

 **Columbia Law School** | COLUMBIA CLIMATE SCHOOL
SABIN CENTER FOR CLIMATE CHANGE LAW

November 12, 2025

State of California Department of Insurance
300 Capital Mall, 17th Floor
Sacramento, CA 95814

Re: REG-20025-00025

To Whom it May Concern:

Columbia Law School’s Sabin Center for Climate Change Law (“Sabin Center”) respectfully submits this comment in response to the October 28, 2025 Invitation to PreNotice Public Discussion on Long-Term Solvency Planning from the California Department of Insurance (“Department”) regarding the contemplated adoption of California Code of Regulations, Title 10, Chapter 5, Subchapter 3, Article 4.7 (commencing with section 2319.7).¹

The Sabin Center develops legal techniques to fight climate change, trains students and lawyers in their use, and provides the public with resources on key topics in climate law and regulation.

Introduction

In its announcement of draft regulatory text aimed at preventing future insurance crises resulting from climate disasters and other threats (the “Draft Regulations”), the Department correctly identifies the risks that “rapidly changing climate conditions” pose to the “market stability... affordability and availability” of the insurance sector. In response to the Department’s call for public input on the draft regulatory text, the Sabin Center writes to encourage the inclusion of public disclosure requirements in these regulations.

The Draft Regulations, referred to as workshop text in their preliminary form, would require covered insurers to “maintain and keep current” the requested data, as well as make certain data and analysis available to examiners. The Draft Regulations do not contain specific reference to any public disclosure of the contemplated risk analysis. This comment respectfully submits that a public-facing component of the reporting requirements should be a central feature of the proposed regulations. By extension, while the Department aims for scenario analyses and stress tests not only to serve as internal “planning instruments” for covered entities, but also to spark “essential discussions involving insurance regulators,” this comment respectfully contends that

¹ [Invitation to PreNotice Public Discussion on Long-Term Solvency Planning](#), (Oct. 28, 2025).

meaningful outcomes-oriented discussions on such topics would include a broad range of public stakeholders.

Previous climate risk undertakings by the Department, as well as current undertakings by equivalent regulatory agencies, demonstrate how public dissemination of insurers' reported data can advance the Department's mandate to protect consumers (including by overseeing insurers' solvency to pay claims, as well as by facilitating the underwriting of new policies). Prevailing social-science models for effective disclosure regimes further illustrate how marketplace feedback loops triggered by public disclosures can enhance Department efforts to foster insurance sector innovation that mitigates climate risks. Empirical literature on adjacent greenhouse gas (GHG) disclosures confirms that public use of such data can produce meaningful outcomes, with stakeholder feedback pushing corporate disclosers to mitigate harmful externalities. Of course, the Department's reporting requirements can and should be carefully tailored to protect disclosers' sensitive business information, and to provide recipients with actionable information.

1. Past Department Initiatives on Climate Risk, and Current Programs Administered by Comparable Climate Risk Regulators, Include Public Disclosure

The Department has previously recognized the value in public dissemination of insurers' reported climate risk data. Through its 2016 Climate Risk Carbon Initiative, the Department committed to disclosing data on fossil fuel holdings in covered insurers' investment portfolios, via a public database searchable by company name. The Department's accompanying [press release](#) highlighted this Initiative's dissemination function, "so that investors, policyholders, regulators and the general public can know the extent to which insurance companies are invested in the carbon economy." The Department's 2018 [publication](#) of insurers' climate risk data further explained that this database "provides consumers, investors, policyholders, regulators and the general public important information about the extent to which insurers doing business in California are invested in oil, gas, coal and utilities that rely on oil, gas and coal." The Department's current [website](#) retrospectively summarizes the Climate Risk Carbon Initiative as "designed to provide the public with information relating to potential climate change-related financial risks faced by California insurance companies."

More prospectively, in his call for annual climate risk stress testing of insurance companies' underwriting and investments, former Department Commissioner Dave Jones recommends that the Department should not only collect but also publish this data.² Former Commissioner Jones notes that publishing such data facilitates relevant stakeholders' "assessment of the transition risks facing insurance company investments and reserves."

