

Technical Considerations for Climate-Related Risk Disclosure Rules

Technical Brief

With proposed climate risk disclosure regulations emerging, this brief shares a few relevant technical insights from EPRI's research. Over the last few years, EPRI has been actively assessing the science, addressing scientific gaps, and developing technical resources and guidance related to company climate-related risk assessment, climate scenarios, greenhouse gas goal (GHG) setting, and GHG accounting. That work has benefitted from numerous critical and constructive conversations with many organizations, including stakeholders in the financial and environmental communities and non-financial companies. It has also led to participation in scientific advisory activities related to the Task Force for Climate-Related Financial Disclosures (TCFD) and research community.¹ This work has and continues to inform company climate and Environmental, Social and Governance (ESG) reports, risk assessment methods and analysis, and recent activities by stakeholders such as the TCFD, Moody's, and federal requests for public comment, as well as scientific activities, such as the Intergovernmental Panel on Climate Change's (IPCC's) newest reports.²

Below we summarize critical technical considerations derived from our research relevant to a climate risk disclosure rulemaking. This information can serve as a technical resource for internal and external conversations, as well as potentially inform public comments on proposed rules.

Investors are increasingly demanding climate disclosure information (for example, TCFD, shareholder resolutions). However, we have found that most investors are unfamiliar with the science, and unsure how climate disclosure should be done. We have also found proposed third-party methodologies to date to be poorly grounded—not considering the broader science, and the insights it provides, regarding risk assessment and risk management (for example, Moody's, Science Based Targets Initiative). A climate risk disclosure rule would likely have a significant impact on how things proceed, but it could promote or hinder accurate and reliable risk assessment, risk management, and properly informed decision-making—company and investor. The critical technical issues identified below will be important to consider.

Based on what we have observed to date in climate-related risk discussions, there is an opportunity and need to educate investors as well as the public to facilitate common understanding regarding the science and risk assessment (e.g., technical principles, assessment elements, risk categories, metrics, signposts). Doing so would make the resulting disclosure information more reliable, transparent, and comparable for investors. We hope the technical points discussed here are useful in informing thinking and



facilitating constructive dialogue and grounded decisions regarding climate risk assessment and risk management communications and disclosure. Please do not hesitate to reach out with questions and feedback to our technical experts—Steven Rose (<u>srose@epri.com</u>), Morgan Scott (<u>mmscott@epri.com</u>), Adam Diamant (<u>adiamant@epri.com</u>), and Laura Fischer (<u>lfischer@epri.com</u>). We look forward to engaging with you further on this very important topic.

Critical Technical Considerations Related to Climate Risk Disclosure Rules

- The set of big climate risk assessment technical issues in play: Climate risk disclosure rules are focused on what to disclose and how. This is but one issue of many significant technical issues relevant to climate risk and disclosure discussions (see box). Disclosure rules would want to recognize what comes before and after disclosure, and would want to consider how those rules might support or hinder the
- ¹ EPRI researchers were asked to participate as experts on the <u>TCFD's Advisory Group for Scenario Guidance</u>, and also sit on the Integrated Assessment Modeling Consortium's Scientific Steering Group and Scientific Working Group on Scenarios for Climate-related Financial Analysis.
- ² EPRI's analyses have produced technical principles for developing and assessing climate risk assessment methodologies—principles that are informing others' scenario guidance, such as the TCFD's 2020 <u>Guidance on Scenario Analysis for Non-Financial Companies</u>, and scientific feedback, such as to Moody's (EPRI, 2020).

development of meaningful risk and risk management information, as well as the effective communications and appropriate use of that information. For instance, the disclosure information required by rules would want to be consistent with good company-level risk assessment and risk and risk management indicators. Disclosure would also want to facilitate consistent meaning and use of disclosed information by companies and investors.

