Introduction, Symposium Facing Climate Change: Opportunity and Tool for States

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Symposium
FACING CLIMATE CHANGE:
OPPORTUNITIES AND TOOLS FOR STATES

INTRODUCTION

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This symposium explores an important and increasingly recognized aspect of climate change—the opportunities as well as legal and policy tools that are available to states. The articles in this symposium are by political leaders, climate change practitioners, and academics from a variety of disciplines. Their overall thesis is straightforward and hopeful: economic, social, and environmental opportunities are abundant, if only states think carefully about their goals and use the right mix and design of legal and policy instruments.

A consensus has emerged that climate change presents significant risks to human health and the environment. As a result, the United States ratified the United Nations Framework Convention on Climate Change in 1992. The Convention commits...
the United States and other parties to monitor greenhouse gas emissions and conduct research, among other things.\(^2\)

At the same time, many fear that legal requirements to reduce emissions would damage the economy. For that reason, the U.S. has refused to ratify the Kyoto Protocol to this Convention, which would have required this country and other developed countries to reduce emissions by specified amounts below 1990 levels by 2012.\(^3\) The U.S. did not offer a serious alternative to Kyoto, and the Protocol has now mustered enough ratifications by other countries to enter into force without this country as a party. In the absence of serious action by the federal government, states have emerged as serious players in the national climate change debate.

The growing role of states is a direct outgrowth of the likely effects of climate change on agriculture, forestry, the availability of water, public health, and other areas of traditional state responsibility. In addition, many of the legal and policy tools employed by states have benefits other than reducing greenhouse gas emissions. These include economic development, the deployment of new technologies, job creation, and the reduction of other pollutants. States thus provide a real-world setting in which to test the extent to which legal action addressing climate change can create economic and social opportunities, rather than reduce them.

Yet many raise questions about the extent to which state actions by themselves can seriously address an international issue. They also raise questions about whether any state has thus far made a significant reduction in its own greenhouse gas emissions.

This symposium directly addresses these and other issues. While it is focused mostly at the state level, it also touches on local government, business and industry, other national governments, and...
and provincial or regional governments in countries other than the United States. Two of the seven articles are specific to Pennsylvania, but their lessons can easily be applied to other states.

The first two articles focus on opportunities. Kathleen McGinty’s keynote address emphasizes the importance of looking for economic and social opportunities as we face climate change, and not limiting our focus to costs. States such as Pennsylvania can create more opportunities, she says, if they expand the range of tools that they employ. In addition, the creation of opportunities provides a way to constructively engage businesses and workers who would otherwise be excluded from constructive dialogue about addressing climate change, and thus opposed to measures that address it. In order to engage farmers, autoworkers, and coal miners, for example, it is necessary to develop legal and policy tools and technologies they can employ for their benefit. Generating these opportunities is not just about climate change; it is also about economic competitiveness and global peace and stability. Her insights are important because of the range and depth of her practical political experience with climate change as well as her experience in the private sector.

Pennsylvania, she explains, is moving forward in this way on a variety of paths. Among other things, the state's Department of Environmental Protection has initiated an "Energy Harvest" grant program to support clean energy technologies for farmers, has increased to 20% the percentage of the state’s electricity needs that are met by green energy, and has reinvigorated the Pennsylvania Energy Development Authority to provide "at the very least $300 million of tax free bond financing for clean advanced energy projects." Governor Ed Rendell is also supporting legislation to increase the percentage of all electricity used in Pennsylvania that
comes from renewable energy and other advanced energy resources.\textsuperscript{11}

Michael Northrop broadens the discussion about opportunities by surveying a great range of companies, national governments, states, provinces, and local governments that have addressed climate change.\textsuperscript{12} "One of the largest obstacles to sensibly confronting climate change," he writes, "is a set of unquestioned assumptions that environmental management efforts are by definition costly, anti-competitive, and disruptive of growth."\textsuperscript{13}

His article collects a great deal of evidence "that points the way to a carbon-constrained future without severe economic disruption, but rather, with improved efficiency, profitability and growth.\textsuperscript{14}" BP, DuPont, and IBM, for example, have each already saved well over $500 million by reducing greenhouse gas emissions.\textsuperscript{15} Swiss Re, a major insurance and reinsurance company, has developed a variety of products and policies to address the likelihood of greater risks and losses caused by climate change.\textsuperscript{16} Governments around the world are also developing a variety of laws and policies, not just mandated reductions, to address climate change. These governments are also realizing significant economic and job creation benefits. Creative government financing policies, including tax incentives, Northrop emphasizes, make a significant contribution to reducing emissions.\textsuperscript{17}

The McGinty and Northrop articles, taken together, make clear the relationship between tools and opportunities. They also paint a compelling and provocative picture of the opportunities that are available.