Indeed, across regulatory and territorial jurisdictions, one driving purpose of climate risk reporting regimes is to provide actionable emissions data to a wide array of public stakeholders. California's recent [Climate Corporate Data Accountability Act](#) (focused on a firm's contribution to climate risk) and [Climate-Related Financial Risk Act](#) (focused on a firm's vulnerability to

² Dave Jones, Climate-Risk Financial Regulation in the United States: States Can Fill the Void, INTERNATIONAL JOURNAL FOR FINANCIAL SERVICES (Feb., 2025).

climate risk) both contain substantive public disclosure requirements (administered by the California Air Resources Board, CARB), as do the European Union’s [Corporate Sustainability Reporting Directive](#) (focused on a firm’s climate impacts) and [Corporate Sustainability Due Diligence Directive](#) (focused on a firm’s climate-mitigating transition plans). The EPA’s longstanding Greenhouse Gas Reporting Program (GHGRP) [website](#) likewise stresses a diverse mesh of public uses of its reported data:

Information in the database can be used by communities to identify nearby sources of greenhouse gas emissions, help businesses track emissions and identify cost- and fuel-saving opportunities, inform policy at the state and local levels, and provide important information to the finance and investment communities.

The Department would do well to prioritize equivalent public dissemination of its Long-Term Solvency Regulation data, as it has done in the past to protect consumers, and as comparable climate risk regulators do today.

2. Social Science Models Demonstrate the Value of Multi-Party Exchanges Between Disclosers and Public Stakeholders

Prevailing social-science models for effective disclosure programs make clear that successful disclosure mechanisms rely on an iterative communication process taking place between disclosers (such as corporate polluters) and a wide range of disclosees (such as consumers, investors, government officials, and concerned public citizens).

In recent decades, economists have formulated effective disclosure processes as an ongoing exchange of “double-sided” decision-making inputs both by disclosers and disclosees.³ Effective disclosure policies follow what Weil et al. (2013) describe as a “demanding ‘action cycle’ of information provision, use, and response”:

Consumers must see and comprehend new information and integrate it into choices of products and services; target companies must perceive and act on consumers’ responses in ways that reduce risks, improve services, minimize corruption, or otherwise further a policy goal. Third parties may play critical roles, translating complex information into a form more readily used by individuals in market settings.⁴

A virtuous cycle gets established as disclosed data prompt recipients of that information (disclosees) to signal back to the disclosing company how it should modify its behavior in order to maintain stakeholder approval. In this virtuous cycle, the disclosing firm’s resulting behavioral changes lead to its enhanced market performance, and thus to more overall transparency within the firm’s industry, which leads to better-informed decision-making by disclosees, and so on.

³ David Weil, Archon Fung, Mary Graham, and Elena Fagotto, The Effectiveness of Regulatory Disclosure Policies, 25 JOURNAL OF POLICY ANALYSIS AND MANAGEMENT, 155 (2006).

⁴ David Weil, Mary Graham, and Archon Fung, Targeting Transparency, 340 SCIENCE, 1410 (June 21, 2013).

More broadly, Kraft et al. (2011) provide useful guideposts on how and why to maintain an effective public-disclosure mechanism:

[W]e want to know...which...policy tools can supplement conventional regulation and foster not just compliance, but performance that goes beyond compliance. If the potential is real and substantial, how might information disclosure policies be designed to ensure effective implementation by government agencies? To keep the burdens and costs imposed on industry to an acceptable level? To provide the most useful information to the public?⁵

Theorists of effective disclosure mechanisms have clarified for more than a generation the importance of such multi-party and multi-directional discloser-disclosee exchanges, which continually recalibrate based on each participant's inputs, so that disclosure does not become a stale or pointless compliance burden. Instead, effective disclosure mechanisms help to unleash competitive marketplace dynamics that catalyze pro-social business innovations across the broader economy. Here again, the Department can further its public mission of safeguarding the state's consumers, by designing public disclosure processes that include all relevant stakeholders who "share the responsibility of proactively preparing for future economic challenges and risks."⁶

3. Empirical Evidence Shows that Public Disclosure Requirements Can Catalyze Outcomes that Reduce Climate Risk

The social-science literature on effective disclosure mechanisms confirms that a public-reporting program can prompt meaningful responses by a broad range of parties. Studies of emissions-reporting regimes in the United Kingdom, France, and the U.S. illustrate the significant impacts of disclosure on relevant stakeholders, leading to market outcomes that mitigate climate risk.

Within securities markets, for example, Jouvenot and Krueger (2021) find that, following the U.K.'s 2013 regulations under its Companies Act of 2006, which imposed stricter disclosure requirements than its European counterparts, institutional investors reallocated capital from high- to low-emissions companies in the U.K., but not in Europe.⁷ This result suggests that disclosure triggered an increase in future costs of emissions for covered companies. The U.K.'s higher-quality disclosure regime (requiring transparent company-wide emissions reporting, rather than opaque facility-level reporting) intensified market pressure on high-emitting firms, as investor stakeholders factored the regulatory risks for a dirty corporation into their decision-making. Disclosure standardization also resulted in lower information-related costs for these investors, and more efficient investment screening based on firms' emissions levels.⁸

⁵ Michael Kraft, Mark Stephan, and Troy D. Abel, *Coming Clean: Information Disclosure and Environmental Performance*, MIT Press 19 (2011).

