



June 9, 2021

Chair Gary Gensler
Securities and Exchange Commission
100 F Street NE
Washington, DC 20549

Re: Statement Welcoming Public Input on Climate Change Disclosures

Dear Chair Gensler:

Thank you for the opportunity to submit this comment on climate change disclosures. We applaud the Securities and Exchange Commission's increased emphasis and recent "all-agency" actions on environmental and climate disclosures.¹

The authors of this comment have an extensive background in climate mitigation and corporate accountability. Daniel Taillant, executive director of the Center for Human Rights and Environment (CHRE), has experience developing global corporate disclosure standards, guidance, and other technical materials. He was directly involved in the development of the United Nations Guiding Principles on Business and Human Rights, which include a strong focus on environmental and social governance (ESG). Additionally, the Institute for Governance & Sustainable Development (IGSD) and CHRE have scientific and policy expertise related to combating climate change and the role of short-lived climate pollutants. We work with partners around the world to promote fast climate mitigation to limit planetary warming enough this decade to stay within the internationally recognized 1.5°C target for a relatively safe planet.

As elaborated in this comment, and given the urgent need to address climate change and avoid catastrophic climate tipping points, we highly encourage the Securities and Exchange Commission (Commission) to further strengthen and expand climate-change-related disclosures in its integrated disclosure system. To understand and appreciate climate-related risks, investors and market participants need disclosures on emissions of climate pollutants, on companies' plans for the transition to a low- or zero-carbon economy, and on the role that publicly traded companies play in causing, adapting to, and mitigating climate change.

It is important that climate-related disclosures include a registrant's key greenhouse gas (GHG) emissions, including carbon dioxide (CO₂) and other, more powerful climate pollutants such as hydrofluorocarbons, methane, and black carbon (soot). Disclosures on these non-CO₂ "super pollutants" are critical in the immediate term to adequately contain global warming by mid-century, whereas CO₂ is most important for end-of-century targets.

Registrants should also detail their plans for the energy transition, including addressing climate risks, uncertainties, and known or probable impacts of their activities, climate change's expected

impacts on their activities, suppliers, and customers. Narrative reports also should disclose existing climate-related legal proceedings involving the registrant, relevant policy and management decisions, and opportunities to address climate change. Without adequate planning, registrants face larger risks related to climate mitigation and adaptation, as well as transition planning.

Specific climate-pollutant disclosures (CO₂ as well as super pollutants) are imperative given the advancing and indisputable science that limiting global warming to 1.5°C is necessary to avoid the most devastating impacts of climate change. Warming above 1.5°C would destabilize the economy and multiply financial and operational uncertainties and disruptions.

Additionally, both global climate agreements and US policies recognize the existential threat posed by climate change—a threat that will require all actors to reduce emissions of climate pollutants. Such actions are accelerating as US and global leaders are beginning to look to 2030 as a new target for enhanced climate action. In light of this policy priority, corporate climate disclosures are urgently needed.

Our comment is organized into three sections with direct responses to select questions attached. We first explain the science that underpins the 1.5°C climate-change target, and discuss methods for avoiding the worst consequences on registrants and their communities. We then present our recommendations for science-based climate disclosures, followed by the justification for such disclosures. As we explain further, this comment is focused on the super pollutants that hold the greatest potential for temperature abatement leading up to 2050.

1. Science Supporting a 1.5°C Target and Mitigation Methods for Achieving it

As the International Panel on Climate Change (IPCC)’s 2018 Special Report on Global Warming of 1.5°C makes clear, limiting warming to 1.5°C will still bring severe consequences, but will avoid the worst impacts of climate change.² The IPCC projects that limiting warming to 1.5°C rather than 2°C “could reduce the number of people both exposed to climate-related risks and susceptible to poverty by up to several hundred million by 2050.”³ Limiting global warming will also lessen the threats to biodiversity, and in turn, reduce impacts from biodiversity-related risks such as forest fires.⁴ The IPCC further concludes that the risks to global aggregated economic growth are lower at 1.5°C than 2°C.⁵ Additionally, the costs of adaptation will be lower at 1.5°C of warming than at 2°C,⁶ and the limits to adaptive capacity are less pronounced at lower levels of warming.⁷

Yet the world has already reached 1.2°C of warming,⁸ which is accelerating self-amplifying feedbacks that exacerbate warming and edge us closer to passing climate tipping points.⁹ Six tipping points are projected to occur between 1°C and 1.5 °C, with another 11 tipping points projected between 1.5 °C and 2 °C.¹⁰ Crossing these tipping points would trigger shifts in the Earth’s climate regimes, some of which are irreversible on a human timescale and could push the climate towards a “hothouse Earth.”¹¹

An example of this is Arctic sea ice loss. Arctic sea ice acts as a “white shield” reflecting incoming solar radiation back into space,¹² but the Arctic lost 7.6 trillion tons of sea ice between 1994 and 2017.¹³ As Arctic sea ice is lost, more solar radiation is absorbed and the Arctic warms, causing sea ice coverage to shrink further and warming to increase.¹⁴ Scientists project that the Arctic

ocean could be ice free in late summer in the next decade or two, much sooner than the IPCC originally estimated.¹⁵ In the extreme case that there is no Arctic sea ice for all sunlit months, catastrophic climate forcing equivalent to one trillion tons of CO₂ would be added to the climate system.¹⁶

Cutting super pollutants is the only known strategy to slow feedbacks, avoid catastrophic tipping points, and keep the 1.5°C limit within reach.¹⁷ Leading scientists—including the IPCC—tell us that we must cut emissions of the most polluting emissions within a very short period, i.e. before 2030.¹⁸ In this framework, one can think of CO₂ emissions reductions as a long-term marathon, and the reduction of super pollutants, especially methane, hydrofluorocarbon (HFCs), and black carbon, and tropospheric ozone, as a short-term sprint. Although super pollutants have greater warming effects than CO₂ they stay in the atmosphere for shorter periods of time, making them the perfect target for bending the warming curve in the next 20 years while the world transitions to a low- or zero-carbon economy.¹⁹

Methane is of particular concern to many regulators, investors, and executives. Methane is 86 times more potent than CO₂ over a 20-year period, but only stays in the atmosphere for around 12 years.²⁰ Methane is the second-most-damaging greenhouse gas after CO₂, but because of the short time it stays in the atmosphere, reducing methane this decade will result in rapid temperature abatement. Expert scientists at the UN Climate & Clean Air Coalition (CCAC)—a UN agency specifically dedicated to super pollutants—have determined that cutting human-caused methane emissions by 45% this decade (a technologically feasible goal) could avoid nearly 0.3°C of global warming by the 2040s.²¹ This avoided warming is critical to staying on a 1.5°C trajectory while decarbonizing the economy.

Cutting HFCs and black carbon (soot) will similarly reducing warming significantly by 2050. The CCAC estimates that widespread action to reduce methane, HFCs, and black carbon will avoid 0.6°C of global warming by 2050.²²

Avoiding this level of warming in the near term is crucial to minimizing risks to market participants, companies, and communities.²³ Reducing super pollutants must complement the herculean efforts needed to reduce CO₂ emissions in the long term. If public and private sector actors cut these super pollutants first, we will take a significant and critical step towards the recognized target of keeping global warming to 1.5°C. If we do not cut super pollutants significantly in the next decade, companies and communities will face greater climate-related risks and disruptions.

2. Recommendations for Science-Based Climate-Related Disclosures

The private sector is both implicated in the need to abate emissions of super pollutants and will be impacted by the worsening consequences if we crash through the 1.5°C guardrail for a relatively safe planet. The Commission has a unique opportunity to help companies move in the right direction by guiding and requiring registrants to report on activities that have immediate impacts on climate trends, including critical emissions data and information on climate-related management and policies.

We agree with other commenters on the importance of disclosing all relevant GHG emissions, including CO₂. But, given the need to quickly limit warming, as well as the scientific global consensus regarding the importance of major climate action before 2030,²⁴ we specifically urge the Commission to expand disclosure requirements on the following key super pollutants and issues:

1. Quantitative reports of emissions of methane, HFCs, and black carbon;
2. Quantitative emission reduction targets for methane, HFCs, and black carbon;
3. Short-term (10-year) and mid-term (20-30 year) emissions reductions and energy transition plans; and
4. Governance systems, policies, monitoring systems, and oversight mechanisms related to climate-related risks and opportunities.

Transition plans for a low- or zero-carbon economy should incorporate information commonly framed as ESG disclosures. A key component of the energy transition is a workforce transition to sustainable industries.²⁵ Additionally, climate change disproportionately impacts already-disadvantaged communities and developing countries.²⁶ Without explicitly addressing equity concerns, responses to climate change could be impaired by and exacerbate these injustices.²⁷

The Commission can guide and build upon evolving corporate climate disclosure frameworks by distinguishing and setting the standard for *short-term* climate disclosures, in parallel to long-term disclosures. We specifically recommend the Commission work with the Sustainability Accounting Standards Board (SASB) and the Global Reporting Initiative (GRI) in this endeavor. A new global approach is warranted for corporate disclosures to accompany the new policy framework that is consolidating globally on the most effective strategies to contain and reverse climate change. As described in an April 2021 report by SASB and GRI, companies can use both standards for comprehensive reporting, and many already do.²⁸ SASB and GRI are insufficient, however, with regard to short-term planning and super-pollutant reductions. They can be strengthened by expanding required disclosures to super pollutants and short-term strategies to promote fast climate action. The Commission can help to lead this process by integrating the four disclosure requirements recommended above.