The next two articles in this symposium look at state strategies in light of the federal/state relationship. Strategies are an important

\begin{flushleft}
\textsuperscript{11} Id. at 16.
\textsuperscript{13} Id. at 54-55.
\textsuperscript{14} Id. at 55.
\textsuperscript{15} Id. at 60-61.
\textsuperscript{16} Id. at 31-34.
\textsuperscript{17} Id. at 39-40.
\end{flushleft}
policy tool for this issue. Thomas Peterson divides the evolution of U.S. climate policy into three periods: 1990-2000, when the Clinton Administration advocated a national approach; 2000-2005, when states, regions, and municipalities became more active; and 2005-2010, when he says state and federal governments are likely to converge in their approach to climate change.\(^{18}\)

For the current period, 2000-2005, Peterson identifies a number of trends in state activity. These include higher levels of public and gubernatorial involvement, greater standardization of policies among states, increasing use in many states of targets and timetables supported by a variety of measures, more widespread monitoring and public reporting of results, and growing multi-state coordination.\(^{19}\) It is worth emphasizing that no single legal or policy measure is being employed; rather, more than 200 different actions are being employed. To explain the range of measures and stimulate thinking about what can be done, Peterson uses a matrix of eight types of mechanisms (including codes and standards, market mechanisms, and voluntary agreements) and six economic sectors (including transportation, forestry, and energy supply).\(^{20}\) During this period, he says, conflicts between climate policy and energy policy have been resolved more often than expected, and "co-benefits" (ancillary environmental, social, and economic benefits of addressing climate change) have played a major role.\(^{21}\) "Increasingly," he adds, "states and stakeholders expect federal action on climate change in the next few years."\(^{22}\)

Barry Rabe agrees with Peterson that states are more and more active in policy development on climate change. But he compares U.S. experience with states to the experience of other countries, and suggests other ways in which state efforts could unfold.\(^{23}\)

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\(^{19}\) *Id.* at 95-98.

\(^{20}\) *Id.* at 106.

\(^{21}\) *Id.* at 112-13.

\(^{22}\) *Id.* at 114.

Many countries that have ratified the Kyoto Protocol are having difficulty carrying out their commitments, and U.S. states appear to be much more engaged than Canadian provinces even though Canada has ratified the Kyoto Protocol.\textsuperscript{24} An increasing number of states, he adds, may have better ability to develop and successfully implement emissions reductions programs than countries that have ratified the Kyoto Protocol.\textsuperscript{25} This is true, Rabe says, despite state budget woes, legal limitations, and uneven performance.

Four different scenarios suggest the ways that state innovation in climate change might unfold. The federal government might simply adopt tools that states have employed, such as legal requirements to increase the amount of electricity generated by renewable energy.\textsuperscript{26} Policy innovations in one state could be diffused to other states.\textsuperscript{27} The U.S. and Canada could collaborate in various ways, building on a recent agreement by eastern Canada provinces and New England states to cooperate to reduce greenhouse gas emissions.\textsuperscript{28} The most ambitious scenario involves "a more fundamental reinterpretation of state and federal roles in related areas of domestic policy" that goes well beyond the standard platitudes about giving greater responsibility to states.\textsuperscript{29} The subtext for all four scenarios is that state experience should inform state and national decision making on climate change.

The next article focuses on the strategic importance of goal setting by states. Laura Kosloff, Mark Trexler, and Hal Nelson urge states to adopt an "outcome-oriented leadership" approach to climate change.\textsuperscript{30} States can develop laws and policies that other states can then adopt, or they can be driven to adopt laws for other reasons—to claim credit for acting or to protect their competitive position. Whatever the reason, Kosloff and her coauthors suggest, state actions should be evaluated according to three criteria. These

\begin{itemize}
\item \textsuperscript{24} Id. at 124-27.
\item \textsuperscript{25} Id. at 128-29.
\item \textsuperscript{26} Id. at 152-56.
\item \textsuperscript{27} Id. at 156-60.
\item \textsuperscript{28} Id. at 160-65.
\item \textsuperscript{29} Id. at 165.
\item \textsuperscript{30} Laura H. Kosloff et al., \textit{Outcome-Oriented Leadership: How State and Local Climate Change Strategies Can Most Effectively Contribute to Global Warming Mitigation}, 14 \textit{Widener L.J.} 173 (2004).
\end{itemize}
are 1) effectiveness in reducing emissions, 2) the extent to which state or local policies encourage national or international action on climate change, and 3) the extent to which such policies minimize long-term costs of climate change to stakeholders. 31

State or local emissions reductions by themselves are simply not enough to have any impact on climate change, even though that is the most commonly stated reason for acting. The only approach that will ultimately work, they argue, is an international regime that has many component parts. Thus, state and local governments should also focus on policies that satisfy the second and third criteria. They apply a scoring system to evaluate a variety of state and local efforts according to these criteria, with interesting results. 32 Some states, for instance, have adopted laws allowing companies to "register" their greenhouse gas emissions. 33 These laws anticipate the future creation of legal rules that will require a specified percentage reduction from existing emissions, and the possibility that early reducers will not be penalized by being asked to make further reductions if their early reductions are well documented. These laws score low on the first two criteria, but high on the third. 34 This multi-dimensional approach suggests a more thoughtful and strategic approach for state and local actions than simple reductions, and its use would likely lead to more rapid adoption of effective national and international responses to climate change.