Big Climate Risk Assessment Technical Issues in Play for Companies

- 1. How to assess climate risks (and opportunities) current and future? Entails defining uncertainties (including separating possibilities from aspirations) and analyzing the risks (e.g., scenario analysis).
- 2. How to manage the risks (and opportunities) identified?
- 3. How to communicate risk and risk management (and opportunities and opportunity management)? Entails defining risk objective and choosing meaningful metrics.
- 4. What to disclose and how? There are technical, as well as legal, administrative, and other considerations.
- 5. How to use the disclosed information? How should it or should it not be used? While misuse cannot be prevented, guidance can be provided on what is meaningful climate risk information and appropriate application.
- 6. How to consider non-technical issues, such as governance, liability (especially regarding use of characterizations of the future), and the administrative burden associated with process, analysis, reporting, assurance, etc.
- Differentiating climate risk assessment from a GHG goal: There is a tendency to conflate risk management with a GHG goal. For example, it is incorrect to say that if a company has a net-zero GHG goal they do not have risk, or if a company has GHG emissions they have unmanaged risk. Company GHG goals, like net-zero, are usually not derived from a low-carbon transition risk assessment. As such, it would be incorrect, and misleading, to consider them as indicators of climate risk management. Similarly, whether a company with GHG emissions has risk depends on the potential implications and the strategy for managing them. It is essential that risk assessment be differentiated from GHG goal setting, but the former can inform the latter, helping identify a goal that is consistent with risk management. It is also critical to recognize that a GHG goal has uncertainties with which to contend, and therefore risks companies need to manage and communicate.
- Meaningful climate risk metrics entail much more than emissions and physical climate change: Climate and ESG reporting templates are not currently providing risk assessment results. Metrics beyond emissions and physical climate change are needed. As noted above, having GHG emissions does not imply unmanaged low-carbon transition risk for a company. The emissions only indicate that there might be risk. Knowing whether there is a risk requires evaluation of (a) the implications of having emissions under different potential futures, and (b) the robustness of a company's strategy. The same is true for physical climate

risk—knowing that there is or might be climate change does not imply unmanaged risk for a company. It only indicates that there may be a risk, and the risk to assets, operations, services, and the business, and the robustness of the company's strategy, should be evaluated.

- **Company-specific circumstances matter:** Each company is unique, with, among other things, different assets, markets, systems, growth potential, resources, climate change, and local policies. As such, each company has different uncertainties and risk management opportunities to consider. The only way to capture these unique conditions is with risk assessment analysis tailored to each company. The steps and conceptual design of such analysis can be standardized; but, for meaningful risk assessment, the details need to be customized to each company to accurately assess and manage risk.
- Uncertainty and company strategy robustness and resilience: Companies need to plan for an uncertain future, with both uncertain climate and non-climate conditions. Focusing on a single plausible future will likely expose a company to risks arising from other plausible futures. A strategy that exists "in between" the possibilities better manages, but does not eliminate, the risk of all potential outcomes. Thus, companies need strategies that are robust regardless of the future that unfolds. Companies will want to be evaluating and communicating company strategy robustness for a set of plausible futures, as well as resilience in the different possible future conditions; and investors should be assessing a company's risk in terms of the company's risk management and strategy robustness and resilience.
- **Comparability across risk assessments:** While comparability is rightfully sought to compare companies (as is consistent and reliable assessment), it can and should be achieved through comparable analytical process. Third-party approaches based on aggregate emissions scenarios or benchmarks (global, national, sectoral), or standardized inputs, are not providing meaningful assessment of individual company risk, much less differences in risk between companies. Companies should instead use a comparable conceptual design with similar analysis steps and set of metrics for assessing risk and communicating risk management. Such an approach will produce reliable, consistent, and comparable risk assessments, unlike one-size fits all methods. Note that, most currently available metrics are inadequate for communicating climate risk and risk management (see above).
- Current third-party methodologies: Third-party methodologies are typically not assessing risk at all, not assessing company-specific risk, and not evaluating company strategy. As a result, these approaches are not providing grounded and reliable risk information regarding a company, and could be misleading to investors and regulators, as well as planners. See, for instance, EPRI's comments on Moody's methodology for utility low-carbon transition risk. Furthermore, some GHG goal setting and climate reporting survey methodologies are not facilitating climate risk assessment and management (for example, Science Based Targets Initiative, CDP Climate Change 2022 Business Strategy Questionnaire). These goal setting and survey methodologies do not consider uncertainties, especially company-specific uncertainties about their relevant potential future conditions; or, facilitate evaluation of alternative strategies necessary for a company to identify a robust risk management approach. These methodologies, instead, typically make

and encourage arbitrary and misleading comparisons to aggregate modeling scenario results. However, with global through to local economic, technological, physical system, and policy uncertainties, there are actually many potential company-level emissions pathways aligned with any global temperature goal. These represent risks that companies need to assess and manage.