We further advise the Commission to consult with leading scientific experts to craft disclosure requirements that are grounded in science and to routinely consult with experts and update any disclosure requirements, as warranted by the latest and best science. The UN's CCAC is the leading source for the science behind reducing super pollutants and technical solutions that could be applied by 2030 to limit warming over the coming decades. The IPCC and other scientific experts can advise on the short- and mid-term risks registrants will face under different emissions scenarios.

Finally, we urge the Commission to adopt a “double materiality” standard, similar to the standard included in the EU's Non-Financial Reporting Directive.²⁹ In this regard, a registrant should report on (1) impacts from climate change on registrant's financial health; and (2) the impact of registrant's activities on climate change and how the registrant is ensuring it contributes to staying on a 1.5°C pathway—again, distinguishing between short- and long-term strategies.

Requiring transparency on these two fronts will help to ensure accountability over time and respond to near-universal calls from investors for this type of information. Companies can and should play a significant role in meeting this target, and the Commission is positioned to help companies achieve a smooth transition to a low- or zero-carbon economy. A discussion of how a registrant is either addressing or exacerbating climate change provides important information to investors and the public about the registrant's perspective. A company that has internalized the risks and urgency of the climate crisis is more likely to reduce its emissions of climate pollutants, follow through on its climate-related planning, and weather the financial storm of climate change.

3. Need for Science-Based Climate-Related Disclosure Requirements

A climate disclosure regime that includes super pollutants will help companies prepare proactively, better manage the energy transition, and avoid exacerbating the impacts of climate change on their own activities. Super pollutant emissions disproportionately impact short-term warming, and in turn, the actions a registrant must take to decrease adaptation costs and risks. Investors already understand the threat posed by super pollutants like methane.³⁰

As the science summarized above demonstrates, super pollutant emissions and mitigation plans are material information for understanding a registrant's financial position, as the emissions are directly tied to increasing climate-related risks and related adaptation costs, including in the short term. Climate change is already impacting business worldwide, and climate-related consequences will continue to grow.³¹ Suppliers reported being exposed to \$1.21 trillion in potential financial impact related to climate change in 2020.³² Climate change, deforestation, and water scarcity is likely to put at risk \$1.26 trillion of suppliers' revenue over the next five years.³³ In an April 2021 report, Swiss Re Institute estimates that meeting the "well below 2°C" goal of the Paris Agreement would limit mid-century global GDP loss to around 4%, as opposed to the projected 11% loss at 2°C.³⁴

Simultaneously the transition to low- or zero-carbon energy will introduce new opportunities to companies. How companies are responding to these evolving risks and opportunities is material information that should be disclosed. Given the call to aggressive action by 2030,³⁵ these plans are especially important now. The Commission can help limit the impact of this transition on the economy by guiding registrants on methods for planning and requiring that registrants disclose their plans.

Furthermore, the uptick in laws, regulations, and government action targeting reductions in GHG emissions in line with the 1.5°C goal underscores the relevance of these disclosures to a registrant's financial situation. Congress and the federal government have taken action to curb super pollutant emissions, and companies must proactively prepare for this shifting legal and regulatory environment. In December 2020, Congress passed—and President Trump later signed into law—the American Innovation and Manufacturing (AIM) Act, which phases down HFCs in the United States.³⁶ The Senate has passed, and the House of Representatives is expected to pass, a resolution to reinstate methane-control regulations for the oil and gas sector.³⁷ Pursuant to President Biden's Executive Order 13,990, every executive agency has been directed to review existing regulations and develop regulations that combat the climate crisis.³⁸ Additionally, in April 2021, EPA proposed regulations to implement the AIM Act.³⁹ EPA also announced stakeholder meetings in

anticipation of a new regulation for methane from new oil and gas sources,⁴⁰ and the Office of Management and Budget requested comments on the social costs of carbon, methane, and nitrous oxide.⁴¹

In line with the United States' international commitments, the federal government has established stringent 2030 GHG reduction targets that include targets for reducing super pollutants. Under the Paris Climate Agreement, the US committed to reducing GHG emissions (including methane and HFCs) by 50–52% below 2005 levels in 2030.⁴² In announcing this commitment, the White House emphasized the importance of reducing super pollutants to keep 1.5°C within reach.⁴³ The US also committed to enhanced actions to reduce black carbon emissions.⁴⁴ Additionally, together with energy ministries from Canada, Norway, Qatar, and Saudi Arabia, the US established the Net-Zero Producers Forum that will advance methane abatement, among other net-zero strategies for the oil and gas sector.⁴⁵

Meeting these international commitments will require action across sectors, and companies must quickly adapt and position themselves to be prepared for the challenges and opportunities that arise amid this evolving crisis. Climate-related disclosures will allow investors and other stakeholders to better understand how registrants are getting ahead of or responding to the changes in the legal and regulatory environment.

The above recommendations will help ensure that companies prepare for the impacts of climate change, minimize adaptation costs, limit the severity of climate-related risks, and provide necessary information to investors and market participants.

Please find attached our direct responses to questions posed by the Commission. We would be happy to continue engaging with the Commission on these important issues.

Sincerely,

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Attachment A

- 1. How can the Commission best regulate, monitor, review, and guide climate change disclosures in order to provide more consistent, comparable, and reliable information for investors while also providing greater clarity to registrants as to what is expected of them? Where and how should such disclosures be provided? Should any such disclosures be included in annual reports, other periodic filings, or otherwise be furnished?**

The Commission should consult regularly with key global agencies and institutions advancing climate strategies, targets and policies on climate change to craft guidance and disclosure requirements that are based on leading science related to climate-related risks and opportunities. For a perspective on the importance of super pollutants and fast climate mitigation to 2030, the Commission should consult the UN's Climate and Clean Air Coalition (CCAC). The CCAC provides knowledge, resources and technical support to help the private and public sector reduce methane, black carbon, HFCs, and tropospheric ozone. For example, the CCAC released the landmark Global Methane Assessment that shows the global reductions in methane needed to keep a 1.5°C target within reach.⁴⁶ The US is currently the co-chair of the CCAC, with Rick Duke, Senior Advisor and White House Liaison for Special Presidential Envoy for Climate John Kerry, serving in that role.

- 2. What information related to climate risks can be quantified and measured? How are markets currently using quantified information? Are there specific metrics on which all registrants should report (such as, for example, scopes 1, 2, and 3 greenhouse gas emissions, and greenhouse gas reduction goals)? What quantified and measured information or metrics should be disclosed because it may be material to an investment or voting decision? Should disclosures be tiered or scaled based on the size and/or type of registrant)? If so, how? Should disclosures be phased in over time? If so, how? How are markets evaluating and pricing externalities of contributions to climate change? Do climate change related impacts affect the cost of capital, and if so, how and in what ways? How have registrants or investors analyzed risks and costs associated with climate change? What are registrants doing internally to evaluate or project climate scenarios, and what information from or about such internal evaluations should be disclosed to investors to inform investment and voting decisions? How does the absence or presence of robust carbon markets impact firms' analysis of the risks and costs associated with climate change?**

In addition to supporting other commenters' recommendations that the Commission require disclosures of registrants' GHG emissions generally (including CO₂), we strongly urge the commission to require annual reporting of the following disclosures:

1. Quantitative reports of emissions of methane, HFCs, and black carbon;
2. Quantitative emission reduction targets for methane, HFCs, and black carbon;
3. Short-term (10 year) and mid-term (20-30 year) emission reductions and transition plans; and

4. Governance systems, policies, monitoring systems, and oversight mechanisms related to climate-related risks and opportunities.

The Commission should establish expectations, requirements and guidance on disclosures related to super pollutants, including methane, black carbon (soot), and hydrofluorocarbons (HFCs). Such disclosures are necessary because super pollutant emissions have more immediate impacts on warming that are distinct from the longer-term effects of CO₂ emissions.

All registrants should report emissions of methane, HFCs, and black carbon to complement reporting on CO₂ emissions. Registrants should measure and quantify these emissions. Because climate pollutants carry different risk factors for exacerbating climate change in the short and long term, emissions data should be delineated by pollutant and by time frame, rather than solely reported in the aggregate. For example, over a 20-year period, methane is 86 times more potent than CO₂. The greater the methane emissions, the greater the chance that disruptive impacts from climate change will affect a company in the short- and mid-term.

Climate-related disclosures should also include reduction targets for super pollutants and short- and mid-term climate mitigation plans. These disclosures will inform investors about registrants' efforts to limit near-term climate-related risks by adapting to current threats while avoiding the worst consequences of climate change. Disclosures can also focus on complementary strategies such as avoided warming strategies (energy efficiency), which reduce a company's need for cooling while lowering the economic costs related to energy consumption.

Additionally, registrants should report in narrative form on their corporate climate policies and plans for responding to and participating in the transition to a low- or zero-carbon economy that is underway. Disclosures should include the policies, management practices, monitoring systems and targets in place to address climate change and reduce emissions in the short term (10 years) and medium term (20-30 years). These plans should address the threats that impacts from climate change pose to registrants, suppliers, and their customers. Additionally, companies should be planning for "fat tail" climate risks, ie: that warming may be greater than expected, partially because of feedbacks and tipping points, and thus the consequences worse.⁴⁷ Building on currently existing requirements, this narrative report should address the registrant's actions related to the changing legal and regulatory environment.

