of the Securities Act, as amended, and Sections 3(b), 12, 13, 15, 23(a), and 36 of the Exchange Act, as amended.

C. Small Entities Subject to the Proposed Rules

The proposed amendments would affect some issuers that are small entities. The RFA defines “small entity” to mean “small business,” “small organization,” or “small governmental jurisdiction.” For purposes of the RFA, under 17 CFR 240.0–10(a), an issuer, other than an investment company, is a “small business” or “small organization” if it had total assets of $5 million or less on the last day of its most recent fiscal year and, under 17 CFR 230.157, is also engaged or proposing to engage in an offering of securities that does not exceed $5 million.

The proposed rules would apply to a registrant when filing a Securities Act or Exchange Act registration statement or an Exchange Act annual or other periodic report. We estimate that there are 1,104 registrants that are small entities that would be affected by the proposed rules.

D. Reporting, Recordkeeping, and Other Compliance Requirements

The proposed amendments would require a registrant, including a small entity, to disclose certain climate-related information, including data about their GHG emissions, when filing a Securities Act or Exchange Act registration statement or Exchange Act annual or other periodic report. In particular, like larger registrants, small entities would be required to disclose information about: The oversight of their boards and management regarding climate-related risks; any material impacts of climate-related risks on their consolidated financial statements, business, strategy, and outlook; their risk management of climate-related risks; climate-related targets or goals, if any; and certain financial statement metrics. In addition, like other registrants, small entities would be required to disclose their Scopes 1 and 2 emissions. We anticipate that the nature of any benefits or costs associated with the above proposed amendments would be similar for large and small entities. Accordingly, we refer to the discussion of the proposed amendments’ economic effects on all affected parties, including small entities, in Section IV.C. Consistent with that discussion, we anticipate that the economic benefits and costs likely would vary widely among small entities based on a number of factors, including the nature and conduct of their businesses, which makes it difficult to
project the economic impact on small entities with precision. However, we request comment on how the proposed amendments would affect small entities.

While small entities would not be exempt from the full scope of the proposed amendments, they would be exempt from the Scope 3 emissions disclosure requirements, which would likely impose the greatest compliance burden on registrants due to the complexity of data gathering, calculation, and assessment required for that type of emissions. Small entities would also have a longer transition period to comply with the proposed rules than other registrants. We believe that these accommodations would reduce the proposed rules’ compliance burden for small entities that, compared to larger registrants with more resources, may be less able to absorb the costs associated with reporting of Scope 3 emissions and may need additional time to allocate the resources necessary to begin providing climate-related disclosures.

E. Duplicative, Overlapping, or Conflicting Federal Rules

The proposed rules do not duplicate or conflict with other existing federal rules. As discussed in Section IV, some registrants currently report certain GHG emissions via the EPA’s 2009 mandatory Greenhouse Gas Reporting Program. However, as discussed above, the reporting requirements of the EPA’s program and the resulting data are different and more suited to the purpose of building a national inventory of GHG emissions rather than allowing investors to assess emissions-related risks to individual registrants.

F. Significant Alternatives

The RFA directs us to consider alternatives that would accomplish our stated objectives, while minimizing any significant economic impact on small entities. In connection with the proposed amendments, we considered the following alternatives:

- Establishing different compliance or reporting requirements that take into account the resources available to small entities;
- Clarifying, consolidating, or simplifying compliance and reporting requirements under the rules for small entities;
- Using performance rather than design standards; and
- Exempting small entities from all or part of the requirements.

As discussed above, the proposed amendments would exempt small entities from certain GHG emissions disclosure requirements that would likely impose the greatest compliance burden on registrants compared to other proposed disclosure requirements. In addition, while there would be a transition period for all registrants to comply with the proposed amendments, small entities would have an additional two more years to comply with the proposed rules than large accelerated filers and an additional year compared to other registrants. We believe that this scaled and phased-in approach would help minimize the economic impact of the proposed amendments on small entities. We are not, however, proposing a complete exemption from the proposed amendments for SRCs because, due to their broad impact across industries and jurisdictions, climate-related risks may materially impact the operations and financial condition of domestic and foreign issuers, both large and small.

For similar reasons, other than the exemption for reporting Scope 3 emissions by SRCs, we are not proposing to clarify, consolidate, or simplify the proposed disclosure requirements for small entities. A key objective of the proposed amendments is to elicit consistent, comparable and reliable information about climate-related risks across registrants. Alternative compliance requirements for small entities could undermine that goal.

The proposed amendments are primarily based on performance standards with some provisions that are more like design standards. For example, while the proposed amendments include certain concepts, such as scopes, developed by the GHG Protocol, they do not require a registrant to use the GHG Protocol’s methodology when calculating its GHG emissions if another methodology better suits its circumstances. Using a performance standard for calculation of GHG emissions would provide registrants with some flexibility regarding how to comply with the proposed GHG emissions requirement while still providing useful information for investors about the various scopes of emissions. Similarly, the proposed amendments would require a registrant that is a large accelerated filer or an accelerated filer to include an attestation report covering its Scopes 1 and 2 emissions that would require the report to meet certain minimum criteria while permitting the filer, at its option, to obtain additional levels of assurance. In contrast, the proposed amendments would require all registrants, including small entities, to express their GHG emissions both disaggregated by each constituent greenhouse gas and in the aggregate, expressed in terms of carbon dioxide equivalent (\(\text{CO}_2\text{e}\)). Using a design standard for the expression of a registrant’s GHG emissions would enhance the comparability of this disclosure for investors.

Request for Comment

We encourage the submission of comments with respect to any aspect of this IRFA. In particular, we request comments regarding:

- How the proposed rule and form amendments can achieve their objective while lowering the burden on small entities;
- The number of small entity companies that may be affected by the proposed rule and form amendments;
- The existence or nature of the potential effects of the proposed amendments on small entity companies discussed in the analysis;
- How to quantify the effects of the proposed amendments; and
- Whether there are any federal rules that duplicate, overlap, or conflict with the proposed amendments.

Commenters are asked to describe the nature of any effect and provide empirical data supporting the extent of that effect. Comments will be considered in the preparation of the Final Regulatory Flexibility Analysis, if the proposed rules are adopted, and will be placed in the same public file as comments on the proposed rules themselves.

VII. Small Business Regulatory Enforcement Fairness Act

For purposes of the Small Business Regulatory Enforcement Fairness Act of 1996 ("SBREFA"), the Commission must advise OMB as to whether the proposed amendments constitute a “major” rule. Under SBREFA, a rule is considered “major” where, if adopted, it results in or is likely to result in:

- An annual effect on the U.S. economy of $100 million or more;
- A major increase in costs or prices for consumers or individual industries; or
- Significant adverse effects on competition, investment, or innovation.

