Mark C. Trexler & Laura H. Kosloff

The Changing Profile of Corporate Climate Change Risk

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Dr Mark C. Trexler
Director, Climate Risk, DNV-KEMA Energy & Sustainability, Portland, OR, USA

Laura H. Kosloff
Attorney at Law, Portland, OR, USA

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Abstract

BUSINESS RISK associated with climate change is commonly assumed to be primarily policy driven. Many companies internalize the current stalemate over global climate policy into a perception that climate risk is no longer a critical issue. Business climate risks, however, include operational and supply chain (physical) risk, brand risk, market-driven structural risk, and liability risk. As national and global policy to materially reduce climate change is delayed, it is business-prudent to assume that the level of climate risk is increasing. Even if policy risk might seem lower today than a few years ago, political will can change quickly. Should physical impacts of climate change manifest in dramatic ways, for example, draconian climate policy is likely to follow quickly. Companies are well served to rethink their perceptions of climate risk in today's changing risk environment and evaluate whether they are effectively positioned.

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The Authors

DR MARK C. TREXLER has 25 years of experience with business climate change risk management, having joined the Climate, Energy and Pollution Program of the World Resources Institute in Washington, DC in 1988. Mark founded Trexler Climate + Energy Services (TC+ES) in 1991, pioneering corporate climate change strategy work, including the first GHG inventories, the first carbon offsets, the first corporate risk management strategies, and the first climate-neutral products and services. Mark has served as a lead author on climate change mitigation for the Intergovernmental Panel on Climate Change. Mark joined Det Norske Veritas (DNV) in 2009.

LAURA KOSLOFF has worked as an environmental attorney since 1985, including for the Environmental Law Institute in Washington, DC as a research attorney and as Associate Editor for the *Environmental Law Reporter*, as trial attorney for the US Department of Justice, as General Counsel to Trexler Climate + Energy Services (TC+ES), and as Associate General Counsel to EcoSecurities Group plc. At EcoSecurities, she supported a team of more than 20 climate change and project experts and developed climate-related contracts. As General Counsel of TC+ES, she participated in GHG market forecasting, carbon project development, and management of an emerging entrepreneurial enterprise.

CHAPTER 1

Executive Summary

CLIMATE CHANGE HAS BEEN CHARACTERIZED as a business risk, at least for major greenhouse gas (GHG) emitters, for more than 20 years.[1] Today, climate change and related risk variables (e.g. water scarcity and extreme events) increasingly rank toward the top of the business risk list published annually by the World Economic Forum.[2]

Climate change can translate into business risks in a number of ways:

- *Physical risk*, including direct impacts of climate change on a company's operations, supply chains, and financial performance;
- *Brand risk*, including the impact of consumer and stakeholder perceptions on corporate competitiveness;
- *Policy risk*, including the impacts of climate change policy and regulatory mandates on a company's operations, supply chains, and competitive advantage;
- *Structural risk*, including the impacts of climate change-influenced market forces on the supply of and demand for a company's products and services; and
- *Liability risk*, including litigation or legislation that could assign corporate liability for GHG emissions, potentially retroactively.

Several of these risks can manifest themselves at both ends of the corporate risk management time-line, i.e. through measures undertaken too early and too aggressively, or too little and too late. Stakeholders routinely pressure companies in virtually every business sector to take corporate action on climate change, even before any regulatory regime is in place. Yet it is a rare investor indeed who willingly and explicitly accepts reduced corporate performance in the near term as a tradeoff for being better hedged against future climate risks. Corporate first-movers undertaking aggressive mitigation strategies can find themselves under pressure from shareholders due to short-term impacts on the bottom line, face competitive disadvantage if competitors do not pursue the same initiatives, and even incur brand risk for their efforts if public attention to those efforts leads to 'greenwashing' charges.

Companies therefore walk a fine line when it comes to managing potential climate risks – assuming they are actually aware of the risks. Playing it safe, much of the corporate action on climate change has taken the form of low-risk voluntary measures, including harvesting low-hanging fruit (e.g. energy efficiency). While that can lead to significant cost savings, it usually runs out long before a company is able to accomplish serious emissions reductions. More importantly, it addresses just one of the potential risks companies face from climate change.

For companies wanting to undertake more material risk management efforts, whether mitigation or adaptation-based, physical and policy uncertainties surrounding future climate change and climate change policy are a major challenge. Corporate efforts can be frustrated by societal risk management inaction on the one hand (resulting in delayed policies and more climate change than the company might have anticipated) or societal risk management actions that are more aggressive than the company might have anticipated. The characteristics of climate change as a risk problem put companies at a significant risk management disadvantage, even as those risks grow.

An obvious question for business observers is just how sure scientists are about climate change and the existence of physical climate risks. There is no question that consensus exists among the scientific community that anthropogenic climate change poses serious risks, notwithstanding a range of continuing uncertainties regarding the magnitude, pace, and impacts of climate change. In interpreting the continuing scientific debates over these aspects of climate change, we have to remember that there's virtually nothing that scientists agree upon universally. This should not be interpreted as somehow undermining scientific certainty about climate change; there's almost nothing that scientists consider 'certain' in the way the term is commonly used.

From a business risk standpoint, it is useful to characterize a range of climate change scenarios against which potential business risks can be compared and evaluated. Five scenarios are profiled below, representing a large part of the potential distribution of climate change and climate policy outcomes:

- *Scenario 1: Issue collapse.* The prospects of climate change, and the pressure for policy action on climate change, could come to an end.
- *Scenario 2: Stay the policy course.* This scenario can be thought of as reflecting a continuation of current policies, and comparable to an explicit or implicit carbon price of US$5–30/ton of CO_2 equivalent.