⁶ [Invitation to PreNotice Public Discussion on Long-Term Solvency Planning](#), *supra*.

⁷ Valentin Jouvenot and Philipp Krueger, *Mandatory Corporate Carbon Disclosure: Evidence from a Natural Experiment 1* (July 13, 2021), <https://ssrn.com/abstract=3434490>.

⁸ *Id.* at 38.

In another study, Mésonnier and Nguyen (2022) investigate the effects of Article 173-6 of France’s Energy Transition for Green Growth Act of 2015 (Article 173), which requires detailed reporting by French institutional investors of their exposure to climate-related risks and their efforts to mitigate climate change.⁹ The authors use a “triple difference” design, comparing the fossil fuel intensive holdings of institutional investors and banks, in and out of France, before and after Article 173’s implementation. Since neither European institutional investors outside of France, nor banks within France, faced comparable reporting requirements at the time, these entities serve as control groups.¹⁰ Mésonnier and Nguyen find that French institutional investors reduced their portfolio holdings in fossil fuel securities by 32% following the imposition of the policy.¹¹ This study also considers how Article 173’s disclosure mandate for institutional investors affected fossil fuel companies, finding these companies more likely to commit to explicit GHG reduction targets when French institutional investors hold more of their equity.¹²

More generally, to clarify how institutional investors incorporate climate-risk reporting into investment decisions, Krueger et al. (2020) provide survey evidence from over 400 respondents (while acknowledging the selection bias in data gathered from investor professionals willing to participate in a climate-risk survey).¹³ The survey found that the two most popular actions to manage risk are conducting carbon footprint analyses and evaluating stranded asset risks. 25% of respondents reported successful direct engagements with portfolio firms on such climate-risk issues.¹⁴

Regarding U.S.-based GHG emissions disclosure regimes, Tomar (2023) usefully adds corporate benchmarking (the consideration of peers’ disclosures, to assess one’s own relative performance, and make corresponding business modifications) to the list of meaningful disclosee responses that can mitigate climate risk.¹⁵ Tomar compares the EPA’s GHGRP participants to equivalent Canadian facilities already subject to a separate disclosure regime (thus controlling for broader industry trends that affect emissions data, such as off-shoring of industrial production and replacement of coal inputs with fracking-derived natural gas).¹⁶ Tomar finds that GHGRP-covered facilities decreased their GHG emissions by 7.9% relative to their non-covered peers.¹⁷ Tomar’s study argues that corporate benchmarking, alongside related anticipations of public pushback and future regulatory threats, appear to have spurred these emissions reductions.¹⁸

In each of the above examples, public disclosure requirements placed two-fold pressure on covered entities. Relevant stakeholders could see both the disclosers’ distinct vulnerability to climate risk, and the disclosers’ own contribution to systemic risk. In each of these examples,

⁹ Jean-Stéphane Mésonnier and Benoît Nguyen, *Showing off Cleaner Hands: Mandatory Climate-Related Disclosure by Financial Institutions and the Financing of Fossil Energy*, 2 (2022), <https://ssrn.com/abstract=3733781>.

¹⁰ *Id.* at 4.

¹¹ *Id.* at 17.

¹² *Id.* at 5.

¹³ Philipp Krueger, Zacharias Sautner, and Laura T. Starks, *The Importance of Climate Risk for Institutional Investors*, 33 *REVIEW OF FINANCIAL STUDIES*, 1067, 1069 (March 2020).

¹⁴ *Id.* at 1071.

¹⁵ Sorabh Tomar, *Greenhouse Gas Disclosure and Emissions Benchmarking*, 61 *JOURNAL OF ACCOUNTING RESEARCH*, 451 (2023).

¹⁶ *Id.* at 453.

¹⁷ *Id.* at 467.

¹⁸ *Id.* at 451.

both disclosers and disclosees responded by, in the Department's apt words, participating in "essential discussions," of a type that ultimately "enhances the financial security" of the discloser, yet also "minimizes the risk of sudden disruptions" across a wider range of markets.¹⁹

4. Appropriately Tailored Public Disclosures Protect Sensitive Business Information for Disclosers While Providing Actionable Data for Disclosees

Precedents of corporate benchmarking need not suggest that the Department now must require public disclosure of copious data streams that compromise a company's capacity to protect its sensitive business information. In fact, disclosure regimes work best when carefully tailoring their disseminated data for targeted uses by disclosees.

