Climate change has become a leading issue in scientific, political, and legal circles, and this may have profound implications for the insurance industry. More frequent catastrophic events such as floods, droughts, fires, hurricanes, tornadoes, monsoons, and sandstorms, whether or not attributable to climate change, challenge the insurance industry’s abilities to measure, predict, and price risk in the first-party context. At the time insurers underwrote many third-party policies currently in force and historic occurrence policies that could still create exposure, neither insurers nor insureds focused on the potential impacts of “climate change” as we understand and discuss that concept today. Thus, climate-change risk probably was not contemplated in developing policy language, underwriting the risk, or developing premium models. The potential exposure associated with climate-change impacts, however, is now beginning to emerge. Tort liability arising out of episodic climatic events targeting operators of facilities and manufacturers with no physical presence in the geographic location of the event indicates that historical insurer management practices, such as limiting aggregate exposures by geographic location, may not be sufficient to manage financial liability. Risks independent of episodic climatic events also are emerging and require additional risk-management approaches.

Climate change is consistently referred to as an “emerging risk” because stakeholders, including potentially regulated entities like targeted emitters and insurers, do not yet know how courts will treat climate change or what mechanisms policymakers will create to further mitigate or adapt to climate change-related risks. Mitigation focuses on interventions to reduce the sources or enhance the “sinks” for greenhouses gases (GHGs). Adaptation refers to adjustments in natural or human systems in response to actual or expected climate-change impacts, which moderate harm or exploit beneficial opportunities.

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2. Id.
In addition, the science used by courts and policymakers is still evolving and its interpretation is often politicized. As with all emerging issues, impacted parties cannot definitively calculate future costs when parameters of the risk, such as frequency and severity, have no specific history. Recent events make apparent, however, that this risk has emerged.

Historical experience with analogous emerging risks (e.g., asbestos, tobacco, and CERCLA/Superfund) indicates that no single change will provide a “silver bullet” solution for managing the risk or securing new opportunities. Risk management and product development strategies could include (1) policy language changes, (2) management of individual policy limits of liability and term lengths, (3) management of overall aggregate liability exposures for a given class or line of business, (4) creation of intentional coverage grants to serve market needs, or (5) participation in the public policy debate regarding changes in applicable law and creation of new legal standards in order to secure the ability to continue to underwrite in a field with greater legal predictability.

A. Potential Exposures

Despite the inherent uncertainty associated with an emerging risk, two categories of potential climate change-related core exposures are apparent: (1) potential exposures arising out of insurer institutional statements and activities (“potential enterprise liability”) and (2) potential exposures arising out of relationships with insureds (“potential claims liability”) with respect to risk management products and services. The first potential core exposure arises from such corporate functions as climate change-related disclosures and development of knowledge of climate change-related issues through underwriting, claims processing, and fee-for-service consulting work. The second potential core exposure develops when insureds faced with climate change-related claims look to their existing insurance policies for coverage.

1. Potential Enterprise Liability

Insurers could face claims as a result of their institutional statements and obligations like disclosures, data collection, and loss control and consulting fee-for-service work. Insurers have mandatory disclosure obligations and also voluntarily issue disclosures that could result in liability. They also have to respond to mandatory climate-change risk disclosure surveys in some states. It is possible that states will take regulatory action against insurers as a result of their responses. In the future, regulators could require further disclosure on proprietary matters and increase reserve requirements. Some insurers also participate in a number of voluntary programs requesting climate change-related information such as the Carbon Disclosure Project, the Dow Jones Sustainability Indexes, and FTSE4Good, and also publish their own material on
climate change. While such participation is important for corporate social responsibility efforts, marketing, and profile raising, voluntary climate-change risk disclosures also carry some potential problems: they can be used by regulators, plaintiffs in bad faith actions trying to show inconsistent corporate positions, plaintiffs in other stakeholder litigation, or shareholders if the company is publicly traded.