- Climate policy and climate risk: Climate policies (federal, state, local) will alter the operating environment, uncertainties, risks, and opportunities for companies. For accurate assessment of company risk, it will be important to incorporate enacted and potential climate policies into company risk assessment and their development of a risk management strategy.
- Evaluating a company's low-carbon transition risk: To evaluate a company's low-carbon transition risk, it is essential to consider the following at a minimum:
 - The future: A company needs to evaluate how its business circumstances might evolve in terms of, among other things, future input and output markets, technologies, and policies. The company's current state affects the implications of possible futures, but the possible futures determine the presence and degree of risk.
 - Uniqueness: Each company is unique. Evaluating their risks, opportunities, and risk management options, means they need to consider their assets, markets, systems, uncertainties, etc. It also means they will likely have a different risk management strategy from others.
 - Uncertainty: There is more than one plausible future for a company, thus a company needs to evaluate and manage for a set of plausible paths forward. This includes considering non-climate-policy-related uncertainties (e.g., fuel markets, load growth), as well as climate policy uncertainties (stringency and design). Companies need to manage both kinds of risk, and climate policy risks should be considered in the broader context of all the uncertainties and risks a company manages.
 - Multiple objectives: Companies typically are pursuing, managing, and balancing multiple social objectives, including environmental, service reliability, and affordability objectives. As a result, low-carbon transition risk assessment and management requires consideration of the full set of objectives.
 - Company plans/strategy: Companies are continuously planning for an uncertain future. Thus, it is essential that the company's strategy be evaluated when trying to understand a company's risk and resiliency to the set of plausible futures.
 - Beyond the asset and company: Many power company assets operate as elements of a larger system, often with unique market and policy compliance considerations. The value of an asset or company therefore depends on relationships with the system, including potential decarbonization compliance interactions within and across sectors, and operational constraints and requirements. Understanding and evaluating the risks and opportunities requires considering these complex relationships and potentially factors beyond the company's control.

- Opportunities for supporting decarbonization: With decarbonization economy-wide, and globally, being sought, companies and investors will want to take into account how a strategy considers, and potentially facilitates, this broader objective.
- **Scope 3 emissions:** Technical issues around Scope 3 emissions suggest that they are impractical to include in a company's risk disclosure.
 - Economic efficiency: First and foremost, is the issue of economic efficiency in reducing emissions. If reducing GHG emissions is the overarching objective, Scope 3 emissions accounting and management is not a cost-effective approach. The economics literature clearly shows that pricing/constraining emissions directly is more economically efficient than the indirect pricing or demand incentives that would be associated with trying to manage Scope 3 emissions. Furthermore, Scope 3 emissions sources may already be priced, or could be in the future, via policies such as standards, GHG taxes, or emissions caps. If so, it would be economically inefficient to "price" these emissions again as Scope 3 for a company.
 - Emissions accounting: Scope 3 GHG accounting is problematic due to inaccuracies, lack of access to necessary supply chain data, double counting, and uncertain attribution. Scope 3 GHG accounting approaches are based on assumptions about markets and technologies (e.g., demand, prices, fuel mixes, emission intensities, marginal emissions). These assumptions are highly unlikely to hold due to uncertainty about the future, as well as changes that will occur with the large system transformations associated with the level of decarbonization envisioned. Scope 3 accounting approaches, as a result, are very likely to be inaccurate and unreliable, even before considering the data challenges. Scope 3 emissions are also challenging to calculate due to the need to coordinate and gather data from beyond a company's boundaries. It is typically not feasible for a reporting entity to calculate many of the most relevant categories of Scope 3 emissions simply due to the lack of data. It is also impossible to prevent double counting of Scope 3 emissions, as the Scope 3 emissions of different entities are linked through markets to these emissions sources and overlap under existing Scope 3 accounting approaches. Lastly, given accounting inaccuracies and double counting, accurately attributing emissions to a company is essentially impossible.
 - Uncertainty, risk management, and goal setting: Companies need to manage many uncertainties, e.g., markets (input and output), technology, and policy. Scope 3 emissions accounting would represent another uncertainty and risk for companies. In addition to the accounting and policy treatment uncertainties already discussed, Scope 3 emissions are based on uncertain activity that is outside a company's control. Together, these issues represent a technical barrier to holding a company responsible for those emissions. With unreliable accounting, economic inefficiency as a GHG reduction strategy, and Scope 3 emissions management challenges, there is little technical justification for companies to set Scope 3 emissions goals. Instead, these emissions sources would be practical for companies to consider including as part of a company's broader decarbonization strategy (see below). Furthermore, if a company determines that there is the risk of potential changes in prices for goods and

