

Climate Policy Risk in the U.S. Electric Power Sector

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Introduction

On July 9, 2018, CSIS hosted a workshop on “Climate Policy and the Power Sector: Identifying and Managing Risks and Opportunities.” The Chatham House Rule workshop convened representatives from the power sector, former public utility commissioners, environmental NGOs, and investors.

The group came together to discuss the deeply unsettled landscape for climate policy in the United States. As a major emitting sector with multi-year capital investments on the line, the U.S. power sector has an important stake in properly assessing its long-term risks and opportunities from climate policy.

The basis for the workshop discussion was a [white paper written by Kyle Danish](#) from Van Ness Feldman. He is also a senior associate (non-resident) at CSIS. The paper finds that the power sector will face significant risks from climate-related regulation and litigation over the next 10 years. In the realm of federal regulation, this risk remains regardless of how current efforts to repeal and replace the Clean Power Plan unfold. First, the rollback efforts could be vulnerable to judicial review in the courts. Second, even if the Trump administration successfully finalizes and defends its repeal of the Clean Power Plan, a future administration could pursue a regulatory program using the same legal authority or by utilizing other existing legal authorities. Moreover, any future federal regulations are likely to be far more stringent than the Obama-era regulations, particularly if a subsequent administration uses “deep decarbonization” as its lodestar for policy.

In addition, for many power sector entities, state and local policies could have very meaningful impacts, including through emerging carbon pricing programs, more ambitious portfolio standards, and demands for carbon-free electricity from major municipalities and large corporate customers. In the absence of clear federal policy, these state-level policies and approaches may become more stringent and may serve as examples that other like-minded states will follow. The power sector also faces risks from a new wave of tort-style lawsuits wending their way through the courts. These lawsuits, which are currently targeting oil

and gas companies, seek to hold the defendants liable for climate-related damages. The prospects for these cases are uncertain. However, regardless of outcomes, ongoing litigation could drain resources from the power sector and impose reputational harm.

Importantly, these various pathways for climate-related regulation and litigation interact with one another; foreclosure of one pathway tends to make other pathways more likely. For example, rolling back federal climate regulations makes it more likely that there will be more robust policymaking efforts in the states and more resources behind litigation in the courts. Accordingly, even if the likelihood of any one regulatory or litigation pathway is low, the cumulative risks related to regulation and litigation are significant.

Although future climate policies present risks for the U.S. power sector, they could also offer opportunities. New policies are focusing on increased electrification of the transportation, industrial, and residential sectors. Importantly, the more that the power sector reduces its CO₂ emissions, the easier it will be for policymakers that wish to reduce emissions to justify moving forward on electrification policies. Furthermore, power sector entities that reduce their emissions profile will find it easier to meet the growing demand from electrification in environments where emissions reduction policies exist; they will not have to invest as much in emission controls or allowances to increase their generation. In these ways, risk management and opportunity management could be two sides of the same coin.

Power sector entities and investors are planning around the potential establishment of additional climate-related policies in the next 10 years and by and large recognize the potential upside benefit from electrification policies. The magnitude of risk and opportunity from climate-related regulations and litigation, however, remains uncertain, and there is less uniform agreement about what kinds of near-term actions are warranted.

The workshop discussion centered around two main questions: (1) given that there are risks and opportunities from future climate policies, what should power sector entities do to manage those risks and opportunities; and (2) what should policy-makers (such as utility commissioners) and financials demand in the way of information about these management efforts? What follows are some key messages from the discussion.

1. Risks from climate policy and litigation should be understood in the context of other risks facing the power sector.

The U.S. power sector is contending with declining demand, pressures to keep rates low, dizzying changes in relative fuel costs, new entrants (including behind the meter and some large customers that are seeking to build and supply their own, clean power sources), cybersecurity risks, and rapid technology changes. Many of these other market and technology drivers have more substantial near-term impacts on decisionmaking than the shadow of potential future climate regulation. However, it is also the case that strategies for managing some of these other risks and drivers dovetail with strategies for managing climate policy risks (e.g., shifting generation from coal to gas and renewable resources). Indeed, such generation shifts are increasingly driven by economics as much as climate imperatives. Other drivers, however, make it harder to get ahead of future climate policy. For example, pressures to keep rates low across a diminishing rate base make it more difficult for some to invest in very significant changes to generation portfolios. And not all stakeholders, including investors, see an unlimited benefit in “getting ahead” of policy or “earning

a seat at the table” for future policymaking efforts; some see getting too far ahead as being subject to risk.

2. The approach to managing climate policy risks varies considerably by region.

For power sector entities in California, the Pacific Northwest, and the Northeast, potential future federal policies are almost beside the point. These entities are facing stringent state and local policies today. And they expect these policies to increase in ambition over time. By contrast, entities in other parts of the country encounter policymakers for whom the paramount concern is keeping rates low. Actions to address climate change are given different levels of priority in various regions around the country. Utility regulators, in particular, have diverse views and knowledge levels; some commissioners continue to hold traditional and static views about what resources are cheapest, or what is necessary for “baseload” generation. However, even in states that have a low interest in climate policy or renewable generation, investor-owned utilities are facing pressure from Wall Street and corporate customers demanding increasing amounts of carbon-free energy.