The Commission should also adopt a "double materiality" disclosure regime, in which registrants would report both how their activities are affected by climate change and how their activities affect climate change. Such a requirement could be similar to the standard included in the EU's Non-Financial Reporting Directive.⁴⁸ Under this standard, information is material if it is necessary for understanding the company's "development, performance, and position" or if it is necessary for understanding the "external impacts of the company."⁴⁹ This understanding of materiality is crucial in the climate context given the extent of action needed to adequately limit warming and the impacts that such action has on companies' activities and financial stability.

3. **What are the advantages and disadvantages of permitting investors, registrants, and other industry participants to develop disclosure standards mutually agreed by them? Should those standards satisfy minimum disclosure requirements established**

by the Commission? How should such a system work? What minimum disclosure requirements should the Commission establish if it were to allow industry-led disclosure standards? What level of granularity should be used to define industries (e.g., two-digit SIC, four-digit SIC, etc.)?

While disclosure standards mutually agreed to by industry participants, registrants, and investors have advantages, the urgency of the climate crisis calls for a minimum threshold that must be disclosed. This includes the above-mentioned emissions quantifications of pollutants, including super pollutants, as well as short- and mid-term plans to reduce these emissions. Determining the minimum threshold for disclosures should not be left to industry sectors or groups of reporting entities. If the Commission does allow industry-led disclosure standards, a uniform disclosure standard is preferable, perhaps with specific sector protocols to allow for the inclusion on nuances or specific data points that are particular to the sector.

4. What are the advantages and disadvantages of establishing different climate change reporting standards for different industries, such as the financial sector, oil and gas, transportation, etc.? How should any such industry-focused standards be developed and implemented?

Provided the Commission establishes a minimum threshold for reporting short-term plans and emissions of super pollutants, different standards for different industries can be helpful for better understanding the risks faced by registrants and how the registrants' actions exacerbate that risk. For certain sectors, abating super pollutant emissions will require significant changes, whereas other sectors will be able to more easily address super pollutant emissions. The energy transition and adaptation costs will also affect some sectors more than others. For example, the oil and gas sector disproportionately emits methane and is also implicated in the energy transition. Heavy-duty transportation and shipping have large black carbon footprints and are also increasingly affected by climate-driven transportation policies. Refrigeration and cooling appliances are largely responsible for HFC emissions and are impacted by EPA's ongoing regulatory actions pursuant to the American Innovation in Manufacturing (AIM) Act.

Sectors such as these that are both most affected by mitigation actions and contribute the most to short-term warming could have more detailed reporting requirements for super pollutant emissions and reduction priorities in a 10-year window. The Commission can also assist registrants in high-risk sectors by providing additional guidance to help with emissions reductions and transition planning disclosures.

5. What are the advantages and disadvantages of rules that incorporate or draw on existing frameworks, such as, for example, those developed by the Task Force on Climate-Related Financial Disclosures (TCFD), the Sustainability Accounting Standards Board (SASB), and the Climate Disclosure Standards Board (CDSB)? Are there any specific frameworks that the Commission should consider? If so, which frameworks and why?

Frameworks need to work towards harmonization at a global level, and the Commission has the opportunity to begin this standardization approach, particularly as pertains to the inclusion of

super pollutants and short term data and strategies, on which all reporting frameworks should be engaging. The Commission should specifically reach out to Sustainability Accounting Standards Board (SASB) and the Global Reporting Initiative (GRI) as foundations for the Commission's framework and to collaborate globally on this key disclosure need. As described in an April 2021 report by SASB and GRI, the two standards complement each other and can be used together to provide a more comprehensive report.⁵⁰ Working together the various frameworks can create resonance and achieve much broader widespread positive economic impact. Around 70% of the world's largest 250 companies already use GRI standards, and more than 1,000 companies reference SASB as an input to their reports.⁵¹

As regards super pollutants and short-term fast action climate strategies, the existing standards are insufficient. The Commission is poised to rectify this shortcoming. For example, GRI directs companies to disclose greenhouse gas emissions, ozone-depleting substances, as well as other air emissions.⁵² Currently there is no separate guidance regarding super pollutants reporting. By relying on firm global scientific consensus regarding the importance of super pollutant emissions, the Commission can improve upon existing frameworks to more accurately frame climate change risks to companies and the need to reduce super pollutant emissions in the next 10 years. Incorporating the four disclosure metrics specified above will help bring existing frameworks in line with a 1.5°C pathway.

- 6. How should any disclosure requirements be updated, improved, augmented, or otherwise changed over time? Should the Commission itself carry out these tasks, or should it adopt or identify criteria for identifying other organization(s) to do so? If the latter, what organization(s) should be responsible for doing so, and what role should the Commission play in governance or funding? Should the Commission designate a climate or ESG disclosure standard setter? If so, what should the characteristics of such a standard setter be? Is there an existing climate disclosure standard setter that the Commission should consider?**

A bi-yearly review or at least every three years is warranted. Climate change is increasingly impacting companies, and the policy framework surrounding the energy transition is rapidly accelerating. The 10-year window to contain warming to 1.5°C underscores the importance of reviewing standards frequently enough to ensure they remain based in science and provide accurate depictions of the risks faced by registrants and how registrants' actions are mitigating or exacerbating those risks.

The latest and best science should underpin the framework for any climate change disclosure framework. The Commission should regularly consult scientific experts, including at the IPCC and the CCAC. Additionally, we encourage the Commission to share or coordinate disclosure expansions, such as requiring disclosures of super pollutants, with other reporting frameworks.

- 7. What is the best approach for requiring climate-related disclosures? For example, should any such disclosures be incorporated into existing rules such as Regulation S-K or Regulation S-X, or should a new regulation devoted entirely to climate risks, opportunities, and impacts be promulgated? Should any such disclosures be filed with or furnished to the Commission?**

Climate-related disclosures should be incorporated into existing regulations. The disclosures recommended in this comment align with disclosures required by Regulation S-K. While some registrants already reference climate change in their annual reports, the discussion of the risks and mitigation opportunities is generally insufficient. Adding minimum climate-related disclosures to the existing rules will ensure robust information is provided to investors without greatly increasing the reporting burden on registrants.

8. How, if at all, should registrants disclose their internal governance and oversight of climate-related issues? For example, what are the advantages and disadvantages of requiring disclosure concerning the connection between executive or employee compensation and climate change risks and impacts?

Registrants should disclose internal governance systems, policies, monitoring systems, and oversight mechanisms of climate-related issues. To the extent feasible, this should include disclosure related to connections between executive compensation and climate change risks and mitigation obligations. Understanding these aspects of internal governance is important for investors to understand a registrant's decision making and its employees' propensity to shield the registrant from climate-related risks.

9. What are the advantages and disadvantages of developing a single set of global standards applicable to companies around the world, including registrants under the Commission's rules, versus multiple standard setters and standards? If there were to be a single standard setter and set of standards, which one should it be? What are the advantages and disadvantages of establishing a minimum global set of standards as a baseline that individual jurisdictions could build on versus a comprehensive set of standards? If there are multiple standard setters, how can standards be aligned to enhance comparability and reliability? What should be the interaction between any global standard and Commission requirements? If the Commission were to endorse or incorporate a global standard, what are the advantages and disadvantages of having mandatory compliance?

It is critical that we work towards global harmonization of standards or at least a minimum global set of standards as a baseline. As mentioned above, the combination of SASB and GRI frameworks, if improved upon to better address fast climate mitigation, could serve as this baseline.

Similarly, it is essential that such a set of standards be grounded in the internationally accepted science. Any effort to standardize climate disclosures should include collaboration with the IPCC and the CCAC, as well as other leading scientists who best understand the differing risks that registrants will face.

12. What are the advantages and disadvantages of a "comply or explain" framework for climate change that would permit registrants to either comply with, or if they do not comply, explain why they have not complied with the disclosure rules? How should

this work? Should “comply or explain” apply to all climate change disclosures or just select ones, and why?

Comply or explain should not apply to disclosures of super pollutant emissions, emissions reduction plans, or transition planning. This information is fundamental to understanding the registrant’s actions to overcome and minimize climate change’s impacts and to adapt to new realities. Allowing registrants to explain noncompliance could lead to uninformative responses that do not provide the necessary information to investors and other stakeholders. As the UK Financial Reporting Council (FRC) recently reported, its “comply or explain” rules produced “ineffective reporting that lacks substance and information about governance outcomes.”⁵³ The FRC went on to recommend information that should be included in any choice to “explain” to ensure explanations are substantive in nature.

If the Commission does choose to adopt a “comply or explain” framework for climate disclosures, it should be limited in its application and should clearly state the criteria that would justify noncompliance, a position that emissions data are ordinarily material, and standards for any explanation. At a minimum, “comply or explain” should not apply to super pollutant emissions data and reduction targets.

13. How should the Commission craft rules that elicit meaningful discussion of the registrant’s views on its climate-related risks and opportunities? What are the advantages and disadvantages of requiring disclosed metrics to be accompanied with a sustainability disclosure and analysis section similar to the current Management’s Discussion and Analysis of Financial Condition and Results of Operations?

As discussed above, while the quantitative disclosures are essential, they must be accompanied by a narrative analysis section. Such reporting should include short- and mid-term planning by the registrant, which is material information for understanding how they will mitigate climate-related risks and disruptions, by pollutant and by the temporal importance of addressing each pollutant within a given time frame. Because the transition to a low- or zero-carbon economy requires continuous planning and evaluation, the registrant’s perspective on the quantitative emissions data reported, as well as the related temporal risks and opportunities implied, provides important insight into the registrant’s actual commitment to addressing climate risks and proactively adapting its operations.