We request comment on whether our proposal would be a “major rule” for purposes of SBREFA. In particular, we request comment on public and empirical data on: 1068 See supra Section II.C.3 and II.L (discussing the proposed exemption from Scope 3 emissions disclosure for smaller reporting companies); 1067 See supra Section II.L (discussing the proposed additional two years for smaller reporting companies to comply with the proposed rules compared to large accelerated filers).
• The potential effect on the U.S. economy on an annual basis;
• Any potential increase in costs or prices for consumers or individual industries; and
• Any potential adverse effect on competition, investment, or innovation.

VIII. Statutory Authority

The amendments contained in this release are being proposed under the authority set forth in Sections 7, 10, 19(a), and 28 of the Securities Act, as amended, and Sections 3(b), 12, 13, 15, 23(a), and 36 of the Exchange Act, as amended.

List of Subjects in 17 CFR Parts 210, 229, 232, 239, and 249

Accountants; Accounting; Administrative practice and procedure, Reporting and recordkeeping requirements, Securities.

For the reasons set out in the preamble, the Commission is proposing to amend title 17, chapter II of the Code of Federal Regulations as follows:

PART 210—FORM AND CONTENT OF AND REQUIREMENTS FOR FINANCIAL STATEMENTS, SECURITIES ACT OF 1933, SECURITIES EXCHANGE ACT OF 1934, INVESTMENT COMPANY ACT OF 1940, INVESTMENT ADVISERS ACT OF 1940, AND ENERGY POLICY AND CONSERVATION ACT OF 1975

1. The authority citation for part 210 continues to read as follows:

Authority: 15 U.S.C. 77l, 77g, 77h, 77j, 77s, 77z–2, 77z–3, 77aa(25), 77aa(26), 77nn(25), 77nn(26), 78c, 78j–1, 78l, 78m, 78n, 78o(d), 78q, 78u–5, 78w, 78l, 78mm, 80a–8, 80a20, 80a–29, 80a–30, 80a–31, 80a–37(a), 80b–3, 80b–11, 7202 and 7262, and sec. 102(c), Pub. L. 112–106, 126 Stat. 310 (2012), unless otherwise noted.

2. Amend §210.8–01 by revising paragraph (b) to read as follows:

§210.8–01 General requirements for Article 8.

(b) Smaller reporting companies electing to prepare their financial statements with the form and content required in Article 8 need not apply the other form and content requirements in 17 CFR part 210 (Regulation S–X) with the exception of the following:

(1) The report and qualifications of the independent accountant shall comply with the requirements of §§210.2–01 through 210.2–07 (Article 2); and

(2) The description of accounting policies shall comply with §210.4–08(n).

(3) Smaller reporting companies engaged in oil and gas producing activities shall follow the financial accounting and reporting standards specified in §210.4–10 with respect to such activities; and


3. Add an undesignated center heading and §§210.14–01 and 210.14–02 to read as follows:

Article 14—Climate-Related Disclosure

§210.14–01 Climate-related disclosure instructions.

(a) General. A registrant must include disclosure pursuant to §210.14–02 in any filing that is required to include disclosure pursuant to subpart 229.1500 of this chapter and also requires the registrant to include its audited financial statements. The disclosure pursuant to §210.14–02 must be included in a note to the financial statements included in such filing.

(b) Definitions. The definitions in §229.1500 (Item 1500 of Regulation S–K) apply to this Article 14 of Regulation S–X.

(c) Basis of calculation. When calculating the metrics in this Article 14, except where otherwise indicated, a registrant must:

(1) Use financial information that is consistent with the scope of the rest of its consolidated financial statements included in the filing; and

(2) Whenever applicable, apply the same accounting principles and policies that it is required to apply in preparation of the rest of its consolidated financial statements included in the filing.

(d) Historical periods. Disclosure must be provided for the registrant’s most recently completed fiscal year, and for the historical fiscal year(s) included in the consolidated financial statements in the filing (e.g., a registrant that is required to include balance sheets as of the end of its two most recent fiscal years and income statements and cash flow statements as of the end of its three most recent fiscal years would be required to disclose two years of the climate-related metrics that correspond to balance sheet line items and three years of the climate-related metrics that correspond to income statement or cash flow statement line items).

§210.14–02 Climate-related metrics.

(a) Contextual information. Provide contextual information, describing how each specified metric was derived, including a description of significant inputs and assumptions used, and, if applicable, policy decisions made by the registrant to calculate the specified metrics.

(b) Disclosure thresholds. (1) Disclosure of the financial impact on a line item in the registrant’s consolidated financial statements pursuant to paragraphs (c) and (d) of this section (including any impacts included pursuant to paragraphs (i) and (j) of this section) is not required if the sum of the absolute values of all the impacts on the line item is less than one percent of the total line item for the relevant fiscal year.

(2) Disclosure of the aggregate amount of expenditure incurred or the aggregate amount of capitalized costs incurred pursuant to paragraphs (e) and (f) of this section (including any impacts included pursuant to paragraphs (i) and (j) of this section) is not required if such amount is less than one percent of the total expenditure incurred or total capitalized costs incurred, respectively, for the relevant fiscal year.

(c) Financial impacts of severe weather events and other natural conditions. Disclose the impact of severe weather events and other natural conditions, such as flooding, drought, wildfires, extreme temperatures, and sea level rise on any relevant line items in the registrant’s consolidated financial statements during the fiscal years presented. Disclosure must be presented, at a minimum, on an aggregated line-by-line basis for all negative impacts and, separately, at a minimum, on an aggregated line-by-line basis for all positive impacts. Impacts may include, for example:

(1) Changes to revenues or costs from disruptions to business operations or supply chains;

(2) Impairment charges and changes to the carrying amount of assets (such as inventory, intangibles, and property, plant and equipment) due to the assets being exposed to severe weather, flooding, drought, wildfires, extreme temperatures, and sea level rise;

(3) Changes to loss contingencies or reserves (such as environmental reserves or loan loss allowances) due to impact from severe weather events; and

(4) Changes to total expected insured losses due to flooding or wildfire patterns.