Historical trends in asbestos litigation demonstrate that plaintiffs sometimes sue insurers directly if insurers had particularized knowledge of an emerging risk and other targets became insolvent. For example, as solvent asbestos defendants became increasingly rare, plaintiffs began targeting insurers directly, often relying on claims stemming from the insurers’ failure to disclose information regarding the dangers of asbestos to an unknowing public. Through claims handling and dealings with insureds, insurers had developed vast knowledge of asbestos risk, and some claimed insurers had a duty to disclose this information. Generally, third-party asbestos claims against insurers have been unsuccessful, but litigation and nuisance settlement costs added up. A similar scenario could arise in relation to climate change as insurers respond to increasing numbers of climate change-related natural-catastrophe claims; promote green building in replacement coverage after episodic climatic events and consumers or policymakers demand use of green building materials to lower carbon footprints; and otherwise integrate sustainability principles into operations. By handling replacement claims and property, professional, or other claims related to climatic events; green-building performance; and other adaptive and mitigative measures, insurers may develop knowledge of the climatic science, safety of green materials and related information about adaptive and mitigation technologies employed to address risks of climate change. This could lead to claims against insurers arising out of their particularized knowledge of any of these issues.

2. Potential Claims Liability
Several types of climate change-related litigation are emerging that could result in potential claims to an insurer:

(1) tort or tort-related litigation including class actions or consolidated actions including:

(a) tort claims arising out of episodic climatic events (e.g., hurricanes) such as *Turner v. Murphy Oil USA, Inc.* and *Comer v. Murphy Oil USA, Inc.* (see Chapter 6.A.5);

(b) tort claims arising out of more gradual or projected alleged consequences of climate change such as *Kivalina v. ExxonMobil Corp.* (see Chapter 6.A.3);

(c) tort claims due to state attorney general (AG) or nongovernmental organization (NGO) activism such as *American Electric Power Co., Inc. v. Connecticut* and *California v. General Motors* (see Chapters 6.A.2 and 6.A.4);
(d) product-liability claims alleging that products like cars and other products that emit GHGs are defective as designed; and
(e) natural resource damage claims based on CERCLA.

(2) regulatory enforcement actions related to GHG emissions (if GHG emissions limits are enacted);
(3) shareholder, Securities and Exchange Commission, or state actions related to misrepresentation, concealment, or mismanagement of climate change-related risk;
(4) a variety of types of claims against service providers arising out of efforts to fix climate change-related problems, such as claims related to preparation of environmental impact statements and mitigation strategies pursuant to federal and state environmental policy acts; claims related to preparation of carbon footprints; disputes related to emerging carbon markets; greenwashing litigation related to allegedly green products; green-building litigation; and failures of emerging technologies like carbon capture and sequestration (CCS) and alternative energy; and
(5) insurance coverage litigation associated with all of the above. Some of these claims may not ultimately succeed, but could prove costly for an insurer to defend.

B. Implications by Coverage Type

Policyholders faced with climate change-related claims may seek coverage pursuant to (1) third-party directors and officers (D&O), commercial general liability (CGL), environmental, and professional/errors and omissions (E&O) policies; (2) first-party property, accident, health, and political risk policies; and (3) first- and third-party policies like owners protective professional indemnity insurance (OPPI) and contractors protective professional indemnity and liability insurance (CPPI). Depending on the nature of the climate change-related claim, multiple types of coverage may be triggered simultaneously. For example, a court could construe a CGL pollution exclusion narrowly and conclude that GHGs are not pollutants but at the same time declare GHGs pollutants for purposes of a coverage grant in an environmental liability policy.

The potential implications for each general policy type are as follows:

• Implications for **D&O Coverage**—In recent years, shareholder resolutions related to climate change have been on the rise, and investors have demanded increased disclosure of climate change-related risk. Voluntary disclosure
programs abound. The SEC has issued guidance on climate change disclosures and on shareholder resolutions, which impact climate change-related resolutions. In this political environment, directors and officers eventually may face class actions and/or shareholder derivative actions if a corporation, or its directors and officers, misrepresent, mismanage, or fail to disclose climate change-related risk. Such failures result in harm to a corporation, such as loss of revenues, loss of market share, falling stock price, reputational damage, and/or missed business opportunities related to climate change issues. Regulators also may bring actions against insureds related to faulty disclosures. Insureds facing claims related to concealment, misrepresentation, or mismanagement of climate change-related risk likely will seek reimbursement of defense costs and indemnification under D&O policies.