The need for narrative reporting is especially true in the short term, as many companies are only beginning to fully acknowledge and appropriately plan for climate change’s impacts. The Commission can help guide companies and facilitate a smooth economic transition to a low- or zero-carbon economy by requiring robust qualitative reporting.

14. What climate-related information is available with respect to private companies, and how should the Commission’s rules address private companies’ climate disclosures, such as through exempt offerings, or its oversight of certain investment advisers and funds?

The Commission should engage with private companies in a broader discussion, by sector and economy wide, on the four key components to planning for a 1.5°C pathway, with a strong short-term focus on super pollutants to complement long-term CO₂ emissions reduction strategies:

1. Quantitative reports of emissions of methane, HFCs, and black carbon;
2. Quantitative emission reduction targets for methane, HFCs, and black carbon;
3. Short-term (10 year) and mid-term (20-30 year) emission reductions and transition plans; and
4. Governance systems, policies, monitoring systems, and oversight mechanisms related to climate-related risks and opportunities.

15. In addition to climate-related disclosure, the staff is evaluating a range of disclosure issues under the heading of environmental, social, and governance, or ESG, matters. Should climate-related requirements be one component of a broader ESG disclosure framework? How should the Commission craft climate-related disclosure requirements that would complement a broader ESG disclosure standard? How do climate-related disclosure issues relate to the broader spectrum of ESG disclosure issues?

Climate-related disclosures are inherently a part of ESG, as failing to limit warming will have severe consequences on all aspects of society, including equity, labor, and the natural environment. For instance, climate impacts disproportionately affect already disadvantaged communities, and the transition to a low- or zero-carbon economy will have significant implications – both negative and positive – for workers in some sectors. As noted by the science above, climate change also threatens natural resources, including water access and other traditional environmental concerns.

The short- and mid-term transition planning by registrants would touch upon many ESG considerations and could be strengthened by incorporating a broader ESG lens. For example, disclosures should address environmental justice and social equity, including how a registrant is ensuring that its activities do not contribute to or sustain – and preferably help to reverse – systemic inequality and environmental racism and injustice. This requirement could be part of the narrative analysis that sheds light on the current emissions of the registrant and the registrant’s emission reduction plans. Similarly, transition plans should indicate how the registrant expects to address changes to its workforce and, as needed, transition its workforce to new skills and opportunities.

¹ SEC, *SEC Response to Climate and ESG Risks and Opportunities* (last visited 09 June 2021) (“As investor demand for climate and other environmental, social and governance (ESG) information soars, the SEC is responding with an all-agency approach.”).

² Allen, M.R., *et al.* (2018) *Summary for Policymakers*, in Intergovernmental Panel on Climate Change (IPCC) *GLOBAL WARMING OF 1.5°C*, MassonDelmotte, V., *et al.* (eds.).

³ Allen, M.R., *et al.* (2018) *Summary for Policymakers*, in Intergovernmental Panel on Climate Change (IPCC) *GLOBAL WARMING OF 1.5°C*, MassonDelmotte, V., *et al.* (eds.), 9.

⁴ Allen, M.R., *et al.* (2018) *Summary for Policymakers*, in Intergovernmental Panel on Climate Change (IPCC) *GLOBAL WARMING OF 1.5°C*, MassonDelmotte, V., *et al.* (eds.), 8 (“Of 105,000 species studied, 9 6% of insects, 8% of plants and 4% of vertebrates are projected to lose over half of their climatically determined geographic range for

global warming of 1.5°C, compared with 18% of insects, 16% of plants and 8% of vertebrates for global warming of 2°C (*medium confidence*). Impacts associated with other biodiversity-related risks such as forest fires and the spread of invasive species are lower at 1.5°C compared to 2°C of global warming (*high confidence*). {3.4.3, 3.5.2}”).

⁵ Allen, M.R., *et al.* (2018) *Summary for Policymakers*, in Intergovernmental Panel on Climate Change (IPCC) [GLOBAL WARMING OF 1.5°C](#), MassonDelmotte, V., *et al.* (eds.), 9 (“Risks to global aggregated economic growth due to climate change impacts are projected to be lower at 1.5°C than at 2°C by the end of this century¹⁰ (*medium confidence*). This excludes the costs of mitigation, adaptation investments and the benefits of adaptation. Countries in the tropics and Southern Hemisphere subtropics are projected to experience the largest impacts on economic growth due to climate change should global warming increase from 1.5°C to 2°C (*medium confidence*). {3.5.2, 3.5.3}”).

⁶ Allen, M.R., *et al.* (2018) *Summary for Policymakers*, in Intergovernmental Panel on Climate Change (IPCC) [GLOBAL WARMING OF 1.5°C](#), MassonDelmotte, V., *et al.* (eds.), 10 (“Most adaptation needs will be lower for global warming of 1.5°C compared to 2°C (*high confidence*). There are a wide range of adaptation options that can reduce the risks of climate change (*high confidence*). There are limits to adaptation and adaptive capacity for some human and natural systems at global warming of 1.5°C, with associated losses (*medium confidence*). The number and availability of adaptation options vary by sector (*medium confidence*). {Table 3.5, 4.3, 4.5, CrossChapter Box 9 in Chapter 4, Cross-Chapter Box 12 in Chapter 5}”).

⁷ Allen, M.R., *et al.* (2018) *Summary for Policymakers*, in Intergovernmental Panel on Climate Change (IPCC) [GLOBAL WARMING OF 1.5°C](#), MassonDelmotte, V., *et al.* (eds.), 10 (“Limits to adaptive capacity exist at 1.5°C of global warming, become more pronounced at higher levels of warming and vary by sector, with site-specific implications for vulnerable regions, ecosystems and human health (*medium confidence*). {Cross-Chapter Box 12 in Chapter 5, Box 3.5, Table 3.5}”).

⁸ World Meteorological Organization (2021) *The State of the Global Climate 2020* (“In 2020, GMST was 1.2 ± 0.1 °C warmer than the pre-industrial baseline (1850-1900). Despite developing La Niña cooling conditions, 2020 was one of the three warmest years on record.”).

⁹ Kopp R. E., *et al.* (2017) *Potential surprises – compound extremes and tipping elements*, in CLIMATE SCIENCE SPECIAL REPORT: FOURTH NATIONAL CLIMATE ASSESSMENT, VOLUME I (“Negative feedbacks, or self-stabilizing cycles, within and between components of the Earth system can dampen changes (Ch. 2: Physical Drivers of Climate Change). However, their stabilizing effects render such feedbacks of less concern from a risk perspective than positive feedbacks, or self-reinforcing cycles. Positive feedbacks magnify both natural and anthropogenic changes. Some Earth system components, such as arctic sea ice and the polar ice sheets, may exhibit thresholds beyond which these self-reinforcing cycles can drive the component, or the entire system, into a radically different state.”); Lenton T. M., Rockstrom J., Gaffney O., Rahmstorf S., Richardson K., Steffen W., & Schellnhuber H. J. (2019) *Climate tipping points—too risky to bet against*, NATURE, Comment, 575(7784):592–595, 594 (“In our view, the clearest emergency would be if we were approaching a global cascade of tipping points that led to a new, less habitable, ‘hothouse’ climate state¹¹. Interactions could happen through ocean and atmospheric circulation or through feedbacks that increase greenhouse-gas levels and global temperature. Alternatively, strong cloud feedbacks could cause a global tipping point¹²⁻¹³. We argue that cascading effects might be common. Research last year¹⁴ analysed 30 types of regime shift spanning physical climate and ecological systems, from collapse of the West Antarctic ice sheet to a switch from rainforest to savanna. This indicated that exceeding tipping points in one system can increase the risk of crossing them in others. Such links were found for 45% of possible interactions¹⁴. In our view, examples are starting to be observed. ... If damaging tipping cascades can occur and a global tipping point cannot be ruled out, then this is an existential threat to civilization. No amount of economic cost–benefit analysis is going to help us. We need to change our approach to the climate problem. ... In our view, the evidence from tipping points alone suggests that we are in a state of planetary emergency: both the risk and urgency of the situation are acute....”).

¹⁰ Drijfhout S., Bathiany S., Beaulieu C., Brovkin V., Claussen M., Huntingford C., Scheffer M., Sgubin G., & Swingedouw D. (2015) *Catalogue of abrupt shifts in Intergovernmental Panel on Climate Change climate models*, PROC. NAT’L. ACAD. SCI. 112(43):E5777–E5786, E5777 (“Abrupt transitions of regional climate in response to the gradual rise in atmospheric greenhouse gas concentrations are notoriously difficult to foresee. However, such events could be particularly challenging in view of the capacity required for society and ecosystems to adapt to them. We present, to our knowledge, the first systematic screening of the massive climate model ensemble informing the recent

Intergovernmental Panel on Climate Change report, and reveal evidence of 37 forced regional abrupt changes in the ocean, sea ice, snow cover, permafrost, and terrestrial biosphere that arise after a certain global temperature increase. Eighteen out of 37 events occur for global warming levels of less than 2°, a threshold sometimes presented as a safe limit.”). See also Lenton T. M., Rockstrom J., Gaffney O., Rahmstorf S., Richardson K., Steffen W., & Schellnhuber H. J. (2019) *Climate tipping points—too risky to bet against*, NATURE, Comment, 575(7784):592–595, 593 (“A further key impetus to limit warming to 1.5 °C is that other tipping points could be triggered at low levels of global warming. The latest IPCC models projected a cluster of abrupt shifts between 1.5 °C and 2 °C, several of which involve sea ice. This ice is already shrinking rapidly in the Arctic....”).

