

The Changing Climate of Cooperative Federalism: The Dynamic Role of the States in a National Strategy to Combat Climate Change

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I.

INTRODUCTION

The federal government must work with, not against, states to reduce greenhouse gas emissions.

President Barack Obama
January 26, 2009

In the past decade, state and local governments have assumed the mantle of leadership in addressing climate change in the United States. State and local leadership has laid the foundation for an effective, efficient, and economically beneficial American climate change and clean energy strategy. Indeed, a silver lining of the federal inaction on climate change over the past eight years has been that it fostered the development of innovative and pioneering efforts by state and local governments to combat climate change. One prime example of this dynamic is the Regional Greenhouse Gas Initiative (RGGI).

As Congress and the federal government’s executive branch finally begin to seriously consider a meaningful national climate change policy, it is critical to heed President Obama’s recognition that a national approach to addressing climate change will need to include a variety of programs at each level of government. Climate change is undoubtedly unique amongst policy challenges in both its magnitude and its scope. It is both a global and local crisis, and it has both global and local solutions and impacts. Given the magnitude of the climate change crisis, our national response to climate change must be collective in nature and incorporate all levels of government in the most effective manner. The federal government cannot address the transcendent chal-

lenges of climate change alone; it must enlist states and municipalities as partners in developing and implementing the policies that are needed to address climate change.

By complementing a federal program with programs and policies at the state and local levels, we will be better able to achieve our climate and energy goals at the lowest collective cost and the greatest overall benefit. Complementary state and local level programs, operating alongside a federal program, can reduce the cost of reducing greenhouse gas (GHG) emissions. Moreover, innovative and aggressive state programs have already provided a model for federal action, and will continue to do so in the future. State and local governments are generally more able than the federal government to respond quickly to new scientific and technological developments. New York and other states have been implementing well-structured and successful climate change programs for a number of years. As we explain, these pioneering and innovative state programs will continue to have value when the federal government finally regulates GHG emissions in some fashion.

This collaborative effort is consistent with fundamental principles of federalism that underlie the relationships between states and the federal government. The American system of federalism respects and values the flexibility of state and local governments to take action above and beyond whatever is required by federal environmental programs, including any prospective federal climate change legislation. As explained below, this flexibility must allow for a state to work to realize whatever additional level of GHG emission reductions it deems necessary and achievable, whether by implementing a concurrent state or regional cap-and-trade program, retiring allowances in a federal cap-and-trade system, requiring certain amounts of renewable energy production, encouraging energy efficiency, or some other method.

This paper explains why President Obama is correct that states and local communities must continue to be on the front lines of confronting our climate and energy challenges in the decades to come. It also articulates the benefits of preserving state and local authority to regulate GHG emissions after a federal legislative or regulatory program is in place. In particular, this paper describes how RGGI has demonstrated both the benefits of auctioning emission allowances in a GHG cap-and-trade program and the mechanics of actually conducting such an action successfully.

II.

CLIMATE CHANGE: A GLOBAL AND LOCAL
PROBLEM WITH GLOBAL AND
LOCAL SOLUTIONS

Climate change is often characterized as being fundamentally distinct from other environmental problems in that it is a global, not local, problem, perhaps creating less need for allowing states to be more stringent than the federal government. This argument seems to imply—incorrectly—that a problem cannot be both global and local in nature. On the contrary, climate change is perhaps the best example of just such a crisis: It is a worldwide problem that has impacts at the global and local level, and it requires action at both levels in order to be solved. First, emission reductions taken in a given state mitigate climate change worldwide, including in the state taking action. The fact that the benefits of state actions spill beyond a state's borders simply increases the benefit of state action from a national or international perspective. Second, while atmospheric concentrations of GHGs are relatively uniform across the globe, emissions are not; therefore, state action tailored to its specific emission portfolio can achieve emission reductions more effectively and efficiently than a federal program. Finally, and perhaps most importantly, actions by a state to reduce GHG emissions often have significant concomitant benefits that may be limited to that state.