services related to Scope 3 economic activity due to emissions reductions, which creates uncertainty about business operation costs, then a company would want to consider managing that risk and communicating their strategy, which would entail using metrics other than GHG emissions.

- Decarbonization strategies: Scope 3 accounting could be a means for crediting decarbonization for electrification. However, the GHG accounting and economic efficiency issues discussed above represent challenges to this approach. There are other more economically efficient options to consider that instead create a decarbonization incentive, such as electrification programs (e.g., electro-technology subsidies), cross-sector collaboration, directly pricing/constraining Scope 3 source emissions, offset credits, and emissions allowances.
- **GHG accounting overall:** In general, double counting is an issue for both Scope 2 and Scope 3 emissions; however, the nature of the issue varies by scope. Also, the existence of multiple different accounting approaches for Scope 1 and Scope 2 emissions is a challenge, creating reporting inconsistencies, while at the same time providing flexibility.

Related EPRI Resources

Review of 1.5 °C and Other Newer Global Emissions Scenarios: Insights for Company and Financial Climate Low-Carbon Transition Risk Assessment and Greenhouse Gas Goal Setting. EPRI, Palo Alto, CA: 2020. 3002018053.

Grounding Decisions: A Scientific Foundation for Companies Considering Global Climate Scenarios and Greenhouse Gas Goals. EPRI, Palo Alto, CA: 2018. 3002014510.

A Technical Foundation for Company Climate Scenarios and Emissions Goals. EPRI, Palo Alto, CA: 2018. 3002014515. *Greenhouse Gas Emissions Accounting for Electric Companies: A Compendium of Technical Briefing Papers and Frequently Asked Questions.* EPRI, Palo Alto, CA: 2021. 3002022366.

Climate Disclosure and Voluntary Reporting Trends: 2020 Activity Survey Results. EPRI, Palo Alto, CA: 2021. 3002021876.

Climate Disclosure and Voluntary Reporting Trends: 2019 Activity Survey Results. EPRI, Palo Alto, CA: 2020. 3002018052.

Climate Disclosure and Voluntary Reporting Trends: 2018 Survey Results. EPRI, Palo Alto, CA: 2019. 3002016948.

EPRI Public Comments on Federal Acquisition Regulation ANOPR: Minimizing the Risk of Climate Change in Federal Acquisitions. EPRI, Palo Alto, CA: 2022. 3002023465.

EPRI Comments on Moody's "Proposed framework to assess carbon transition risks for electric power companies." EPRI, Palo Alto, CA: 2020. 3002020282.

A Starting Point for Physical Climate Risk Assessment and Mitigation: Future Resilience and Adaptation Planning. EPRI, Palo Alto, CA: 2022. 3002024895.

EPRI Energy Systems and Climate Analysis Group Research on Climate Risk and Resilience. EPRI, Palo Alto, CA 2022. 3002023659.

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