(d) Financial impacts related to transition activities. Disclose the impact of any efforts to reduce GHG emissions or otherwise mitigate exposure to transition risks on any relevant line items in the registrant’s consolidated financial statements during the fiscal years presented. Disclosure must be presented, at a minimum, on an aggregated line-by-line basis for all negative impacts and, separately, at a minimum, on an aggregated line-by-line
basis for all positive impacts. Impacts may include, for example:

(1) Changes to revenue or cost due to new emissions pricing or regulations resulting in the loss of a sales contract;

(2) Changes to operating, investing, or financing cash flow from changes in upstream costs, such as transportation of raw materials;

(3) Changes to the carrying amount of assets (such as intangibles and property, plant, and equipment) due to, among other things, a reduction of the asset’s useful life or a change in the asset’s salvage value by being exposed to transition activities; and

(4) Changes to interest expense driven by financing instruments such as climate-linked bonds issued where the interest rate increases if certain climate-related targets are not met.

(e) Expenditure to mitigate risks of severe weather events and other natural conditions. Disclose separately the aggregate amount of expenditure expended and the aggregate amount of capitalized costs incurred during the fiscal years presented to mitigate the risks from severe weather events and other natural conditions, such as flooding, drought, wildfires, extreme temperatures, and sea level rise. For example, a registrant may be required to disclose the amount of expense or capitalized costs, as applicable, to increase the resilience of assets or operations, retire or shorten the estimated useful lives of impacted assets, relocate assets or operations at risk, or otherwise reduce the future impact of severe weather events and other natural conditions on business operations.

(f) Expenditure related to transition activities. Disclose separately the aggregate amount of expenditure expended and the aggregate amount of capitalized costs incurred during the fiscal years presented to reduce GHG emissions or otherwise mitigate exposure to transition risks. For example, a registrant may be required to disclose the amount of expense or capitalized costs, as applicable, related to research and development of new technologies, purchase of assets, infrastructure, or products that are intended to reduce GHG emissions, increase energy efficiency, offset emissions (purchase of energy credits), or improve other resource efficiency. A registrant that has disclosed GHG emissions reduction targets or other climate-related commitments must disclose the expenditures and costs related to meeting its targets, commitments, and goals, if any, in the fiscal years presented.

(g) Financial estimates and assumptions impacted by severe weather events and other natural conditions. Disclose whether the estimates and assumptions the registrant used to produce the consolidated financial statements were impacted by exposures to risks and uncertainties associated with, or known impacts from, severe weather events and other natural conditions, such as flooding, drought, wildfires, extreme temperatures, and sea level rise. If yes, provide a qualitative description of how the development of such estimates and assumptions were impacted by such events.

(h) Financial estimates and assumptions impacted by transition activities. Disclose whether the estimates and assumptions the registrant used to produce the consolidated financial statements were impacted by risks and uncertainties associated with, or known impacts from, a potential transition to a lower carbon economy or any climate-related targets disclosed by the registrant. If yes, provide a qualitative description of how the development of such estimates and assumptions were impacted by such a potential transition or the registrant’s disclosed climate-related targets.

(i) Impact of identified climate-related risks. A registrant must also include the impact of any climate-related risks (separately by physical risks and transition risks, as defined in § 229.1500(c) of this chapter), identified by the registrant pursuant to § 229.1502(a) of this chapter, on any of the financial statement metrics disclosed pursuant to paragraphs (c) through (h) of this section.

(j) Impact of climate-related opportunities. A registrant may also include the impact of any opportunities arising from severe weather events and other natural conditions, any impact of efforts to pursue climate-related opportunities associated with transition activities, and the impact of any other climate-related opportunities, including those identified by the registrant pursuant to § 229.1502(a) of this chapter, on any of the financial statement metrics disclosed pursuant to paragraphs (c) through (h) of this section. If a registrant makes a policy decision to disclose the impact of an opportunity, it must do so consistently for the fiscal years presented, including for each financial statement line item and all relevant opportunities identified by the registrant.
(3) **Chronic risks** relate to longer term weather patterns and related effects, such as sustained higher temperatures, sea level rise, drought, and increased wildfires, as well as related effects such as decreased arability of farmland, decreased habitability of land, and decreased availability of fresh water.

(4) **Transition risks** are the actual or potential negative impacts on a registrant’s consolidated financial statements, business operations, or value chains attributable to regulatory, technological, and market changes to address the mitigation of, or adaptation to, climate-related risks, such as increased costs attributable to changes in law or policy, reduced market demand for carbon-intensive products leading to decreased prices or profits for such products, the devaluation or abandonment of assets, risk of legal liability and litigation defense costs, competitive pressures associated with the adoption of new technologies, reputational impacts (including those stemming from a registrant’s customers or business counterparties) that might trigger changes to market behavior, consumer preferences or behavior, and registrant behavior.

(d) **Carbon dioxide equivalent ("CO₂-e")** means the common unit of measurement to indicate the global warming potential (“GWP”) of each greenhouse gas, expressed in terms of the GWP of one unit of carbon dioxide ("CO₂").

(e) **Emission factor** means a multiplication factor allowing actual GHG emissions to be calculated from available activity data or, if no activity data is available, economic data, to derive absolute GHG emissions. Examples of activity data include kilowatt-hours of electricity used, quantity of fuel used, output of a process, hours of operation of equipment, distance travelled, and floor area of a building.

(f) **Global warming potential ("GWP")** means a factor describing the global warming impacts of different greenhouse gases. It is a measure of how much energy will be absorbed in the atmosphere over a specified period of time as a result of the emission of one ton of a greenhouse gas, relative to the emissions of one ton of carbon dioxide (CO₂).

(g) **Greenhouse gases ("GHG")** means carbon dioxide (CO₂), methane ("CH₄"), nitrous oxide ("N₂O"), nitrogen trifluoride ("NF₃"), hydrofluorocarbons ("HFCs"), perfluorocarbons ("PFCS"), and sulfur hexafluoride ("SF₆").

(b) **GHG emissions** means direct and indirect emissions of greenhouse gases expressed in metric tons of carbon dioxide equivalent (CO₂-e), of which:

(1) **Direct emissions** are GHG emissions from sources that are owned or controlled by a registrant.

(2) **Indirect emissions** are GHG emissions that result from the activities of the registrant, but occur at sources not owned or controlled by the registrant.

(i) **GHG intensity (or carbon intensity)** means a ratio that expresses the impact of GHG emissions per unit of economic value (e.g., metric tons of CO₂-e per unit of total revenues, using the registrant’s reporting currency) or per unit of production (e.g., metric tons of CO₂-e per product produced).

(j) **Internal carbon price** means an estimated cost of carbon emissions used internally within an organization.