A. State and Local Greenhouse Gas Emission Reductions Can Have State- and Local-Specific Benefits

Climate change is a global problem, but it is also a problem at the state and local level. Local GHG reduction strategies contribute to reductions in local, as well as international, ambient GHG concentrations. Furthermore, the effects of climate change are being felt at the local and state levels and many of these effects are distinct in nature and magnitude across different locations.

Those who believe climate change to be a purely global problem also often argue that local GHG emissions do not cause local environmental and health problems. But any emission, from any location, contributes to global atmospheric concentrations of GHGs. The contribution of any particular source may be minimal, but the fundamental cycle remains: (1) local emissions combine to affect global atmospheric concentrations, and (2) in turn, local emissions cause both global and local environmental and

public health problems through this change in global atmospheric concentration. Of course, the reverse is also true: Local reductions of GHG emissions combine to mitigate global atmospheric concentrations of GHGs, and in turn result in both global and local benefits in terms of mitigating environmental and health impacts associated with climate change. These may seem obvious points, but without accepting this basic premise, any comprehensive policy might ignore both cause and effect at the state and local level.

In any case, local impacts are not uniform across the country. In fact, many states are disproportionately impacted by the effects of climate change, especially in terms of sea level rise, droughts, and reduction in water supplies, but also based on other inherent climate differences. Much of the world will suffer from the effects of climate change, which of course means that any individual state and locality will suffer as well. In its historic decision in *Massachusetts v. EPA*, the Supreme Court observed correctly that the fact “[t]hat these climate-change risks are ‘widely shared’ does not minimize [a particular state’s] interest”¹ Each state and local government may have to adapt to different consequences of climate change, or may have to deal with an even more pressing crisis than other state and local governments or the nation as a whole.

B. *Uneven Emissions of Greenhouse Gases Across States Create Uneven Incentives, Responsibilities and Opportunities Across States*

Of course, while concentrations of GHGs may be relatively uniform throughout the planet’s atmosphere, emissions of GHGs are not. In fact, GHG emissions are extremely disproportionate throughout the world and even throughout the country. For example, the average New Yorker’s per capita carbon dioxide (CO₂) emissions are approximately 10 percent of the average Wyoming resident’s.² Similarly, in New York, transportation and

1. *Massachusetts v. EPA*, 549 U.S. 497, 522 (2007) (discussing the particularized impacts of climate change on the Commonwealth of Massachusetts in the context of determining standing to sue).

2. See U.S. EPA, STATE CO₂ EMISSIONS FROM FOSSIL FUEL COMBUSTION 1990-2005, available at http://www.epa.gov/climatechange/emissions/state_energyco2inv.html (last visited Mar. 2, 2009); U.S. CENSUS BUREAU, ANNUAL ESTIMATES OF THE POPULATION FOR THE UNITED STATES, REGIONS, STATES, AND PUERTO RICO: April 1, 2000 to July 1, 2007 (NST-EST2007-01), available at <http://www.census.gov/popest/states/NST-ann-est.html> (last visited Mar. 2, 2009).

buildings are the largest sources of GHG emissions, while in many other states and regions, the power sector produces the most GHG emissions. This element of the crisis further belies the familiar trope that the scale of climate change makes it unlike any other environmental problem; its roots are also at the local level.

The differences in the relative levels of GHG emissions amongst the states suggest the importance of an approach that leaves certain choices to the individual states. Perhaps a federal cap-and-trade program would take this unevenness into account, whether in the context of allocation of allowances or otherwise. But the fact that the cause of the climate change problem is distributed so unevenly across the country further demonstrates that the federal level may not be the most appropriate level of government to make all policy decisions. The solutions to the problem may need to be different in form and scale depending on the relative level of emissions in a particular state, as well as the various drivers behind that level of emissions in each state.