In analyzing available coverage, the pollution exclusion, intentional/criminal acts exclusion, definition of loss, limits of liability provision related to interrelated wrongful acts, bodily injury and property damage exclusions, and definition of claim provision, among others, should be considered. Certain insurers have entered the market with affirmative coverage for claims related to mismanagement of climate change or deleted exclusions (e.g., Zurich and Liberty Mutual).

• **Implications for CGL Coverage**—Insureds hit with climate change-related tort lawsuits probably will look to CGL policies for coverage because CGL insurance generally provides broad coverage for defense and indemnity of claims for bodily injury, personal injury, and property damage (potentially including natural resource damages). Insureds in the manufacturing and green building industry also may look for advertising injury liability coverage if they are subject to greenwashing claims. CGL product liability endorsements also may be implicated by new climate change-related claims. Although no climate change-related product-liability claims have been made thus far, it is possible that individuals could bring product-liability claims against an insured, such as failure to warn or design-defect claims related to products that emit GHGs. CGL is an attractive target because claims may implicate numerous occurrence-based policies and the policies generally provide defense coverage in addition to policy limits for any indemnity. Even if climate change-related cases do not ultimately succeed, defense costs could be high.

CGL policies have pollution exclusions, known loss or loss in progress exclusions and limitations, expected or intended exclusions, batch clauses, and failure to conform exclusions that may be relevant in the climate change context. Thus far, there has only been one climate change-related coverage
dispute in the courts. In *AES Corp. v. Steadfast Insurance Co.*, the Virginia Supreme Court concluded that there can be no “occurrence” giving rise to coverage where the underlying complaint alleges that the defendant intentionally emitted GHGs and the alleged “natural and probable consequence” of such emissions is global warming and related damages. Given it decided there was no occurrence, the Virginia court did not need to reach the other issues raised by Steadfast—the pollution exclusion and known loss argument. Other jurisdictions may be called on to decide climate change-related CGL coverage disputes involving these issues.

**Implications for Environmental Liability Coverage**—Environmental liability insurance generally covers damages and cleanup costs arising out of “pollution events” at, on, under, or migrating from covered locations and defense costs associated with such events. Thus, it is highly likely that insureds facing climate change-related claims will seek coverage under environmental policies. Whereas any conclusion that GHGs are pollutants for purposes of pollution exclusions could decrease insurers’ exposure under CGL policies, a determination that GHGs are pollutants could increase insurers’ exposure under environmental policies. Courts probably will consider recent EPA regulations related to GHGs in evaluating whether GHGs are pollutants for purposes of affirmative coverage grants in insurance policies. Thus, climate change presents a special risk in the environmental liability insurance field.

Insureds may seek coverage under environmental liability policies for tort claims arising out of episodic environmental events, other common law tort claims (such as *AEP, Kivalina*, and *Comer*), and statutory environmental claims such as natural resource damages under CERCLA. In addition to tort lawsuits and CERCLA NRD actions, insureds may face statutory liability pursuant to the Clean Air Act or new GHG statutory schemes if ever enacted by Congress. For example, insureds may attempt to seek costs of compliance through their environmental liability policies. Betterment exclusions could bar exposures for day-to-day operational costs such as costs associated with Clean Air Act–related upgrades, but the specific wording of the particular exclusion should be evaluated and considered in context.

The fact that most environmental policies are written on a claims-made rather than an occurrence basis will temper some of this risk because insureds will not be able to look to historic or multiple policies. Circumstance reporting of climate change events, however, may become more commonplace as

3. 725 S.E.2d 532 (2012).
insureds try to preserve their right to demand coverage for climate change events even under claims-made policies.

In evaluating exposure under environmental liability policies, the following policy provisions may be relevant: definition of “natural resource damages”; intentional/criminal acts exclusion; fines, penalties, and punitive damages exclusion; and limits of liability provisions for multiple claims arising out of the same pollution event, multiple insureds or claimants, multiple coverages, multiple policy periods, and sub-limits.