(k) **Location** means a ZIP code or, in a jurisdiction that does not use ZIP codes, a similar subnational postal zone or geographic location.

(l) **Operational boundaries** means the boundaries that determine the direct and indirect emissions associated with the business operations owned or controlled by a registrant.

(m) **Organizational boundaries** means the boundaries that determine the operations owned or controlled by a registrant for the purpose of calculating its GHG emissions.

(n) **Renewable energy credit or certificate ("REC")** means a credit or certificate representing each megawatt-hour (1 MWh or 1,000 kilowatt-hours) of renewable electricity generated and delivered to a power grid.

(o) **Scenario analysis** means a process for identifying and assessing a potential range of outcomes of various possible future climate scenarios, and how climate-related risks may impact a registrant’s operations, business strategy, and consolidated financial statements over time. For example, registrants might use scenario analysis to test the resilience of their strategies under certain future climate scenarios, such as those that assume global temperature increases of 3 °C, 2 °C, and 1.5 °C above pre-industrial levels.

(p) **Scope 1 emissions** are direct GHG emissions from operations that are owned or controlled by a registrant.

(q) **Scope 2 emissions** are indirect GHG emissions from the generation of purchased or acquired electricity, steam, heat, or cooling that is consumed by operations owned or controlled by a registrant.

(e) **Scope 3 emissions** are all indirect GHG emissions not otherwise included in a registrant’s Scope 2 emissions, which occur in the upstream and downstream activities of a registrant’s value chain.

(1) **Upstream activities** in which Scope 3 emissions might occur include:

(i) A registrant’s purchased goods and services.

(ii) A registrant’s capital goods.

(iii) A registrant’s fuel and energy related activities not included in Scope 1 or Scope 2 emissions.

(iv) Transportation and distribution of purchased goods, raw materials, and other inputs.

(v) Waste generated in a registrant’s operations.

(vi) Business travel by a registrant’s employees.

(vii) Employee commuting by a registrant’s employees and

(viii) A registrant’s leased assets related principally to the sale or disposition of goods or services.

(2) **Downstream activities** in which Scope 3 emissions might occur include:

(i) Transportation and distribution of a registrant’s sold products, goods or other outputs.

(ii) Processing by a third party of a registrant’s sold products.

(iii) Use by a third party of a registrant’s sold products.

(iv) End-of-life treatment by a third party of a registrant’s sold products.

(v) A registrant’s leased assets related principally to the sale or disposition of goods or services.

(vi) A registrant’s franchises; and

(vii) Investments by a registrant.

(s) **Transition plan** means a registrant’s strategy and implementation plan to reduce climate-related risks, which may include a plan to reduce its GHG emissions in line with its own commitments or commitments of jurisdictions within which it has significant operations.

(t) **Value chain** means the upstream and downstream activities related to a registrant’s operations. Upstream activities in connection with a value chain may include activities by a party other than the registrant that relate to the initial stages of a registrant’s production of a good or service (e.g., materials sourcing, materials processing, and supplier activities). Downstream activities in connection with a value chain may include activities by a party other than the registrant that relate to processing materials into a finished product and delivering it or providing a service to the end user (e.g., transportation and distribution, processing of sold products, use of sold products, end of life treatment of sold products, and investments).
§ 229.1501 (Item 1501) Governance.

(a)(1) Describe the board of director’s oversight of climate-related risks. Include the following, as applicable:

(i) The identity of any board members or board committee responsible for the oversight of climate-related risks;

(ii) Whether any member of the board of directors has expertise in climate-related risks, with disclosure in such detail as necessary to fully describe the nature of the expertise;

(iii) The processes by which the board of directors or board committee discusses climate-related risks, including how the board is informed about climate-related risks, and the frequency of such discussion;

(iv) Whether and how the board of directors or board committee considers climate-related risks as part of its business strategy, risk management, and financial oversight; and

(v) Whether and how the board of directors sets climate-related targets or goals, and how it oversees progress against those targets or goals, including the establishment of any interim targets or goals.

(2) If applicable, a registrant may also describe the board of director’s oversight of climate-related opportunities.

(b)(1) Describe management’s role in assessing and managing climate-related risks. Include the following, as applicable:

(i) Whether certain management positions or committees are responsible for assessing and managing climate-related risks and, if so, the identity of such positions or committees and the relevant expertise of the position holders or members in such detail as necessary to fully describe the nature of the expertise;

(ii) The processes by which such positions or committees are informed about and monitor climate-related risks; and

(iii) Whether and how frequently such positions or committees report to the board or a committee of the board on climate-related risks.

(2) If applicable, a registrant may also describe management’s role in assessing and managing climate-related opportunities.

§ 229.1502 (Item 1502) Strategy, business model, and outlook.

(a) Describe any climate-related risks reasonably likely to have a material impact on the registrant, including on its business or consolidated financial statements, which may manifest over the short, medium, and long term. If applicable, a registrant may also disclose the actual and potential impacts of any climate-related opportunities when responding to any of the provisions in this section.

(1) Discuss such climate-related risks, specifying whether they are physical or transition risks and the nature of the risks presented.

(i) For physical risks, describe the nature of the risk, including if it may be categorized as an acute or chronic risk, and the location and nature of the properties, processes, or operations subject to the physical risk.

(A) If a risk concerns the flooding of buildings, plants, or properties located in flood hazard areas, disclose the percentage of those assets (square meters or acres) that are located in flood hazard areas in addition to their location.

(B) If a risk concerns the location of assets in regions of high or extremely high water stress, disclose the amount of assets (e.g., book value and as a percentage of total assets) located in those regions in addition to their location. Also disclose the percentage of the registrant’s total water usage from water withdrawn in those regions.

(ii) For transition risks, describe the nature of the risk, including whether it relates to regulatory, technological, market (including changing consumer, business counterparty, and investor preferences), liability, reputational, or other transition-related factors, and how those factors impact the registrant. A registrant that has significant operations in a jurisdiction that has made a GHG emissions reduction commitment may be exposed to transition risks related to the implementation of the commitment.

(2) Describe the registrant’s short-, medium-, and long-term time horizons, including how it takes into account or reassesses the expected useful life of the registrant’s assets and the time horizons for the registrant’s climate-related planning processes and goals.

(b) Describe the actual and potential impacts of any climate-related risks identified in response to paragraph (a) of this section on the registrant’s strategy, business model, and outlook.