For example, states like Montana and Wyoming that are heavily-dependant on coal for the generation of electricity have focused on carbon capture and sequestration as a response to climate change. California and many eastern states have focused on the contribution of motor vehicles, developing programs like the California GHG emission standard and low carbon fuel standards (LCFS).

C. State and Local Efforts to Combat Climate Change Have Other Benefits

Even if one were to accept that climate change is a purely global problem, actions undertaken by state and local governments to reduce GHG emissions almost always have ancillary benefits at the local level. Various initiatives that result in decreases in GHG emissions may also help to diversify the energy supply mix, reduce dependence on foreign oil, promote advanced technologies and “green” jobs, increase energy efficiency and reduce emissions of other non-GHG pollutants. For example, actions taken to reduce GHGs often simultaneously reduce criteria pollutants like sulfur dioxides (SO₂), nitrogen oxides (NO_x) and particulate matter (PM). This is especially true with requirements imposed on electric generating units that promote use of low-carbon intensive fuels. Any federal cap-and-trade program

must not preclude state and local governments from realizing these ancillary benefits.

Similarly, even initiatives that might be seen as having primarily unrelated policy objectives may simultaneously result in GHG emission reductions. Examples of these kinds of programs include changes in land use policy, promoting the use of public transportation, and encouraging “green” building. These kinds of programs may be focused on, for instance, promoting livable communities, reducing traffic congestion and increasing energy efficiency. Yet each of these initiatives also has the added benefit of reducing GHG emissions. The fact that efforts to reduce GHG emissions are so often inextricably intertwined with other energy, economic and similar efforts, is yet another reason why climate change is properly characterized as a global and local crisis and not purely a global problem.

III.

RGGI AND OTHER NEW YORK STATE CLIMATE INITIATIVES

With these fundamental aspects of the crisis in mind, New York State has already taken a variety of important steps to combat climate change. Its clean energy efforts and GHG reduction strategies illustrate the three characteristics of the climate change crisis described above, especially the fact that state-specific benefits are realized by state-specific efforts to reduce GHG emissions. Among these efforts, the most important is probably New York’s participation in RGGI, which is an important model for federal efforts to combat climate change, particularly regarding the use and mechanics of auctions to distribute allowances.

A. *RGGI: A Pioneering Cap-and-Trade Program for the Power Sector*

Certain characteristics of the climate change problem—along with the benefits of state action to address it—are best illustrated by existing state efforts that have already proven successful. In particular, existing state and regional cap-and-trade programs like RGGI will serve as a model for Congress to consider in drafting its legislation, as well as for administrative agencies to consider in implementing any associated regulations. Regardless of when Congress ultimately passes climate change legislation, the initiation of state and regional programs has already preceded the implementation of any federal program. RGGI is al-

ready in effect in ten northeastern and mid-Atlantic states. As a result, at the very least, lessons learned from RGGI will be able to be applied to any federal program.

In their memorandum of understanding setting forth the framework of the RGGI program (RGGI MOU), the RGGI-participating states recognized the benefit of returning the value of allowances to the public.³ In a competitive market for electricity, like that present in the RGGI-participating states, the value of allowances will be incorporated into the market price for electricity regardless of whether the sources paid for the allowances or received them for free. Therefore, if the allowances are allocated for free, the compliance entities may receive a windfall, passing on to the ratepayers costs that were not incurred. This outcome was realized in the European Union Emission Trading System (ETS), in which large windfall profits were achieved by generators that received allowances for free.⁴

In the RGGI MOU, the RGGI-participating states agreed to use at least 25 percent of allowances for public benefit. The MOU did not specify auctions of those allowances as the means of reaping that public benefit, but auctions were anticipated as a means of realizing the value of the allowances. Recognizing, however, that the economic theory underlying the auction of allowances applies to all the allowances issued, not just 25 percent, the RGGI-participating states, led by New York, quickly moved to embrace the concept of auctioning nearly all of the allowances.⁵

Taken by itself, the recommendation of auctioning allowances was unprecedented in the history of environmental regulation. No other cap-and-trade program had auctioned more than a