3. Not all power sector entities are alike, and therefore, their perceptions of and responses to risk vary.

Even among power sector entities that acknowledge meaningful policy risk, there is variability in how entities are managing that risk. Some of that variability is a function of corporate form. A number of large investor-owned utilities have announced multi-year commitments to achieve very substantial emission reductions or invest in increased amounts of renewable generation. For new market entrants, the existence of climate policy is not a risk but a fundamental enabler of their ability to achieve larger degrees of market penetration and integration. These companies and investors are likely to support the most ambitious, forward-looking commitments. By contrast, many rural electric cooperatives serve impoverished regions, and, for historical reasons, own or take their power exclusively from coal-fired generators. These factors may constrain their ability to make major generation-shifting investments in anticipation of future policies of uncertain form or stringency.

4. Power sector entities are taking action to reduce emissions, but the sum total of the action is not adequate to address the climate challenge.

As noted above, a number of entities have announced pledges to achieve major emission reductions or substantial investments in renewables—and many have cited potential future climate policies as a rationale for these pledges. In general, the power sector is often viewed as the sector of the economy where the most progress is being made to transition to the type of energy system commensurate with global climate goals. Indeed, thus far, the regulatory and policy environment in most parts of the country, save for a few locations like California, only requires companies to begin to transition their system rather than fundamentally transform it. However, if a future administration, a future Congress, more state-level policymakers, or investors adopt “deep decarbonization” as a policy objective, the power sector would likely face a very dramatic shift in generation in a very short period of time. Recent modeling efforts show that even a relatively mild carbon tax or other price on carbon would drive a rapid transformation of the sector. It is not clear that all of the announced commitments reasonably anticipate such policy scenarios. On the other

hand, power sector entities face choices about how far to go in investing for projected but unknown future policy changes.

The ultimate question may be whether the portfolio planning that is now taking place fully takes into account more stringent, “deep decarbonization” policy scenarios and whether there are “no regrets” investments that can be made now to better prepare for such scenarios.

5. Locking in overly prescriptive or restrictive policies and regulations could pose problems given the amount of current and anticipated change in the sector.

On the other side of the spectrum, there are concerns about potentially locking in suboptimal policies that could magnify the challenges of future climate policies. For example, legal interpretations in the proposed rollback of the Clean Power Plan could preclude the use of flexible, market-based approaches for complying with potentially more stringent future regulations. On the other side of the spectrum, some state and local actors are beating the drum for policies that would require an abrupt shift to 100 percent of renewable generation. If pursued too precipitously, such an approach could prove impracticable, could cause a cost-based backlash to climate policies, or could forestall the development of other low carbon energy technologies.

6. Electrification is a compelling opportunity, but the path to get there is not entirely clear, and sequencing will be important.

Electrification of the economy presents a lot of potential upsides for power sector stakeholders. Some models of “deep decarbonization” (reducing emissions by at least 80 percent by 2050) project a doubling of demand for electricity as a result of electrifying the transportation, industrial, and residential sectors. At the same time, there are questions about how we get from here to there—and, in particular, what public policies are necessary for ensuring the build-out of charging infrastructure for vehicles. Currently, this infrastructure is balkanized and rather primitive. Utility participants in the workshop asserted that they are treading carefully in this area and are still trying to resolve questions about what roles they want to or will be asked to play. Developing the charging infrastructure needed to support substantial electrification of the transportation sector will involve significant questions around ownership, siting, and tariff design. Regulators in many jurisdictions are currently balancing the extent to which both regulated utilities and third parties should be able to invest in and charge for the infrastructure. The outcome of these discussions, as well as several pilot programs and initiatives, will help advance understanding of what mix of responsibilities work in which markets.

7. Investment banks are diverse, and their approaches to climate change-related risk vary.

Investor recognition of climate risk is an important driving force for change in the electric power sector. One of the major ways that investors get companies to address this risk is through requesting climate-related risk disclosure. European financials have adopted a more forceful position on climate disclosure than U.S. financials, but the urgency here is growing. Views and expectations can differ between pension funds, banks, and other types of financials. And there is often a diversity of views and expectations even within the same financial.

In general, financials seek more information from power sector entities about how they are managing risks and opportunities from climate policy. However, form matters. Some investors believe that many environmental, social, and governance (ESG) rating firms suffer from a low level of sector knowledge and have a tendency to provide overly simplified data. Some uniformity of analysis has come from asking power sector entities to evaluate how they would fare in a world where emissions reductions were forced to drop to a level commensurate with limiting average global warming to two degrees Celsius. However, some investors are questioning the value of these “two-degree” analyses. [Recent studies](#) make clear that there are numerous global pathways to a two-degree Celsius outcome, which makes it almost impossible to define what any individual entity would be required to do as part of such a scenario.

In response to this increasing demand for better information, power sector stakeholders are working to establish improved frameworks for disclosure. Many see the merits of different kinds of scenario-based reporting, in which a power sector entity would provide, for example, an analysis of how the entity would fare under different carbon pricing policies.

Conclusion

Notwithstanding the current uncertain landscape for U.S. climate policy, many power sector entities acknowledge that the risk of stringent future regulation or litigation remains significant. Utilities, utility regulators, and investors are managing these risks differently depending on important contextual factors, including regional policies and regulations, corporate form, resource and asset base, and perspectives on technological change. Most stakeholders are looking for no-regret strategies to mitigate potential risks while solving other important issues they face. But whether and how far to “get ahead” of policy is a more complicated strategic decision. Electrification seems to be the unifying theme for many in the power sector who are looking to align a low carbon future with economic opportunity, and while the pathway to achieving that outcome remains unclear, there are a number of power sector stakeholders experimenting with electrification strategies today.

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