(1) Include impacts on the registrant’s:

(i) Business operations, including the types and locations of its operations;

(ii) Products or services;

(iii) Suppliers and other parties in its value chain;

(iv) Activities to mitigate or adapt to climate-related risks, including adoption of new technologies or processes;

(v) Expenditure for research and development; and

(vi) Any other significant changes or impacts.

(2) Include the time horizon for each described impact (i.e., in the short, medium, or long term, as defined in response to paragraph (a) of this section).

(c) Discuss whether and how any impacts described in response to paragraph (b) of this section are considered as part of the registrant’s business strategy, financial planning, and capital allocation. Provide both current and forward-looking disclosures that facilitate an understanding of whether the implications of the identified climate-related risks have been integrated into the registrant’s business model or strategy, including how any resources are being used to mitigate climate-related risks. Include in this discussion how any of the metrics referenced in § 210.14–02 of this chapter and § 229.1504 or any of the targets referenced in § 229.1506 relate to the registrant’s business model or business strategy. If applicable, include in this discussion the role that carbon offsets or RECs play in the registrant’s climate-related business strategy.

(d) Provide a narrative discussion of whether and how any climate-related risks described in response to paragraph (a) of this section have affected or are reasonably likely to affect the registrant’s consolidated financial statements. The discussion should include any of the climate-related metrics referenced in § 210.14–02 of this chapter that demonstrate that the identified climate-related risks have had a material impact on reported financial condition or operations.

(e)(1) If a registrant maintains an internal carbon price, disclose:

(i) The price in units of the registrant’s reporting currency per metric ton of CO2e;

(ii) The total price, including how the total price is estimated to change over time, if applicable;

(iii) The boundaries for measurement of overall CO2e on which the total price is based if different from the GHG emission organizational boundary required pursuant to § 229.1504(e)(2); and

(iv) The rationale for selecting the internal carbon price applied.

(2) Describe how the registrant uses any internal carbon price described in response to paragraph (e)(1) of this section to evaluate and manage climate-related risks.

(3) If a registrant uses more than one internal carbon price, it must provide the disclosures required by this section for each internal carbon price, and disclose its reasons for using different prices.
(f) Describe the resilience of the registrant’s business strategy in light of potential future changes in climate-related risks. Describe any analytical tools, such as scenario analysis, that the registrant uses to assess the impact of climate-related risks on its business and consolidated financial statements, and to support the resilience of its strategy and business model. If the registrant uses scenario analysis to assess the resilience of its business strategy to climate-related risks, disclose the scenarios considered (e.g., an increase of no greater than 3 °C, 2 °C, or 1.5 °C above pre-industrial levels), including parameters, assumptions, and analytical choices, and the projected principal financial impacts on the registrant’s business strategy under each scenario. The disclosure should include both qualitative and quantitative information.

§ 229.1503 (Item 1503) Risk management.

(a) Describe any processes the registrant has for identifying, assessing, and managing climate-related risks. If applicable, a registrant may also describe any processes for identifying, assessing, and managing climate-related opportunities when responding to any of the provisions in this section.

(1) When describing any processes for identifying and assessing climate-related risks, disclose, as applicable, how the registrant:

(i) Determines the relative significance of climate-related risks compared to other risks;

(ii) Considers existing or likely regulatory requirements or policies, such as GHG emissions limits, when identifying climate-related risks;

(iii) Considers shifts in customer or counterparty preferences, technological changes, or changes in market prices in assessing potential transition risks; and

(iv) Determines the materiality of climate-related risks, including how it assesses the potential scope and impact of an identified climate-related risk, such as the risks identified in response to § 229.1502.

(2) When describing any processes for managing climate-related risks, disclose, as applicable, how the registrant:

(i) Decides whether to mitigate, accept, or adapt to a particular risk;

(ii) Prioritizes whether to address climate-related risks; and

(iii) Determines how to mitgate any high priority risks.

(b) Describe whether and how any processes described in response to paragraph (a) of this section are integrated into the registrant’s overall risk management system or processes. If a separate board or management committee is responsible for assessing and managing climate-related risks, a registrant should disclose how that committee interacts with the registrant’s board or management committee governing risks.

(c)(1) If the registrant has adopted a transition plan as part of its climate-related risk management strategy, describe the plan, including the relevant metrics and targets used to identify and manage any physical and transition risks. To allow for an understanding of the registrant’s progress to meet the plan’s targets or goals over time, a registrant must update its disclosure about the transition plan each fiscal year by describing the actions taken during the year to achieve the plan’s targets or goals.

(2) If the registrant has adopted a transition plan, discuss, as applicable:

(i) How the registrant plans to mitigate or adapt to any identified physical risks, including but not limited to those concerning energy, land, or water use and management;

(ii) How the registrant plans to mitigate or adapt to any identified transition risks, including the following:

(A) Laws, regulations, or policies that:

(1) Restrict GHG emissions or products with high GHG footprints, including emissions caps; or

(2) Require the protection of high conservation value land or natural assets;

(B) Imposition of a carbon price; and

(C) Changing demands or preferences of consumers, investors, employees, and business counterparties.

(3) If applicable, a registrant that has adopted a transition plan as part of its climate-related risk management strategy may also describe how it plans to achieve any identified climate-related opportunities, such as:

(i) The production of products that may facilitate the transition to a lower carbon economy, such as low emission modes of transportation and supporting infrastructure;

(ii) The generation or use of renewable power;

(iii) The production or use of low waste, recycled, or other consumer products that require less carbon intensive production methods;

(iv) The setting of conservation goals and targets that would help reduce GHG emissions; and

(v) The provision of services related to any transition to a lower carbon economy.

§ 229.1504 (Item 1504) GHG emissions metrics.

(a) General. Disclose a registrant’s GHG emissions, as defined in § 229.1500(h), for its most recently completed fiscal year, and for the historical fiscal years included in its consolidated financial statements in the filing, to the extent such historical GHG emissions data is reasonably available.

(1) For each required disclosure of a registrant’s Scopes 1, 2, and 3 emissions, disclose the emissions both disaggregated by each constituent greenhouse gas, as specified in § 229.1500(g), and in the aggregate, expressed in terms of CO2e.

(2) When disclosing a registrant’s Scopes 1, 2, and 3 emissions, exclude the impact of any purchased or generated offsets.

(b) Scopes 1 and 2 emissions. (1) Disclose the registrant’s total Scope 1 emissions and total Scope 2 emissions separately after calculating them from all sources that are included in the registrant’s organizational and operational boundaries.

(2) When calculating emissions pursuant to paragraph (b)(1) of this section, a registrant may exclude emissions from investments that are not consolidated, are not proportionately consolidated, or that do not qualify for the equity method of accounting in the registrant’s consolidated financial statements.