3. See RGGI MOU (Dec. 20, 2005), available at http://rggi.org/docs/mou_final_12_20_05.pdf (last visited Feb. 26, 2009).

4. See, e.g., Jos Sijm, Karsten Neuhoff, & Yihsu Chen, *CO₂ Cost Pass-Through and Windfall Profits in the Power Sector*, 6 CLIMATE POL'Y 49 (2006), available at http://faculty.ucmerced.edu/ychen/climate_policy_2006.pdf (last visited Mar. 2, 2009) (explaining and analyzing the impacts of free allocation of allowances in Phase I of ETS); POINT CARBON ADVISORY SERVICES, *EU ETS PHASE II – THE POTENTIAL AND SCALE OF WINDFALL PROFITS IN THE POWER SECTOR* (2008), available at http://assets.panda.org/downloads/point_carbon_wwf_windfall_profits_mar08_final_report.pdf (last visited Mar. 2, 2009) (predicting that during Phase II of ETS, from 2008-2012, power companies in five European Union nations could reap windfall profits in excess of €70 billion because of continued free allocation of allowances).

5. Several of the RGGI states have small “set asides” of free allowances. For example, New York allocates 1.5 million tons of allowances (approximately 2.3%) to generators operating under long term fixed price contracts. 6 N.Y. COMP. CODES R. & REGS. tit. 6 § 242-5.3(d) (2008).

small percentage of emission allowances, let alone nearly 100 percent of allowances.⁶ The crowning achievement of RGGI was to take this concept of nearly 100-percent auctioning a step further by demonstrating the mechanics of auctioning allowances. The RGGI-participating states convened a panel of experts in conducting auctions of emission allowances and other commodities, which in turn developed a number of recommendations for how to conduct the auctions.⁷ These recommendations included:

- Open participation in the auction (the only requirement is posting a bond to cover the value of the participant's bids);
- A sealed-bid, uniform-price auction (all bidders pay the market-clearing price);
- A 25-percent limit on the volume that any bidder can acquire in any auction;
- Use of a reserve price;
- Frequent auctions (at least quarterly); and
- Auction of some allowances prior to the applicable compliance period.

The RGGI-participating states incorporated all of these principles into their respective rules governing the auctions. Through a cooperative effort, each of the states enacted similar auction rules, enabling the states to join in multistate auctions. In some states, these auction rules were enacted through legislation; in New York, the New York State Department of Environmental Conservation's (DEC's) regulation allocated the allowances to the New York State Energy Research and Development Authority (NYSERDA), which, in turn, promulgated regulations implementing the recommendations for the auction.⁸

6. For example, Ireland was the first to conduct an auction for a limited number (0.75%) of allowances in ETS Phase I. See David Porter, Stephen Rassenti, William Shobe, Vernon Smith, and Abel Winn, *The Design, Testing and Implementation of Virginia's NO_x Allowance Auction*, 69 J. ECON. BEHAVIOR & ORG. 190 (2009) (stating that the Commonwealth of Virginia conducted an auction of 8% of its NO_x allowances in 2004; its auction was designed to maximize revenue, unlike the RGGI).

7. See Charles Holt, William Shobe, Dallas Burtraw, Karen Palmer, and Jacob Goeree, *Auction Design for Selling CO₂ Emission Allowances Under the Regional Greenhouse Gas Initiative* (2007), available at http://www.rggi.org/docs/rggi_auction_final.pdf (last visited Feb. 26, 2009).