The final two articles examine specific tools. They illustrate the importance of care in design to the overall effectiveness of legal programs to mitigate climate change. Robert McKinstry, Adam Rose, and Coreen Ripp outline a detailed set of options for a greenhouse gas tax and emissions trading system for Pennsylvania. 35 Taxation and trading are perhaps the favorite tools of economists, mostly because of their ability to reach across all economic sectors, their efficiency, and their cost effectiveness (if

31 Id. at 176-77.
32 Id. at 199-201.
33 Id. at 188-89.
34 Id. at 201.
they are designed properly). This approach, they argue, would not only reduce greenhouse gas emissions, but would also improve the state's taxation system and stimulate economic changes that would better prepare Pennsylvania for a future control system.\textsuperscript{36} Their analysis provides a useful point of departure for any future discussion of this issue in Pennsylvania, and could easily be replicated for other states.

A greenhouse gas tax in Pennsylvania, they state, could bring in between $300 million and $3 billion per year, depending on the tax rate.\textsuperscript{37} This tax could serve as a means of tax reform because the revenue received could be used to reduce or eliminate (depending on the tax level) the Corporate Net Income Tax, the Capital Stock and Franchise Tax, or property taxes.\textsuperscript{38} The proposal is thus to shift the source for taxes, not to raise them. Another choice is to "cap" greenhouse gas emissions at a level that effectively requires a reduction in emissions from existing levels.\textsuperscript{39} Firms that reduce their emissions beyond the required level are allowed to "trade" their excess reductions to firms for which the required reduction is much more expensive. When excess reductions are available, and the trading cost for the excess reductions is less than the cost of reduction for at least some firms, this cap-and-trade approach is less expensive than other means of compliance.

Of course, a host of issues arise with tax and trading proposals, including the tax rate, use of the revenue received, the level of emissions reductions sought by the state, and their political feasibility. Beyond these are questions about exactly what is to be taxed, how to employ a trading system, and how to avoid state and federal statutory and constitutional limitations. McKinstry and his coauthors identify these issues and provide options for resolving them.

Mark Trexler, Laura Kosloff, and Carol Hu address another and more discrete issue—project-level "additionality" in the design

\textsuperscript{36} ld. at 221-28.
\textsuperscript{37} ld. at 223.
\textsuperscript{38} ld. at 232-33.
\textsuperscript{39} ld. at 234-35.
of a trading scheme.40 Most trading schemes are designed for a particular geographic area or set of sources. Many trading systems, however, allow the use of reductions from sources to which the cap does not apply, such as sources in another state or nation. For these sources, additionality is a significant issue. The problem with these sources is the difficulty of determining that reduced emissions would not otherwise have occurred, or are in addition to reductions that occurred anyway. If these reductions would have occurred anyway, trading achieves no environmental benefit. The problem is compounded by the absence of an analytical method for determining whether reductions from any given project meet this additionality requirement. At the international level, the authors say, the additionality rules are quite complex. States, they suggest, cannot and should not emulate this level of complexity.41

Instead, Trexler and his coauthors argue, states should initially establish a list of technologies whose use is highly likely to be in addition to what any firm would otherwise be using.42 As time passes, and as demand increases, states can increase the size of the list. Development of the list forces states to give greater attention to their goals in the policy design phase (e.g., local reductions or cost effective reductions), and reduces the likelihood of allowing trades based on "business as usual" reductions that would have occurred anyway.43

The availability of opportunities based on thoughtful choice of legal and policy tools does not mean that the road ahead is going to be easy or cost free. Climate change is unlike any other environmental issue because virtually every economic sector in virtually every country contributes to it, and because the scale of adverse effects is essentially global. At the state level in the United States, as this symposium’s contributors demonstrate, states are making growing progress in developing and implementing mechanisms that address climate change while creating other benefits. While the challenges ahead are enormous, this experience provides a reason to be hopeful.

40 Mark C. Trexler et al., Developing Project-Level Emissions Reductions Policy at the State Level, 14 WIDENER L.J. 269 (2004).
41 Id. at 270.
42 Id. at 272-73.
43 Id. at 274.