(c) Scope 3 emissions. (1) Disclose the registrant’s total Scope 3 emissions if material. A registrant must also disclose its Scope 3 emissions if it has set a GHG emissions reduction target or goal that includes its Scope 3 emissions.

Disclosure of a registrant’s Scope 3 emissions must be separate from disclosure of its Scopes 1 and 2 emissions. If required to disclose Scope 3 emissions, identify the categories of upstream or downstream activities that have been included in the calculation of the Scope 3 emissions. If any category of Scope 3 emissions is significant to the registrant, identify all such categories and provide Scope 3 emissions data separately for them, together with the registrant’s total Scope 3 emissions.

(2) If required to disclose Scope 3 emissions, describe the data sources used to calculate the registrant’s Scope 3 emissions, including the use of any of the following:

(i) Emissions reported by parties in the registrant’s value chain, and whether such reports were verified by the registrant or a third party, or unverified;

(ii) Data concerning specific activities, as reported by parties in the registrant’s value chain; and

(iii) Data derived from economic studies, published databases, government statistics, industry associations, or other third-party sources outside of a registrant’s value chain.
chain, including industry averages of emissions, activities, or economic data.

(3) A smaller reporting company, as defined by §§ 229.10(f)(1), 230.405, and 240.12b–2 of this chapter, is exempt from, and need not comply with, the disclosure requirements of this paragraph (c).

(d) **GHG intensity.** (1) Using the sum of Scope 1 and 2 emissions, disclose GHG intensity in terms of metric tons of CO₂e per unit of total revenue (using the registrant’s reporting currency) and per unit of production relevant to the registrant’s industry for each fiscal year included in the consolidated financial statements. Disclose the basis for the unit of production used.

(2) If Scope 3 emissions are otherwise disclosed, separately disclose GHG intensity using Scope 3 emissions only.

(3) If a registrant has no revenue or unit of production for a fiscal year, it must disclose another financial measure of GHG intensity or another measure of GHG intensity per unit of economic output, as applicable, with an explanation of why the particular measure was used.

(4) A registrant may also disclose other measures of GHG intensity, in addition to metric tons of CO₂e per unit of total revenue (using the registrant’s reporting currency) and per unit of production, if it includes an explanation of why a particular measure was used and why the registrant believes such measure provides useful information to investors.

(e) **Methodology and related instructions.** (1) A registrant must describe the methodology, significant inputs, and significant assumptions used to calculate its GHG emissions. The description of the registrant’s methodology must include the registrant’s organizational boundaries, operational boundaries (including any approach to categorization of emissions and emissions sources), calculation approach (including any emission factors used and the source of the emission factors), and any calculation tools used to calculate the GHG emissions. A registrant’s description of its approach to categorization of emissions and emissions sources should explain how it determined the emissions to include as direct emissions, for the purpose of calculating its Scope 1 emissions, and indirect emissions, for the purpose of calculating its Scope 2 emissions.

(2) The organizational boundary and any determination of whether a registrant owns or controls a particular source shall be consistent with the scope of entities, operations, assets, and other holdings within its business organization as those included in, and based upon the same set of accounting principles applicable to, the registrant’s consolidated financial statements.

(3) A registrant must use the same organizational boundaries when calculating its Scope 1 emissions and Scope 2 emissions. If required to disclose Scope 3 emissions, a registrant must also apply the same organizational boundaries used when determining its Scopes 1 and 2 emissions as an initial step in identifying the sources of indirect emissions from activities in its value chain over which it lacks ownership and control and which must be included in the calculation of its Scope 3 emissions. Once a registrant has determined its organizational and operational boundaries, a registrant must be consistent in its use of those boundaries when calculating its GHG emissions.

(4) A registrant may use reasonable estimates when disclosing its GHG emissions as long as it also describes the assumptions underlying, and its reasons for using, the estimates.

(i) When disclosing its GHG emissions for its most recently completed fiscal year, if actual reported data is not reasonably available, a registrant may use a reasonable estimate of its GHG emissions for its fourth fiscal quarter, together with actual, determined GHG emissions data for the first three fiscal quarters, as long as the registrant promptly discloses in a subsequent filing any material difference between the estimate used and the actual, determined GHG emissions data for the fourth fiscal quarter.

(ii) In addition to the use of reasonable estimates, a registrant may present its estimated Scope 3 emissions in terms of a range as long as it discloses its reasons for using the range and the underlying assumptions.

(5) A registrant must disclose, to the extent material and as applicable, any use of third-party data when calculating its GHG emissions, regardless of the particular scope of emissions. When disclosing the use of third-party data, it must identify the source of such data and the process the registrant undertook to obtain and assess such data.

(6) A registrant must disclose any material change to the methodology or assumptions underlying its GHG emissions disclosure from the previous fiscal year.

(7) A registrant must disclose, to the extent material and as applicable, any gaps in the data required to calculate its GHG emissions. A registrant’s GHG emissions disclosure should provide investors with a reasonably complete understanding of the registrant’s GHG emissions in each scope of emissions. If a registrant discloses any data gaps encountered when calculating its GHG emissions, it must also discuss whether it used proxy data or another method to address such gaps, and how its accounting for any data gaps has affected the accuracy or completeness of its GHG emissions disclosure.

(8) When determining whether its Scope 3 emissions are material, and when disclosing those emissions, in addition to emissions from activities in its value chain, a registrant must include GHG emissions from outsourced activities that it previously conducted as part of its own operations, as reflected in the financial statements for the periods covered in the filing.

(9) If required to disclose Scope 3 emissions, when calculating those emissions, if there was any significant overlap in the categories of activities producing the Scope 3 emissions, a registrant must describe the overlap, how it accounted for the overlap, and the effect on its disclosed total Scope 3 emissions.

(f) **Liability for Scope 3 emissions disclosures.** (1) A statement within the coverage of paragraph (f)(2) of this section that is made by or on behalf of a registrant is deemed not to be a fraudulent statement (as defined in paragraph (f)(3) of this section), unless it is shown that such statement was made or reaffirmed without a reasonable basis or was disclosed other than in good faith.

(2) This paragraph (f) applies to any statement regarding Scope 3 emissions that is disclosed pursuant to §§ 229.1500 through 229.1506 and made in a document filed with the Commission.