Dalley (2007) clarifies this basic element of the discloser-disclosee exchange:

The information must be directed at the appropriate decision-maker and the appropriate decision. Furthermore, it must be provided in a form accessible to and usable by the appropriate decision-maker, and the decision-maker must be able respond to the information.²⁰

Dalley's account confirms a disclosure regime's potential to impose "significant costs" not only on disclosers generating this data, but also on disclosees, if data sets prove unwieldy.²¹

A brief comparison of effectively and ineffectively designed state-regulator public-reporting regimes helps illustrate the importance of tailoring disclosure interfaces to specific marketplaces, disclosers, and disclosees. It confirms that public-reporting mechanisms have their best chance of catalyzing desired market outcomes when serving the needs of all such participants in "essential discussions" to mitigate risk.²²

Jin and Leslie's (2003) study of Los Angeles County's requirement that restaurants post hygiene-quality scorecards in their windows has prompted a generation of both disclosure-friendly and disclosure-skeptical researchers to treat this particular reporting initiative as a "paradigm for successful disclosure."²³ Jin and Leslie document that, with the mandatory posting of streamlined letter-grade scorecards starting in 1998, overall restaurant-hygiene scores improved, consumer demand became more sensitive to restaurants' hygienic quality, and local hospitalizations for foodborne illness decreased by roughly 20%.²⁴ Moreover, Los Angeles County's apt focus on a

¹⁹ [Invitation to PreNotice Public Discussion on Long-Term Solvency Planning](#), *supra*.

²⁰ Paula J. Dalley, *The Use and Misuse of Disclosure as a Regulatory System*, 34 FLA. ST. U. L. REV. 1089, 1091 (Summer 2007).

²¹ *Id.* at 1115.

²² [Invitation to PreNotice Public Discussion on Long-Term Solvency Planning](#), *supra*.

²³ Ginger Zhe Jin and Phillip Leslie, The Effect of Information on Product Quality: Evidence from Restaurant Hygiene Grade Cards, 118 QUARTERLY JOURNAL OF ECONOMICS, 409 (2003); George Loewenstein, Cass Sunstein, and Russell Golman, Disclosure: Psychology Changes Everything, 6 Annual Review of Economics, 391, 403 (2014).

²⁴ Sixteen years after Jin and Leslie's landmark study, Daniel E. Ho, Zoe C. Ashwood and Cassandra Handan-Nader, New Evidence on Information Disclosure through Restaurant Hygiene Grading, 11 AMERICAN ECONOMIC JOURNAL: ECONOMIC POLICY, 404 (2019) question aspects of their research methodology. While the methodological

marketplace scenario in which consumers encounter an easily assimilated rating scale, at a pivotal moment in their decision-making process, with immediate impacts on the restaurant discloser's commercial success, illuminates how these various components of a disclosure interface might most effectively come together to catalyze desired behavioral change by targeted businesses.²⁵

Yet while Jin and Leslie track a marketplace conducive to straightforward disclosures by businesses, and to better-informed choices by consumers, disclosure report cards oriented toward other public-health goals have yielded less desirable results. In the late 20th century, New York and Pennsylvania experimented with patient-safety scorecards on cardiac-bypass surgery, which researchers find to have produced ambiguous and sometimes problematic outcomes.²⁶ Patients struggled to incorporate these data-driven disclosures into a decision-making process already marked by unfamiliarity, urgency, conflicting priorities or recommendations, and logistical or monetary constraints.²⁷ Health providers questioned what they considered overly reductive performance metrics (a focus solely on mortality rates), as insufficiently accounting for inevitable differences from one medical practice's patient pool to the next.²⁸

Overall, New York's and Pennsylvania's patient-safety disclosure regimes may have harmed patients in the aggregate, with disclosers' efforts to improve their scores leading to unintended outcomes. Pennsylvania's disclosures, for instance, led to a majority of cardiac surgeons claiming newfound reluctance to operate on patients most in need, given the greater likelihood of generating problematic mortality rates.²⁹ Complementary studies point to a wide range of medical providers responding to disclosure mandates by segregating high-risk patients at

challenge Ho et al. pose extends beyond this present analysis of effective disclosure regimes, it is worth noting that these authors do acknowledge the broader benefit of Jin and Leslie's study modeling what an effective disclosure mechanism might look like, particularly through its focus on "simplification of information disclosure." See also Omri Ben-Shahar and Carl Schneider, *The Failure of Mandated Disclosure*, 159 U. Pa. L. Rev. 647 (2011) (emphatically declaring the trend towards additional disclosure regimes a "spectacular... failure," yet recognizing restaurant-hygiene disclosures as among the most effective of such regimes).