- *Scenario 3: Policy induced atmospheric stabilization of CO_2.* This scenario is based on emergence of the political will to pursue the aggressive emissions reductions and technology development initiatives that would be necessary to stabilize GHG concentrations in the atmosphere.
- *Scenario 4: Policy induced return to 350 ppm CO_2.* This scenario carries Scenario 3 further by suggesting an actual reversal in the accumulation of GHGs in the atmosphere, and would only be motivated by a revolution in public and political climate risk perceptions.
- *Scenario 5: Technology induced transition to a low carbon economy.* This scenario is premised on big changes in the rate of development and or deployment of low-carbon technologies leading to a stabilization or reduction in atmospheric GHG concentrations, even in the absence of material carbon pricing.

Companies evaluating climate risks may wish to assign relative probabilities to the five scenarios introduced above as part of their risk management strategies. Such strategies have to accommodate potentially rapid future transitions from one scenario to another. Could the ‘stay the policy course’ scenario suddenly switch to the ‘policy-induced atmospheric stabilization’ scenario, or the ‘return to 350 ppm’ scenario in response to climate change itself? Are there circumstances in which the ‘technology-induced transition to a low-carbon economy’ scenario becomes more or less probable?

The business community has no prudent choice but to consider climate change as an integral part of corporate planning. For some companies, climate change and climate policy outcomes will create business opportunities. For the others, climate risk management strategies can already reduce companies' exposure and vulnerability to both climate change and climate policy. Climate risk positioning strategies can make companies 'response-ready' for climate risks that will evolve, or which cannot be materially or cost-effectively mitigated today. Companies with effective positioning strategies will be able to move more quickly than competitors when uncertainties around key variables are narrowed and thus enhance their competitive advantage.

The potential for business risk and business opportunity based on climate change and climate change policy is greater now than in the past, and will continue to grow as the gap between climate science and climate policy continues to expand. It is important that corporate risk management strategies keep up.

CHAPTER 2

Introduction

SCIENTISTS HAVE CALLED for a near-term reduction in global emissions of carbon dioxide (CO_2) of more than 70% to stabilize the concentration of CO_2 in the atmosphere. Meanwhile global CO_2 emissions, as well as emissions of the other so-called greenhouse gases (GHGs), continue to increase. While a political consensus exists for the view that exceeding 2°C of global temperature change would constitute 'dangerous anthropogenic interference with the climate system'[3] (the avoidance of which global governments are committed to through the United Nations Framework Convention on Climate Change), that amount of warming is already almost inevitable. More importantly, there is no global action plan in place to prevent much more dramatic temperature rises in coming decades.

Even as climate science has solidified, companies have been hearing for years that they don't need to know much about climate change science, they just need to recognize that 'the climate policy train is leaving the station, and you want to be on it'. This 'policy paradigm' of climate risk assumes that policy and regulation are the primary contributors to corporate climate risk, rather than climate change itself, and encourages policy-oriented risk responses. Correspondingly, the primary focus of corporate risk management activities has been to be at the policy table (rather than 'on the menu'), to measure and commit to reducing corporate carbon footprints, to anticipate the timing and magnitude of a future price on carbon, and to use carbon offsets to voluntarily reduce corporate or product-based emissions. Hundreds of corporate footprint reduction commitments and a slew of 'carbon-neutral' products and services have sprung up as a result.

Some 25 years after initial calls for broad-based GHG emissions reductions,[4] agreement on climate change policy to accomplish these reductions has proven an almost impossible nut to crack through domestic legislation or international negotiations. It's not for a want of trying; numerous policies intended to help reduce GHG emissions, and reduce or adapt to climate change are in place or being developed around the world. The problem is that these measures are unlikely to do more than scratch the surface of what scientists have said is necessary in order to materially reduce climate risk.

With the failure of national climate change legislation in the US, and the anticipated failure of international efforts to extend a meaningful version of the Kyoto Protocol, many companies are asking themselves: Climate risk? What climate risk? Companies should question, however, whether the 'policy paradigm' that underlies this conclusion, and that has guided corporate thinking for more than a decade, is actually the right risk management paradigm.

For example, does the growing disconnect between societal climate change risk and climate change policy have risk implications for business? How material to business is climate change itself, including all of the associated supply chain and brand risks? Is it reasonable to assume that if climate change makes itself increasingly felt it will become politically harder and harder to ignore, and that the risk of sudden and draconian policy risk will escalate? A gradual glide path to lower GHG emissions and toward a higher price on GHG emissions – long an objective of corporate efforts to influence climate policy – could be rendered moot if the public and policy-makers conclude that we have run out of time for gradual measures.

Notes and References

1. AES Corp. pursued the first carbon offset project, an agroforestry project in Guatemala in 1989. In 1994 dozens of US companies signed up to the Climate Challenge, a governmentally incentivized program to encourage electric utilities to commit to targets to reduce, avoid, or sequester greenhouse gases by the year 2000. See **http://www.climatevision.gov/climate_challenge/climatechallenge.html**.

2. Global Risks, 2011. 6th Ed. World Economic Forum. Available at: **http://reports.weforum.org/global-risks-2011/**.

3. United Nations Framework Convention on Climate Change, Article 2. Available at: **http://unfccc.int/resource/docs/convkp/conveng.pdf**.

4. The Intergovernmental Panel on Climate Change was launched in 1988, and released its First Assessment report in 1990.