¹¹ Lenton T. M., Rockstrom J., Gaffney O., Rahmstorf S., Richardson K., Steffen W., & Schellnhuber H. J. (2019) *Climate tipping points—too risky to bet against*, NATURE, Comment, 575(7784):592–595, 594 (“In our view, the clearest emergency would be if we were approaching a global cascade of tipping points that led to a new, less habitable, ‘hothouse’ climate state¹¹. Interactions could happen through ocean and atmospheric circulation or through feedbacks that increase greenhouse-gas levels and global temperature. Alternatively, strong cloud feedbacks could cause a global tipping point¹²⁻¹³. We argue that cascading effects might be common. Research last year¹⁴ analysed 30 types of regime shift spanning physical climate and ecological systems, from collapse of the West Antarctic ice sheet to a switch from rainforest to savanna. This indicated that exceeding tipping points in one system can increase the risk of crossing them in others. Such links were found for 45% of possible interactions¹⁴. In our view, examples are starting to be observed. ... If damaging tipping cascades can occur and a global tipping point cannot be ruled out, then this is an existential threat to civilization. No amount of economic cost–benefit analysis is going to help us. We need to change our approach to the climate problem. ... In our view, the evidence from tipping points alone suggests that we are in a state of planetary emergency: both the risk and urgency of the situation are acute....”); see also Steffen W., *et al.* (2018) *Trajectories of the Earth System in the Anthropocene*, PROC. NAT’L. ACAD. SCI. 115(33):8252–8259, 8254 (“This analysis implies that, even if the Paris Accord target of a 1.5 °C to 2.0 °C rise in temperature is met, we cannot exclude the risk that a cascade of feedbacks could push the Earth System irreversibly onto a “Hothouse Earth” pathway. The challenge that humanity faces is to create a “Stabilized Earth” pathway that steers the Earth System away from its current trajectory toward the threshold beyond which is Hothouse Earth (Fig. 2). The human created Stabilized Earth pathway leads to a basin of attraction that is not likely to exist in the Earth System’s stability landscape without human stewardship to create and maintain it. Creating such a pathway and basin of attraction requires a fundamental change in the role of humans on the planet. This stewardship role requires deliberate and sustained action to become an integral, adaptive part of Earth System dynamics, creating feedbacks that keep the system on a Stabilized Earth pathway (Alternative Stabilized Earth Pathway).”).

¹² IGSD & CHRE (2021) *The Need for Fast Near-Term Climate Mitigation to Slow Feedbacks and Tipping Points* (“Over the past several decades the Arctic air temperature has been warming at three times the global average according to NOAA and NASA, and up to four times the global average for the area above 70°N,¹² with even greater warming over the Arctic ocean. As a result, the extent of Arctic sea ice—a white shield reflecting incoming solar radiating safely back to space—is shrinking.”) (internal citations omitted).

¹³ Slater T., Lawrence I., Otosaka I. Shepherd A., Gourmelen N., Jacob L., Tepes P., Gilbert L., & Nienow P. (2021) *Earth's ice imbalance*, THE CRYOSPHERE 15(1):233–246, 233 (“Arctic sea ice (7.6 trillion tonnes), Antarctic ice shelves (6.5 trillion tonnes), mountain glaciers (6.1 trillion tonnes), the Greenland ice sheet (3.8 trillion tonnes), the Antarctic ice sheet (2.5 trillion tonnes), and Southern Ocean sea ice (0.9 trillion tonnes) have all decreased in mass [T]here can be little doubt that the vast majority of Earth's ice loss is a direct consequence of climate warming.”).

¹⁴ Pistone K., Eisenman I., & Ramanathan V. (2014) *Observational determination of albedo decrease caused by vanishing Arctic sea ice*, PROC. NAT’L. ACAD. SCI. 111(9):3322–3326 (“The Arctic has warmed by nearly 2 °C since the 1970s, a temperature change three times larger than the global mean (1). During this period, the Arctic sea ice cover has retreated significantly, with the summer minimum sea ice extent decreasing by 40% (2).”) See also Jansen E. *et al.* (2020) *Past perspectives on the present era of abrupt Arctic climate change*, NAT. CLIM. CHANGE 10:714–721, 714 (“Annual mean temperature trends over the Arctic during the past 40 years show that over this period, where satellite data are available, major portions have warmed by more than 1 °C per decade (Fig. 1a, red colours and outlined portion; a warming of 4 °C within 40 years is hereafter referred to as 1 °C per decade). ... Using a criterion based on the speed of near-surface air temperature warming over the past four decades, we find that the current Arctic is experiencing rates of warming comparable to abrupt changes, or D–O events, recorded in Greenland ice cores during the last glacial period. [During the last glacial period (120,000–11,000 years ago), more than 20 abrupt periods of

warming, known as Dansgaard–Oeschger (D–O) events, took place^{18:19}.] Both past changes in the Greenland ice cores and the ongoing trends in the Arctic are directly linked to sea-ice retreat—in the Nordic Seas during glacial times and in the Eurasian Arctic at present. Abrupt changes have already been experienced and could, according to state-of-the-art climate models, occur in the Arctic during the twenty-first century, but climate models underestimate current rates of change in this region.”).

¹⁵ Overland J. E., *et al.* (2014) *Future Arctic climate changes: Adaptation and mitigation time scales*, EARTH’S FUTURE 2:68–74, 68 (“The climate in the Arctic is changing faster than in midlatitudes. This is shown by increased temperatures, loss of summer sea ice, earlier snow melt, impacts on ecosystems, and increased economic access. Arctic sea ice volume has decreased by 75% since the 1980s. Long-lasting global anthropogenic forcing from carbon dioxide has increased over the previous decades and is anticipated to increase over the next decades. Temperature increases in response to greenhouse gases are amplified in the Arctic through feedback processes associated with shifts in albedo, ocean and land heat storage, and near-surface longwave radiation fluxes. Thus, for the next few decades out to 2040, continuing environmental changes in the Arctic are very likely, and the appropriate response is to plan for adaptation to these changes. For example, it is very likely that the Arctic Ocean will become seasonally nearly sea-ice free before 2050 and possibly within a decade or two, which in turn will further increase Arctic temperatures, economic access, and ecological shifts. Mitigation becomes an important option to reduce potential Arctic impacts in the second half of the 21st century. Using the most recent set of climate model projections (CMIP5), multimodel mean temperature projections show an Arctic-wide end of century increase of +13 °C in late fall and +5 °C in late spring for a business-as-usual emission scenario (RCP8.5) in contrast to +7 °C in late fall and +3 °C in late spring if civilization follows a mitigation scenario (RCP4.5). Such temperature increases demonstrate the heightened sensitivity of the Arctic to greenhouse gas forcing.”); *see also* Overland J. E. & Wang M. (2013) *When will the summer Arctic be nearly sea ice free?*, GEOPHYSICAL RESEARCH LETTERS 40:2097–2101, 2100 (“Direct extrapolation of sea ice volume, by trendsetters, gives loss projections of 2016 [Maslowski *et al.*, 2012] (Peter Wadhams, 2012, personal communication), which may be minimizing the potential effects of year-to-year variability. Stochasters acknowledge current conditions and the range of projections suggested by model results yet point to the lack of being able to forecast the next rapid sea ice loss event. They are saved in part as it will possibly take several such events to reach the nearly sea ice-free threshold, thus adding some averaging to the final date prediction (hence stochastic). Observations and citations in this article support the conclusion that current rapid Arctic change, especially loss of multiyear sea ice, is likely out of sample for most CMIP5 models. Thus, time horizons for summer sea ice loss of these three approaches turns out to be roughly 2020, 2030, and 2040 respectively for trendsetters, stochasters, and modelers. Predictions depend on the weight given to data, understanding of Arctic change processes, and the use of model projections. It is reasonable to conclude that Arctic sea ice loss is very likely to occur in the first rather than the second half of the 21st century, with a possibility of loss within a decade or two.”).

¹⁶ Pistone K., Eisenman I., & Ramanathan V. (2019) *Radiative Heating of an Ice-Free Arctic Ocean*, GEOPHYS. RSCH. LETT. 46(13):7474–7480, 7477 (“This heating of 0.71 W/m² is approximately equivalent to the direct radiative effect of emitting one trillion tons of CO₂ into the atmosphere (see calculation in Appendix A). As of 2016, an estimated 2.4 trillion tons of CO₂ have been emitted since the preindustrial period due to both fossil fuel combustion (1.54 trillion tons) and land use changes (0.82 trillion tons), with an additional 40 billion tons of CO₂ per year emitted from these sources during 2007–2016 (Le Quéré *et al.*, 2018). Thus, the additional warming due to the complete loss of Arctic sea ice would be equivalent to 25 years of global CO₂ emissions at the current rate.”). *See also* IGSD’s Plain Language Summary of Pistone K., *et al.* (2019), Institute for Governance & Sustainable Development.

¹⁷ de Coninck, H., *et al.* (2018) *Strengthening and Implementing the Global Response*, in GLOBAL WARMING OF 1.5°C, Masson-Delmotte, V., *et al.* (eds.), 341 (“Mitigation options for warming SLCFs often overlap with other mitigation options, especially since many warming SLCFs are co-emitted with CO₂. SLCFs are generally mitigated in 1.5°C- or 2°C-consistent pathways as an integral part of an overall mitigation strategy (Chapter 2). For example, Section 2.3 indicates that most very- low-emissions pathways include a transition away from the use of coal and natural gas in the energy sector and oil in transportation, which coincides with emission-reduction strategies related to methane from the fossil fuel sector and BC from the transportation sector. Much SLCF emission reduction aims at BC-rich sectors and considers the impacts of several co-emitted SLCFs (Bond *et al.*, 2013; Sand *et al.*, 2015; Stohl *et al.*, 2015). The benefits of such strategies depend greatly upon the assumed level of progression of access to modern energy for the poorest populations who still rely on biomass fuels, as this affects the reference level of BC emissions (Rogelj *et al.*, 2014).”).