²⁵ Weil et al. (2006), *supra*, at 169, describe, for example, this disclosure regime's efficient tailoring to a pivotal step within a repeatable marketplace decision-making process, with a given restaurant's grade "available when users need it, at the time when they make a decision about entering the establishment; where they need it, at the location where purchase of a meal will take place; and in a format that makes complex information quickly comprehensible" for effective comparison-shopping.

²⁶ See E.L. Hannan, H. Kilburn Jr., M. Racz, and M., Shields, *Improving the Outcomes of Coronary Artery Bypass Surgery in New York State*, 271 JAMA 765 (1994); E.D. Peterson, E.R. DeLong, J.G. Jollis, L.H. Muhlbaier, and D.B. Mark, *The Effects of New York's Bypass Surgery Provider Profiling on Access to Care and Patient Outcomes in the Elderly*, 32 J. AM. C. CARDIOLOGY 993 (1998); and Dana B. Mukamel and Alvin I. Mushlin, *Quality of Care Information Makes a Difference: An Analysis of Market Share and Price Changes After Publication of the New York State Cardiac Surgery Mortality Reports*, 36 MED. CARE 945 (1998).

²⁷ Disclosure skeptics such as Ben-Shahar and Schneider, *supra*, point to patients' limited capacity to assimilate or even access such data points, while recognizing that patients may nonetheless benefit from medical providers at least internalizing performance metrics in the hopes of receiving more referrals from fellow doctors and insurance providers.

²⁸ On the low predictive accuracy of such data points, see, e.g., J. Green and N. Wintfeld, *Report Cards on Cardiac Surgeons-Assessing New York State's Approach*, 332 N.E. J. OF MEDICINE, 1229 (1995).

²⁹ See E.C. Schneider and A.M. Epstein, *Influence of Cardiac-Surgery Performance Reports on Referral Practices and Access to Care: A Survey of Cardiovascular Specialists*, 335 N.E. J. OF MEDICINE, 251 (1996).

separate facilities, and/or recommending low-risk treatments with correspondingly lower success rates, in order to improve their overall data-reporting record.³⁰

Both the restaurant-hygiene and the patient-safety disclosure regimes provided scorecards for consumers to use. Yet scholars of effective disclosure regimes do not grade these two disclosure initiatives the same, with Weil et al. (2006) rating Los Angeles County's restaurant-hygiene initiative "highly effective," while rating New York's and Pennsylvania's patient safety initiatives "moderately effective" and "ineffective," respectively.³¹

More generally, these case studies of disclosure interfaces confirm that any public-reporting regime needs to select carefully the data its particular disclosers can reasonably provide, the data its particular disclosees can effectively assimilate, and how to cultivate "essential discussions" among all relevant participants. As the Department considers how to calibrate the optimal degree of public disclosure from California's regulated insurance providers, it is worth considering that insurers' reasonable desire to protect certain components of their underwriting and investment strategies from scrutiny by competitors dovetails with public stakeholders' need to receive actionable data that can be applied to effective marketplace decision-making.

Conclusion

Previous Department actions, and current actions by comparable regulatory offices, confirm the utility of public disclosures to reducing climate risk in insurance markets. Prevailing social-science models stress the importance of this reported data reaching a broad range of stakeholder disclosees. And scholarly evidence demonstrates the real-world climate risk reductions that effective discloser-disclosee exchanges have achieved. For all these reasons, we encourage the Department to prioritize the inclusion of public disclosure requirements in any forthcoming regulations on long-term solvency planning.

Thank you for the opportunity to provide comments. Please do not hesitate to contact the Sabin Center with any questions.

Respectfully submitted,

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³⁰ See, e.g., D. Dranove, D. Kessler, M. McClellan, and M. Satterthwaite, Is More Information Better? The Effects of "Report Cards" on Health Care Providers, 111 J. POL. ECON. 555 (2003).

³¹ Addressing this modest difference in assessment for the Pennsylvania and New York regimes, Weil et al. 2006, *supra*, at 173, observe that "researchers remain divided about the specific effects and effectiveness findings of both state reporting systems."