(3) For the purpose of this paragraph (f), the term fraudulent statement shall mean a statement that is an untrue statement of material fact, a statement false or misleading with respect to any material fact, an omission to state a material fact necessary to make a statement not misleading, or that constitutes the employment of a manipulative, deceptive, or fraudulent device, contrivance, scheme, transaction, act, practice, course of business, or an artifice to defraud as those terms are used in the Securities Act of 1933 or the Securities Exchange Act of 1934 or the rules or regulations promulgated thereunder.

§ 229.1505 Attestation of Scope 1 and Scope 2 emissions disclosure.

(a) Attestation. (1) A registrant that is required to provide Scope 1 and Scope 2 emissions disclosure pursuant to
§ 229.1504 and that is an accelerated filer or a large accelerated filer must include an attestation report covering such disclosure in the relevant filing. For filings made by an accelerated filer or a large accelerated filer for the second and third fiscal years after the compliance date for § 229.1504, the attestation engagement must, at a minimum, be at a limited assurance level and cover the registrant’s Scope 1 and Scope 2 emissions disclosure. For filings made by an accelerated filer or a large accelerated filer for the fourth fiscal year after the compliance date for § 229.1504 and thereafter, the attestation engagement must be at a reasonable assurance level and, at a minimum, cover the registrant’s Scope 1 and Scope 2 emissions disclosures.

(2) Any attestation report required under this section must be provided pursuant to standards that are publicly available at no cost and are established by a body or group that has followed due process procedures, including the broad distribution of the framework for public comment. An accelerated filer or a large accelerated filer obtaining voluntary assurance prior to the first required fiscal year must comply with subparagraph (e) of this section. Voluntary assurance obtained by an accelerated filer or a large accelerated filer thereafter must follow the requirements of paragraphs (b) through (d) of this section and must use the same attestation standard as the required assurance over Scope 1 and Scope 2.

(b) GHG emissions attestation provider. The GHG emissions attestation report required by paragraph (a) of this section must be prepared and signed by a GHG emissions attestation provider. A GHG emissions attestation provider means a person or a firm that has all of the following characteristics:

(1) Is an expert in GHG emissions by virtue of having significant experience in measuring, analyzing, reporting, or attesting to GHG emissions. Significant experience means having sufficient competence and capabilities necessary to:

(i) Perform engagements in accordance with professional standards and applicable legal and regulatory requirements; and

(ii) Enable the service provider to issue reports that are appropriate under the circumstances.

(2) Is independent with respect to the registrant, and any of its affiliates, for whom it is providing the attestation report, during the attestation and professional engagement period.

(i) A GHG emissions attestation provider is not independent if such attestation provider is not, or a reasonable investor with knowledge of all relevant facts and circumstances would conclude that such attestation provider is not, capable of exercising objective and impartial judgment on all issues encompassed within the attestation provider’s engagement.

(ii) In determining whether a GHG emissions attestation provider is independent, the Commission will consider:

(A) Whether a relationship or the provision of a service creates a mutual or conflicting interest between the attestation provider and the registrant (or any of its affiliates), places the attestation provider in the position of attesting such attestation provider’s own work, results in the attestation provider acting as management or an employee of the registrant (or any of its affiliates), or places the attestation provider in a position of being an advocate for the registrant (or any of its affiliates); and

(B) All relevant circumstances, including all financial or other relationships between the attestation provider and the registrant (or any of its affiliates), and not just those relating to reports filed with the Commission.

(3) Whether the attestation provider is an advocate for the registrant (or any of its affiliates), places the attestation provider in a position of being an advocate for the registrant (or any of its affiliates), and not just those relating to reports filed with the Commission.

(c) Additional disclosures by the registrant. In addition to including the GHG emissions attestation report required by paragraph (a) of this section, a large accelerated filer must disclose the following information within the separately captioned “Climate-Related Disclosure” section in the filing, after requesting relevant information from any GHG emissions attestation provider as necessary:

(1) Whether the attestation provider has a license from any licensing or accreditation body to provide assurance, and if so, identify the licensing or accreditation body, and whether the attestation provider is a member in good standing of that licensing or accreditation body.

(2) Whether the GHG emissions attestation engagement is subject to any oversight inspection program, and if so, which program (or programs); and

(3) Whether the attestation provider is subject to record-keeping requirements with respect to the work performed for
the GHG emissions attestation engagement and, if so, identify the record-keeping requirements and the duration of those requirements.

(e) Disclosure of voluntary attestation. A registrant that is not required to include a GHG emissions attestation report pursuant to paragraph (a) of this section must disclose within the separately captioned “Climate-Related Disclosure” section in the filing the following information if the registrant’s GHG emissions disclosures were subject to third-party attestation or verification:

1. Identify the provider of such attestation or verification;
2. Describe the attestation or verification standard used;
3. Describe the level and scope of attestation or verification provided;
4. Briefly describe the results of the attestation or verification;
5. Describe whether the third-party service provider has any other business relationships with or has provided any other professional services to the registrant that may lead to an impairment of the service provider’s independence with respect to the registrant; and
6. Disclose any oversight inspection program to which the service provider is subject (e.g., the AICPA’s peer review program).

§ 229.1506 (Item 1506) Targets and goals.

(a)(1) A registrant must provide disclosure pursuant to this section if it has set any targets or goals related to the reduction of GHG emissions, or any other climate-related target or goal (e.g., regarding energy usage, water usage, conservation or ecosystem restoration, or revenues from low-carbon products) such as actual or anticipated regulatory requirements, market constraints, or other goals established by a climate-related treaty, law, regulation, policy, or organization.

(b) A registrant may provide the disclosure required by this section as part of its disclosure in response to § 229.1502 or § 229.1503.

(b) If the registrant has set climate-related targets or goals, disclose the targets or goals, including, as applicable, a description of:

1. The scope of activities and emissions included in the target;
2. The unit of measurement, including whether the target is absolute or intensity based;
3. The defined time horizon by which the target is intended to be achieved, and whether the time horizon is consistent with one or more goals established by a climate-related treaty, law, regulation, policy, or organization;
4. The defined baseline time period and baseline emissions against which progress will be tracked with a consistent base year set for multiple targets;
5. Any interim targets set by the registrant; and
6. How the registrant intends to meet its climate-related targets or goals. For example, for a target or goal regarding net GHG emissions reduction, the discussion could include a strategy to increase energy efficiency, transition to lower carbon products, purchase carbon offsets or RECs, or engage in carbon removal and carbon storage.

(c) Disclose relevant data to indicate whether the registrant is making progress toward meeting the target or goal and how such progress has been achieved. A registrant must update this disclosure each fiscal year by describing the actions taken during the year to achieve its targets or goals.