¹⁸ Allen, M.R., *et al.* (2018) *Summary for Policymakers*, in Intergovernmental Panel on Climate Change (IPCC) [GLOBAL WARMING OF 1.5°C](#), MassonDelmotte, V., *et al.* (eds.), 18 (“Pathways that limit global warming to 1.5°C with no or limited overshoot show clear emission reductions by 2030 (*high confidence*). All but one show a decline in global greenhouse gas emissions to below 35 GtCO₂eq yr⁻¹ in 2030, and half of available pathways fall within the 25–30 GtCO₂eq yr⁻¹ range (interquartile range), a 40–50% reduction from 2010 levels (*high confidence*). Pathways reflecting current nationally stated mitigation ambition until 2030 are broadly consistent with cost-effective pathways that result in a global warming of about 3°C by 2100, with warming continuing afterwards (*medium confidence*). {2.3.3, 2.3.5, Cross-Chapter Box 11 in Chapter 4, 5.5.3.2}”); *see also* Xu Y., Ramanathan V., & Victor D. G. (2018) *Global warming will happen faster than we think*, NATURE, Comment, 564(7734):30–32, 30–31 (“But the latest IPCC special report underplays another alarming fact: global warming is accelerating. Three trends—rising emissions, declining air pollution and natural climate cycles—will combine over the next 20 years to make climate change faster and more furious than anticipated. In our view, there’s a good chance that we could breach the 1.5 °C level by 2030, not by 2040 as projected in the special report (see ‘Accelerated warming’). The climate-modelling community has not grappled enough with the rapid changes that policymakers care most about, preferring to focus on longer-term trends and equilibria.”).

¹⁹ CCAC (2021) [GLOBAL METHANE ASSESSMENT](#), 21 (“Methane mitigation offer a way of rapidly reducing the rate of near-term warming. Also, mitigation of methane, along with non- fossil greenhouse gases including some hydrofluorocarbons (HFCs) and black carbon-rich sources of particulate matter (PM), is the only plausible way of decreasing warming relative to a reference case with minimal changes in current policies over the next 20 years. This is because a realistically paced phase-out of fossil fuels, or even a rapid one under aggressive decarbonization, is likely to have minimal net impacts on near-term temperatures due to the removal of co-emitted aerosols (Shindell and Smith 2019). As methane is the most powerful driver of climate change among the short-lived substances (Myhre *et al.* 2013), mitigation of methane emissions is very likely to be the most powerful lever in reducing near-term warming. This is consistent with other assessments; for example, the Intergovernmental Panel on Climate Change Fifth Assessment Report (IPCC AR5) showed that methane controls implemented between 2010 and 2030 would lead to a larger reduction in 2040 warming than the difference between RCPs 2.6, 4.5 and 6.0 scenarios. (The noted IPCC AR5-era scenarios are called representative concentration pathways (RCPs, with the numerical value indicating the target radiative forcing in 2100 (Kirtman *et al.* 2013)).”).

²⁰ CCAC, [Methane](#) (*last visited* 09 June 2021) (“Methane is a short-lived climate pollutant with an atmospheric lifetime of around 12 years. While its lifetime in the atmosphere is much shorter than carbon dioxide (CO₂), it is much more efficient at trapping radiation. Per unit of mass, the impact of methane on climate change over 20 years is **86 times greater than CO₂**; over a 100-year period it is 28 times greater.”).

²¹ CCAC (2021) [GLOBAL METHANE ASSESSMENT](#), 8 (“Reducing human-caused methane emissions is one of the most cost-effective strategies to rapidly reduce the rate of warming and contribute significantly to global efforts to limit temperature rise to 1.5°C. Available targeted methane measures, together with additional measures that contribute to priority development goals, can simultaneously reduce human-caused methane emissions by as much as 45 per cent, or 180 million tonnes a year (Mt/yr) by 2030. This will avoid nearly 0.3°C of global warming by the 2040s and complement all long-term climate change mitigation efforts. It would also, each year, prevent 255 000 premature deaths, 775 000 asthma- related hospital visits, 73 billion hours of lost labour from extreme heat, and 26 million tonnes of crop losses globally (Figure ES1).”).

²² CCAC, [Short-Lived Climate Pollutants](#) (*last visited* 09 June 2021) (“Widespread and fast action to reduce short-lived climate pollutant emissions has the potential to reduce the amount of warming that would occur over the next few decades **by as much as 0.6°C**. Such actions would also prevent climate tipping points that could exacerbate long-term climate impacts and make adapting to climate change harder, especially for the poor and most vulnerable.”).

²³ Swiss Re Institute (2021) [The economics of climate change: no action not an option](#), 1 (“Recent scientific research indicates that current likely temperature-rise trajectories, supported by implementation of mitigation pledges, would entail 2.0–2.6°C global warming by mid-century. We use this as the baseline to simulate the impact of rising temperatures over time, while also modelling for the uncertainties around most severe possible physical outcomes. The result is that global GDP would be 11–14% less than in a world without climate change (ie, 0°C change). Under the same no climate change comparative, the Paris target too result in negative GDP impact, but less much so (–4.2%). We also consider a severe scenario in which temperatures rise by 3.2°C by mid-century, with society doing nothing

to combat climate change. In this scenario, the global economy would be 18% smaller than in a world without warming, reinforcing the imperative of, if anything, more action on climate change.”).

²⁴ See e.g. G7 (21 May 2021) [G7 Climate and Environment Ministers’ Meeting Communiqué](#) (“We highlight with deep concern the findings from the IPCC Special Report 2018, and recognise the need to reduce the global level of annual GHG emissions to 25-30 Gt of carbon dioxide equivalent or lower by 2030 to put the world on track to limit global warming to 1.5°C above pre-industrial levels, in order to reduce the risk of catastrophic consequences of climate change. We commit to submitting long-term strategies (LTSS) that set out concrete pathways to net zero GHG emissions by 2050 as soon as possible, making utmost efforts to do so by COP26. We commit to updating them regularly, including to reflect on the latest science, as well as technological and market developments. We also note with concern the initial version of the NDC Synthesis Report prepared by the UNFCCC Secretariat which highlights that many parties are yet to submit new and updated NDCs. NDCs communicated by 2020 collectively fall far short of the ranges found in pathways identified by the IPCC, which limit global warming to 1.5°C or well below 2°C. We welcome the significantly enhanced ambition reflected in 2030 targets announced by all G7 members, which put us on clear and credible pathways towards our respective 2050 net zero GHG emission reduction targets. We note the important contribution these commitments make towards keeping 1.5°C within reach and in providing an unequivocal direction of travel for business, investors and society at large. Those of us who have not already done so commit to submitting our enhanced NDCs to the UNFCCC as soon as possible ahead of COP26.”); Allen, M.R., *et al.* (2018) [Summary for Policymakers](#), in Intergovernmental Panel on Climate Change (IPCC) [GLOBAL WARMING OF 1.5°C](#), MassonDelmotte, V., *et al.* (eds.), 18 (“Pathways that limit global warming to 1.5°C with no or limited overshoot show clear emission reductions by 2030 (*high confidence*). All but one show a decline in global greenhouse gas emissions to below 35 GtCO₂eq yr⁻¹ in 2030, and half of available pathways fall within the 25–30 GtCO₂eq yr⁻¹ range (interquartile range), a 40–50% reduction from 2010 levels (*high confidence*). Pathways reflecting current nationally stated mitigation ambition until 2030 are broadly consistent with cost-effective pathways that result in a global warming of about 3°C by 2100, with warming continuing afterwards (*medium confidence*). {2.3.3, 2.3.5, Cross-Chapter Box 11 in Chapter 4, 5.5.3.2}”).

²⁵ United Nations Framework Convention on Climate Change (2016) [Just Transition of the Workforce, and the Creation of Decent Work and Quality Jobs](#), 17 (“Most studies that have investigated the net impact on employment of environmental policy measures suggest it is positive. A review of 30 studies (covering individual countries and economic regions) has found that meaningful employment gains either have been achieved or are possible through the pursuit of climate policies (ILO and ILS, 2012). Most of the studies indicated net employment gains of 0.5–2 per cent, or 15–60 million additional jobs globally. [...] The likelihood that the overall net employment outcome will be positive should not obscure the reality that far-reaching mitigation policies will change global, regional and national economies in potentially profound ways and severely disrupt the lives of affected workers and their communities. Regions which lack diversification (with a high degree of dependence on a single industry), which have a limited capacity for innovation, or whose economic mainstay is vulnerable to decisions made elsewhere will face the greatest challenge, as will workers with skills that are in less demand or who are unable to acquire new skills. The situation is also more challenging if the shift in demand of occupation is in a sector that offers a big share of employment for the region (e.g. agriculture). Such concerns are particularly strong for (but not limited to) developing countries.”).