**Implications for Professional/E&O Coverage**—Climate change-related claims could arise out of a wide variety of professional activities such as carbon footprinting, preparation of environmental impact statements and mitigation strategies, green building, and greenwashing. As EPA, states, and nonprofits demand disclosure of GHG emissions from corporations, professionals are being called on to account for or calculate GHG emissions for corporate clients in reports to EPA or other federal or state authorities. For example, regulated emitters will rely on professionals to help prepare reports pursuant to the EPA GHG Reporting Rule and in connection with preparation of environmental impact statements and mitigation strategies related to obtaining permits at the state and local level. If professionals make mistakes in the course of doing such work, their customers may file claims against them.

Professionals also could be subject to liability if problems arise from misrepresentations or mistakes made in connection with green building, installation of emissions-reduction solutions, and possibly handling of carbon credits. For example, if a professional fails to take the promised steps to mitigate GHGs in a green building project, causing a loss of LEED certification or loss of tax benefits, the client may have a claim against the professional. If a consultant assists a client in developing green products and the client is saddled with greenwashing claims, the client may in turn sue the consultant. As climate change progresses and adaptation solutions become increasingly important, claims arising out of adequacy of professional services related to resilience solutions and disaster management planning may also increase.

Professionals will seek coverage for these kinds of climate change-related claims. Whether or not exposure is significant may depend on whether the professional liability policies contain pollution or intentional/criminal acts exclusions. Exclusions for fines; penalties; taxes; punitive, exemplary, and multiple damages; and products liability also may be relevant considerations in the coverage analysis. In light of the likely emerging claims, it will be important to identify and monitor the evolving standard of care and to revamp underwriting criteria and pricing in this area.
• Implications for Property, Accident, and Health Coverage—Episodic climatic events will continue to generate first-party claims under personal and commercial property policies. These same events will also continue to generate accident and health-based claims. Regardless of their potential relation to climate change, insurers generally have systems in place to monitor how severe weather events are affecting the frequency and severity of first-party property claims. Many insurers and their experts model storm patterns and other natural phenomena without labeling this “climate change” work. This book does not focus on first-party claims in detail.

• Implications for Political Risk Coverage—Insureds may seek political risk coverage for carbon and other GHG emissions credit transactions. Political risk insurance may protect against the risk of a host government’s actions that prevent an insured from receiving benefits associated with emission credits. It also might provide coverage for political violence, including war, riot, unauthorized repatriation, and terrorism, which might disrupt operations related to the credits. Some insurers have specifically decided to cover such risk through new product offerings in this area.

• New Products—Traditional property and casualty insurance, along with specific new products targeted to the needs of renewable and alternative energy projects, such as carbon capture and sequestration (CCS) or warranty policies, may assist owners, operators, and contractors with climate change-related risk management. Insurers may find that climate change creates a fertile ground for new applications of existing products and demand for new and innovative products to address emerging circumstances.

C. Risk Management and Product Development Considerations

1. Potential Enterprise Liability

Careful vetting of climate change disclosures can help reduce risk because litigants might try to use such communications to establish knowledge or an enterprise position even when the litigation or claims matter at issue is in a jurisdiction foreign to that where the disclosure or communication was made. Insurers also can try to avoid taking inconsistent positions in claims against their own insurance carriers and in coverage disputes with their insureds.
2. Potential Claims Liability

Given there have been few claims to date, there is no clear exposure driver. Neverthe-
less, the following appear to be particularly significant in the climate change context:
(a) whether a policy contains a pollution exclusion or grant of pollution coverage,
(b) whether a policy offers defense in or outside of limits, and (c) whether a policy is
claims-made without circumstance reporting options or triggered by an occurrence.
The range of potential exposure drivers are discussed in Chapter 8.

In addressing climate change-related risk, insurers could consider developing
new products specifically addressing the risks unique to climate change (and thereby
channeling emerging market need into products better suited to manage these emerg-
ing risks for both insurers and insureds); new exclusions; sub-limits; restrictions on
defense outside of limits; restrictions on underwriting certain industries; development
of underwriting guidelines for new industries and for changing exposures to exist-
ing industries, changes in pricing and risk profiling; strategic changes to language of
existing exclusions, limitations, and other policy provisions; and strategic placement
of existing exclusions, limitations, and other policy provisions in additional kinds of
policies.