(d) If carbon offsets or RECs have been used as part of a registrant’s plan to achieve climate-related targets or goals, disclose the amount of carbon reduction represented by the offsets or the amount of generated renewable energy represented by the RECS, the source of the offsets or RECs, a description and location of the underlying projects, any registries or other authentication of the offsets or RECs, and the cost of the offsets or RECs.

§ 229.1507 (Item 1507) Interactive data requirement.

Provide the disclosure required by this Subpart 1500 in an Interactive Data File as required by § 232.405 of this chapter (Rule 405 of Regulation S–T) in accordance with the EDGAR Filer Manual.

PART 232—REGULATION S–T—GENERAL RULES AND REGULATIONS FOR ELECTRONIC FILINGS

6. The general authority citation for part 232 continues to read as follows:

Authority: 15 U.S.C. 77c, 77f, 77g, 77h, 77j, 77s, 77z–2, 77z–3, 77ss, 78c, 78l, 78m, 78n, 78o(d), 78s-7 note, 78a-5, 78a(w), 78ll, 78mm, 80a–2(a), 80a–3, 80a–8, 80a–9, 80a–10, 80a–13, 80a–24, 80a–26, 80a–29, 80a–30, and 80a–37; and sec. 107, Pub. L. 112–106, 126 Stat. 312, unless otherwise noted.

7. Amend Form S–1 (referenced in § 239.11) by adding Item 11(o) to Part I to read as follows:

Note: The text of Form S–1 does not, and these amendments will not, appear in the Code of Federal Regulations.

FORM S–1

PART I—INFORMATION REQUIRED IN PROSPECTUS

Item 11. Information With Respect to the Registrant.

(o) Information required by Subpart 1500 of Regulation S–K (17 CFR 229.1500 through 229.1507), in a part of the registration statement that is separately captioned as Climate-Related Disclosure. Pursuant to Rule 411 (17 CFR 230.411) and General Instruction VII of this form, a registrant may incorporate by reference disclosure from other parts of the registration statement (e.g., Risk Factors, Business, Management’s Discussion and Analysis, or the financial statements) or from a separately filed annual report or other periodic report into the Climate-Related Disclosure item if it is responsive to the topics specified in Items 1500 through 1507 of Regulation S–K.

10. Amend Form S–11 (referenced in § 239.18) by adding Item 9 to Part I to read as follows:

Note: The text of Form S–11 does not, and these amendments will not, appear in the Code of Federal Regulations.
Section 249.308a is also issued under secs. 3(a) and 302, Pub. L. 107–204, 116 Stat. 745.
* * * *
Section 249.310 is also issued under secs. 3(a), 202, 206, 302, 406 and 407, Pub. L. 107–204, 116 Stat. 745.
* * * *

■ 14. Amend Form 10 (referred in §249.210) by adding Item 3.A (‘‘Climate-Related Disclosure’’) to read as follows:

Note: The text of Form 10 does not, and these amendments will not, appear in the Code of Federal Regulations.

FORM 10
* * * *

Item 3.A Climate-Related Disclosure. Provide the information required by Subpart 1500 of Regulation S–K (17 CFR 229.1500 through 229.1507), in a part of the registration statement that is separately captioned as Climate-Related Disclosure. Pursuant to Exchange Act Rule 12b–23 (17 CFR 240.12b–23) and General Instruction F of this form, a registrant may incorporate by reference disclosure from other parts of the registration statement (e.g., Risk Factors, Management’s Discussion and Analysis, or the financial statements) or from a separately filed annual report or other periodic report into the Climate-Related Disclosure item if it is responsive to the topics specified in Item 1500 through 1507 of Regulation S–K.

■ 15. Amend Form 20–F (referred in §249.220f) by adding Item 3.E (‘‘Climate-related disclosure’’) to Part I to read as follows:

Note: The text of Form 20–F does not, and these amendments will not, appear in the Code of Federal Regulations.

FORM 20–F
* * * *

E. Climate-Related Disclosure

1. Required disclosure. The company must provide disclosure responsive to the topics specified in Subpart 1500 of Regulation S–K (17 CFR 229.1500 through 229.1507) in a part of the registration statement or annual report that is separately captioned as Climate-Related Disclosure.

2. Incorporation by reference. Pursuant to Rule 12b–23 (17 CFR 240.12b–23), the company may incorporate by reference disclosure from other parts of the registration statement
or annual report (e.g., Risk Factors, Information on the Company, Operating and Financial Review and Prospects, or the financial statements) into the Climate-Related Disclosure item if it is responsive to the topics specified in Item 1500 through 1507 of Regulation S–K.

16. Amend Form 6–K (referenced in § 249.306) by adding the phrase “climate-related disclosure;” before the phrase “and any other information which the registrant deems of material importance to security holders.” in the second paragraph of General Instruction B.

17. Amend Form 10–Q (referenced in § 249.308a) by adding Item 1.B (“Climate-Related disclosure”) to Part II (“Other Information”) to read as follows:

Note: The text of Form 10–Q does not, and these amendments will not, appear in the Code of Federal Regulations.

FORM 10–Q

Item 1B. Climate-Related Disclosure. Disclose any material changes to the disclosures provided in response to Item 6 (“Climate-related disclosure”) of Part II to the registrant’s Form 10–K (17 CFR 229.310).

18. Amend Form 10–K (referenced in § 249.310) by:

a. Revising paragraph (1)(g) of General Instruction J (“Use of this Form by Asset-backed Issuers”); and

b. Adding Item 6 (“Climate-Related Disclosure”) to Part II to read as follows:

Note: The text of Form 10–K does not, and these amendments will not, appear in the Code of Federal Regulations.

FORM 10–K

GENERAL INSTRUCTIONS

J. Use of This Form by Asset-Backed Issuers.

Item 6. Climate-Related Disclosure

Part II

Provide the disclosure required by Subpart 1500 of Regulation S–K (17 CFR 229.1500 through 229.1507) in a part of the annual report that is separately captioned as Climate-Related Disclosure. Pursuant to Rule 12b–23 (17 CFR 240.12b–23) and General Instruction G of this form, a registrant may incorporate by reference disclosure from other parts of the registration statement or annual report (e.g., Risk Factors, Business, Management’s Discussion and Analysis, or the financial statements) into the Climate-Related Disclosure item if it is responsive to the topics specified in Item 1500 through 1507 of Regulation S–K.

By the Commission.

Dated: March 21, 2022.

Vanessa A. Countryman,
Secretary.

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