²⁶ Allen, M.R., *et al.* (2018) [Summary for Policymakers](#), in Intergovernmental Panel on Climate Change (IPCC) [GLOBAL WARMING OF 1.5°C](#), MassonDelmotte, V., *et al.* (eds.), 9 (“Populations at disproportionately higher risk of adverse consequences with global warming of 1.5°C and beyond include disadvantaged and vulnerable populations, some indigenous peoples, and local communities dependent on agricultural or coastal livelihoods (*high confidence*). Regions at disproportionately higher risk include Arctic ecosystems, dryland regions, small island developing states, and Least Developed Countries (*high confidence*). Poverty and disadvantage are expected to increase in some populations as global warming increases; limiting global warming to 1.5°C, compared with 2°C, could reduce the number of people both exposed to climate-related risks and susceptible to poverty by up to several hundred million by 2050 (*medium confidence*). {3.4.10, 3.4.11, Box 3.5, Cross-Chapter Box 6 in Chapter 3, Cross-Chapter Box 9 in Chapter 4, Cross-Chapter Box 12 in Chapter 5, 4.2.2.2, 5.2.1, 5.2.2, 5.2.3, 5.6.3}”); see also D. Simmons (29 July 2020) [What is ‘climate justice’?](#), *Yale Climate Connections* (“Climate change, an inherently social issue, can upset anyone’s daily life in countless ways. But not all climate impacts are created equal, or distributed equally. From extreme weather to rising sea levels, the effects of climate change often have disproportionate effects on historically marginalized or underserved communities.”).

²⁷ World Economic Forum (2021) *The Global Risks Report 2021*, 5 (“Our analysis centres on the risks and consequences of widening inequalities and societal fragmentation. In some cases, disparities in health outcomes, technology, or workforce opportunities are the direct result of the dynamics the pandemic created. In others, already present societal divisions have widened, straining weak safety nets and economic structures beyond capacity. Whether the gaps can be narrowed will depend on the actions taken in the wake of COVID-19 to rebuild with a view towards an inclusive and accessible future. Inaction on economic inequalities and societal divisiveness may further stall action on climate change—still an existential threat to humanity.”).

²⁸ SASB & GRI (2021) *A Practical Guide to Sustainability Reporting Using GRI and SASB Standards*, 5 (“Transparency is the best currency for creating trust among organizations and their stakeholders, including investors. That is why companies and other organizations focus on disclosing the information each stakeholder group requires. GRI and SASB provide compatible standards for such disclosures. Their standards are mutually supportive and designed to fulfill different purposes.”).

²⁹ Directive 2014/95/EU (22 October 2014).

³⁰ Press Release, Ceres (13 May 2021) *Major investors demand ambitious methane* (“As the Biden administration prepares to revise federal methane regulations, 147 oil and gas industry investors representing \$5.35 trillion in assets under management [signed on to a statement](#) calling for comprehensive regulations to curb dangerous GHG emissions — and more stringent enforcement mechanisms to back them up. As “prudent fiduciaries”, the statement says, the [signatories](#) believe that virtually eliminating methane emissions supports the financial goals of companies and investors. “By taking action on methane emissions, government can achieve valuable greenhouse gas reductions while helping American industry become cleaner and more competitive,” it continues. In 2019, U.S. oil and gas operations emitted 16 million metric tons of methane emissions, with a [near-term climate impact](#) greater than all U.S. coal-fired power plants.”).

³¹ Swiss Re Institute (2021) *The economics of climate change: no action not an option*, 1 (“Recent scientific research indicates that current likely temperature-rise trajectories, supported by implementation of mitigation pledges, would entail 2.0–2.6°C global warming by mid-century. We use this as the baseline to simulate the impact of rising temperatures over time, while also modelling for the uncertainties around most severe possible physical outcomes. The result is that global GDP would be 11–14% less than in a world without climate change (ie, 0°C change). Under the same no climate change comparative, the Paris target too result in negative GDP impact, but less much so (–4.2%). We also consider a severe scenario in which temperatures rise by 3.2°C by mid-century, with society doing nothing to combat climate change. In this scenario, the global economy would be 18% smaller than in a world without warming, reinforcing the imperative of, if anything, more action on climate change.”); World Economic Forum (2021) *The Global Risks Report 2021*, 7 (“Among the highest likelihood risks of the next ten years are extreme weather, climate action failure and human-led environmental damage; as well as digital power concentration, digital inequality and cybersecurity failure. Among the highest impact risks of the next decade, infectious diseases are in the top spot, followed by climate action failure and other environmental risks; as well as weapons of mass destruction, livelihood crises, debt crises and IT infrastructure breakdown.”).

³² CDP (2021) *Transparency to Transformation: A Chain Reaction*, 13 (“This is easily justified by the scale of the problem. In 2020, suppliers reported that they were exposed to some US\$1.21 trillion in potential financial impact related to climate change.”).

³³ CDP (2021) *Transparency to Transformation: A Chain Reaction*, 9 (“In 2020, over 8,000 suppliers disclosing through CDP reported that US\$1.26 trillion of revenue is likely to be at risk over the next five years due to climate change, deforestation and water insecurity. The anticipated financial risk covers potential loss of revenue due to changing consumer preferences, loss of access to capital, and increased operational costs. The increased costs alone amount to as much as US\$120 billion, and are caused by physical environmental impacts as well as addressing regulation and market changes.”).

³⁴ Swiss Re Institute (2021) *The economics of climate change: no action not an option*, 1 (“Recent scientific research indicates that current likely temperature-rise trajectories, supported by implementation of mitigation pledges, would entail 2.0–2.6°C global warming by mid-century. We use this as the baseline to simulate the impact of rising

temperatures over time, while also modelling for the uncertainties around most severe possible physical outcomes. The result is that global GDP would be 11–14% less than in a world without climate change (ie, 0°C change). Under the same no climate change comparative, the Paris target too result in negative GDP impact, but less much so (–4.2%). We also consider a severe scenario in which temperatures rise by 3.2°C by mid-century, with society doing nothing to combat climate change. In this scenario, the global economy would be 18% smaller than in a world without warming, reinforcing the imperative of, if anything, more action on climate change.”).

³⁵ See e.g. G7 (21 May 2021) [G7 Climate and Environment Ministers’ Meeting Communiqué](#) (“We highlight with deep concern the findings from the IPCC Special Report 2018, and recognise the need to reduce the global level of annual GHG emissions to 25-30 Gt of carbon dioxide equivalent or lower by 2030 to put the world on track to limit global warming to 1.5°C above pre-industrial levels, in order to reduce the risk of catastrophic consequences of climate change. We commit to submitting long-term strategies (LTSs) that set out concrete pathways to net zero GHG emissions by 2050 as soon as possible, making utmost efforts to do so by COP26. We commit to updating them regularly, including to reflect on the latest science, as well as technological and market developments. We also note with concern the initial version of the NDC Synthesis Report prepared by the UNFCCC Secretariat which highlights that many parties are yet to submit new and updated NDCs. NDCs communicated by 2020 collectively fall far short of the ranges found in pathways identified by the IPCC, which limit global warming to 1.5°C or well below 2°C. We welcome the significantly enhanced ambition reflected in 2030 targets announced by all G7 members, which put us on clear and credible pathways towards our respective 2050 net zero GHG emission reduction targets. We note the important contribution these commitments make towards keeping 1.5°C within reach and in providing an unequivocal direction of travel for business, investors and society at large. Those of us who have not already done so commit to submitting our enhanced NDCs to the UNFCCC as soon as possible ahead of COP26.”); Allen, M.R., *et al.* (2018) *Summary for Policymakers*, in Intergovernmental Panel on Climate Change (IPCC) [GLOBAL WARMING OF 1.5°C](#), MassonDelmotte, V., *et al.* (eds.), 18 (“Pathways that limit global warming to 1.5°C with no or limited overshoot show clear emission reductions by 2030 (*high confidence*). All but one show a decline in global greenhouse gas emissions to below 35 GtCO₂eq yr^{–1} in 2030, and half of available pathways fall within the 25–30 GtCO₂eq yr^{–1} range (interquartile range), a 40–50% reduction from 2010 levels (*high confidence*). Pathways reflecting current nationally stated mitigation ambition until 2030 are broadly consistent with cost-effective pathways that result in a global warming of about 3°C by 2100, with warming continuing afterwards (*medium confidence*). {2.3.3, 2.3.5, Cross-Chapter Box 11 in Chapter 4, 5.5.3.2}”).

³⁶ [Consolidated Appropriations Act, 2021](#), H.R. 133, 116th Cong., Div. S §103 (2020)(enacted); *see also* Environmental Protection Agency, [AIM Act](#) (*last visited* 09 June 2021) (“On December 27, 2020, the American Innovation and Manufacturing (AIM) Act of 2020 was enacted as section 103 in Division S, Innovation for the Environment, of the Consolidated Appropriations Act, 2021 ([H.R. 133 \(116th\): Consolidated Appropriations Act, 2021 \[Including Coronavirus Stimulus & Relief\]](#)). The AIM Act directs EPA to address HFCs by providing new authorities in three main areas: to phase down the production and consumption of listed HFCs, manage these HFCs and their substitutes, and facilitate the transition to next-generation technologies.”).

³⁷ S.J.Res.14, 117th Cong. (2021) (“Providing for congressional disapproval under [chapter 8](#) of title 5, United States Code, of the rule submitted by the Environmental Protection Agency relating to “Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources Review”.”).

³⁸ [Exec. Order No. 13,990](#), 86 Fed. Reg. 7037 (Jan. 20, 2021) (“To that end, this order directs all executive departments and agencies (agencies) to immediately review and, as appropriate and consistent with applicable law, take action to address the promulgation of Federal regulations and other actions during the last 4 years that conflict with these important national objectives, and to immediately commence work to confront the climate crisis.”); *see generally* Vizcarra, H. & Perls, H. (2021) [Biden’s First 100 Days of Climate Action](#), HARVARD LAW SCHOOL ENVIRONMENTAL & ENERGY LAW PROGRAM.

³⁹ EPA, [Proposed Rule – Phasedown of Hydrofluorocarbons: Establishing the Allowance Allocation and Trading Program under the AIM Act](#) (*last visited* 09 June 2021) (“This proposed rule is the first regulation under the American Innovation and Manufacturing (AIM) Act of 2020 to address the production and consumption of hydrofluorocarbons (HFCs), which are potent greenhouse gases commonly used in refrigerators, air conditioners, and many other applications. This proposed rule would set the HFC production and consumption baseline levels from which reductions

will be made, establish an initial methodology for allocating HFC allowances for 2022 and 2023, and create a robust, agile, and innovative compliance and enforcement system.”).

⁴⁰ News Release, EPA (14 May 2021) [EPA Announces Public Listening Sessions and Trainings on Upcoming Oil and Natural Gas Methane Rule](#) (“Today, the U.S. Environmental Protection Agency (EPA) is taking the first step to develop a proposed rule to reduce methane and other harmful pollutants from new and existing sources in the oil and natural gas industry, beginning with a broad public outreach effort to gather community and stakeholder input. These activities include holding training sessions on the rulemaking process and how to participate in it, convening listening sessions for stakeholders, and opening a public docket for pre-proposal comments.”).

⁴¹ [Notice of Availability and Request for Comments](#), 86 Fed. Reg. 24,669 (May 7, 2021) (“The Office of Management and Budget (OMB), on behalf of the co-chairs of the Interagency Working Group on the Social Cost of Greenhouse Gases, including the Council of Economic Advisors (CEA) and the Office of Science and Technology Policy (OSTP), request comments on “*Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates under Executive Order 13990*,” released on February 26, 2021, available at: https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf. The estimates of the social cost of carbon (SC-CO₂), social cost of methane (SC-CH₄), and social cost of nitrous oxide (SC-N₂O), collectively called the Social Cost of Greenhouse Gases (SC-GHG), are used to estimate the value to society of marginal reductions in greenhouse gas emissions, or conversely, the social costs of increasing such emissions, in the policy making process.”).

⁴² [The United States of America Nationally Determined Contribution](#), UNFCCC NDC Registry (Submitted 22 April 2021) (“After a careful process involving analysis and consultation across the United States federal government and with leaders in state, local, and tribal governments, the United States is setting an economy-wide target of reducing its net greenhouse gas emissions by 50-52 percent below 2005 levels in 2030. The National Climate Advisor developed this NDC in consultation with the Special Presidential Envoy for Climate, and it was approved by President Joseph R. Biden Jr.”).

⁴³ White House (23 April 2021) [FACT SHEET: President Biden’s Leaders Summit on Climate](#) (“Enhancing climate ambition and enabling the transformations required to reach net-zero emissions by 2050. President Biden is galvanizing efforts by the world’s major economies to reduce emissions during this critical period. From reducing short-lived climate pollutants and supporting the most vulnerable to investing in nature-based solutions, these transformational changes are critical to keep a 1.5 degree C limit on global average temperature rise within reach. Just as importantly, they will create new, good-paying jobs today to drive tomorrow’s economy.”).

⁴⁴ White House (23 April 2021) [FACT SHEET: President Biden’s Leaders Summit on Climate](#) (“Reducing emissions from international shipping. The international shipping sector contributes approximately three percent of global greenhouse gas (GHG) emissions, and the sector’s emissions are only projected to increase. In support of the global effort to keep within reach a 1.5 degree C limit on global average temperature increase, and in support of global efforts to achieve net-zero GHG emissions no later than 2050, the United States is committing to work with countries in the International Maritime Organization (IMO) to adopt a goal of achieving zero emissions from international shipping by 2050 and to adopt ambitious measures that will place the sector on a pathway to achieve this goal.”).

⁴⁵ White House (23 April 2021) [FACT SHEET: President Biden’s Leaders Summit on Climate](#) (“Establishing a Net-Zero Producers Forum. In support of efforts to achieve net-zero emissions by midcentury, the United States, together with the energy ministries from Canada, Norway, Qatar, and Saudi Arabia, representing 40 percent of global oil and gas production, established a cooperative forum that will create pragmatic net-zero strategies, including methane abatement, advancing the circular carbon economy approach, development and deployment of clean-energy and carbon capture and storage technologies, diversification from reliance on hydrocarbon revenues, and other measures in line with each country’s national circumstances.”).

⁴⁶ CCAC (2021) [GLOBAL METHANE ASSESSMENT](#), 9 (“Currently available measures could reduce emissions from these major sectors by approximately 180 Mt/yr, or as much as 45 per cent, by 2030. This is a cost-effective step required to achieve the United Nations Framework Convention on Climate Change (UNFCCC) 1.5° C target. According to scenarios analysed by the Intergovernmental Panel on Climate Change (IPCC), global methane emissions must be reduced by between 40–45 per cent by 2030 to achieve least cost-pathways that limit global

warming to 1.5° C this century, alongside substantial simultaneous reductions of all climate forcers including carbon dioxide and short-lived climate pollutants. (Section 4.1”).

⁴⁷ Weitzman, M. L. (2010) *Revisiting Fat-Tailed Uncertainty in the Economics of Climate Change*, REVIEW OF ENV'TL. ECON. AND POLICY 5:275–292, 275 (“I believe that the most striking feature of the economics of climate change is that its extreme downside is nonnegligible. Deep structural uncertainty about the unknown unknowns of what might go very wrong is coupled with essentially unlimited downside liability on possible planetary damages. This is a recipe for producing what are called “fat tails” in the extremes of critical probability distributions. There is a race being run in the extreme tail between how rapidly probabilities are declining and how rapidly damages are increasing. Who wins this race, and by how much, depends on how fat (with probability mass) the extreme tails are. It is difficult to judge how fat the tail of catastrophic climate change might be because it represents events that are very far outside the realm of ordinary experience.”); *see also* D. Zaelke (21 May 2021) Op-Ed: [We have a chance to halt climate change if we stop destroying carbon sinks and cut methane](#), *The Hill* (“Climate change, we are beginning to realize, presents the ultimate fat tail risk. This includes risks to the stability of the world financial system and economy — through, for example, losing \$1 trillion to \$4 trillion of fossil fuel assets made unviable by stricter climate regulations and cheaper renewable energy. But the real stinger in the tail is the risk that self-reinforcing feedbacks could cause the Earth to warm itself beyond our control, pushing the climate past a series of deadly tipping points into Hothouse Earth.”).

⁴⁸ [Directive 2014/95/EU](#) (22 October 2014).

⁴⁹ European Commission (2019) [Guidelines on reporting climate-related information](#), 6 (“As indicated in the Commission’s 2017 Non-Binding Guidelines on Non-Financial Reporting, the reference to the “impact of [the company’s] activities” introduced a new element to be taken into account when assessing the materiality of non-financial information. In effect, the Non-Financial Reporting Directive has a double materiality perspective: - The reference to the company’s “development, performance [and] position” indicates financial materiality, in the broad sense of affecting the value of the company. Climate-related information should be reported if it is necessary for an understanding of the development, performance and position of the company. This perspective is typically of most interest to investors. - The reference to “impact of [the company’s] activities” indicates environmental and social materiality. Climate-related information should be reported if it is necessary for an understanding of the external impacts of the company. This perspective is typically of most interest to citizens, consumers, employees, business partners, communities and civil society organisations. However, an increasing number of investors also need to know about the climate impacts of investee companies in order to better understand and measure the climate impacts of their investment portfolios.”).

⁵⁰ SASB & GRI (2021) *A Practical Guide to Sustainability Reporting Using GRI and SASB Standards*, 5 (“Transparency is the best currency for creating trust among organizations and their stakeholders, including investors. That is why companies and other organizations focus on disclosing the information each stakeholder group requires. GRI and SASB provide compatible standards for such disclosures. Their standards are mutually supportive and designed to fulfill different purposes.”).

⁵¹ SASB & GRI (2021) *A Practical Guide to Sustainability Reporting Using GRI and SASB Standards*, 10 (“According to the 2020 KPMG Survey of Sustainability Reporting, 96% of the world’s largest 250 companies (the G250) report on their sustainability performance and 73% of these use the GRI Standards to do so; similarly, 80% of the N100 report, and 67% of them use the GRI Standards. As of January 2021, more than 600 companies disclose SASB metrics, with more than 1,000 companies referencing SASB as an input to their reports.”).

⁵² GRI, [GRI 305: Emissions](#), 4 (“GRI 305 addresses emissions into air, which are the discharge of substances from a source into the atmosphere. Types of emissions include: greenhouse gas (GHG), ozone-depleting substances (ODS), and nitrogen oxides (NOX) and sulfur oxides (SOX), among other significant air emissions.”).

⁵³ Financial Reporting Council (2021) *Improving the quality of ‘comply or explain’ reporting* (“This document is intended to help companies improve transparency when reporting against the 2018 UK Corporate Governance Code and advise them on how to achieve good quality explanations when departing from the Code. In November 2020 the FRC published our Review of Corporate Governance Reporting. We found that ‘tick-box compliance’ continues to be preferred over high quality reporting of good governance practice. Our analysis, of a random sample of 100 companies,

found that too many companies strive to declare strict compliance with the Code. Such a formulaic approach leads to boilerplate language, and ineffective reporting that lacks substance and information about governance outcomes.”).