8. See N.Y. COMP. CODES R. & REGS. tit. 6 § 242 (2008) (NYSDEC cap-and-trade regulation); N.Y. COMP. CODES R. & REGS. tit. 21 § 507 (2008) (NYSERDA auction regulation). It is worth noting that New York already had existing statutory authority to promulgate these regulations, while the other RGGI participating states enacted new RGGI-specific legislation to authorize their respective programs. New York's regulations are currently the subject of a legal challenge by Indeck-Corinth,

Further details of the auction process were developed cooperatively by the RGGI participating states. For example, sixty days in advance of each quarterly auction, the RGGI-participating states release a comprehensive auction notice through RGGI, Inc., setting forth the detailed instructions and procedures for participating in the relevant auction.⁹ Among these rules is that, in order to participate in any RGGI CO₂ allowance auction, an individual must first complete a qualification application and become qualified to participate in subsequent auctions.¹⁰ Among other things, an applicant must disclose corporate and bidding associations in the qualification application so that the 25-percent bid limit can be applied meaningfully to prevent collusion. Once a potential participant has become qualified to participate in RGGI CO₂ allowance auctions, it must then complete an intent to bid form for each individual auction in which it wishes to participate.¹¹ Finally, each potential participant in an auction must post financial security prior to an auction, and the dollar value of a participant's total bids for that auction is limited to the amount of posted financial security.

The success of the RGGI-participating states' cooperative effort in developing these detailed rules and procedures became apparent when the RGGI states conducted two pre-compliance auctions in late 2008. In each of these auctions, demand for allowances greatly exceeded allowances available, by a factor of 3.5 or 4. The clearing prices—\$3.07 and \$3.38 for the first and second auctions, respectively—were well above the \$1.86 reserve price but within the range of allowance prices projected by the modeling undertaken in the development of RGGI. Approximately 80 percent of the allowances went to regulated sources,

LP, the owner and operator of a combined cycle natural gas facility in Upstate New York. The plaintiff is an applicant for allowances from the Long Term Contract (LTC) Set-Aside, a provision of the NYSDEC cap-and-trade regulation under which certain generators that are parties to LTCs and unable to pass on the cost of allowances to power purchasers may be able to obtain up to 2.3% of allowances for free. N.Y. COMP. CODES R. & REGS. tit. 6 § 242-5.3(d). Because the litigation is ongoing, any further discussion of this lawsuit is beyond the scope of this Article.

9. *See, e.g.*, RGGI, INC., AUCTION NOTICE FOR CO₂ ALLOWANCE AUCTION 3 ON MARCH 18, 2009 (Jan. 12, 2009), available at http://www.rggi.org/docs/Auction_Notice_Jan_12_2009.pdf.

10. *See, e.g.*, RGGI, INC., QUALIFICATION APPLICATION, Version 2.0 (Jan. 12, 2009), available at http://www.rggi.org/docs/Qualification_Application_2.0_Auction_3_Jan_12_2009.doc.

11. *See, e.g.*, RGGI, INC., INTENT TO BID FOR CO₂ ALLOWANCE AUCTION 3 ON MARCH 18, 2009 (Jan. 12, 2009), available at http://www.rggi.org/docs/Intent_to_Bid_Auction_3_Jan_12_2009.doc.

allaying fears of some of the regulated parties that speculators would horde many of the allowances. For each auction, the market monitor concluded that there was no evidence of market manipulation.¹²

Each of the RGGI-participating states is using the substantial proceeds from the auction of allowances for public benefit. In New York, NYSERDA must use the auction proceeds “to promote and implement programs for energy efficiency, renewable or non-carbon emitting technologies, and innovative carbon emissions abatement technologies with significant carbon reduction potential. . . .”¹³ Therefore, in addition to the cap itself, RGGI further benefits the environment by promoting energy efficiency and renewable energy, which results in additional reductions of GHG emissions. Consequently, this reinvestment of auction proceeds reduces the demand for CO₂ allowances and the overall cost of the RGGI program, while at the same time maximizing the program’s effectiveness and efficiency. Based on the results of the two auctions to date, New York is projecting that approximately \$130 million per year will be available for the implementation of a variety of programs, which may include energy efficiency programs for all sectors and all fuels, deployment of photovoltaic and other advanced renewable technologies, deployment of electrified rail and plug-in hybrid infrastructure, and establishment of advanced, clean technology research centers. Most of these programs are designed to achieve immediate emission reduction benefits.

All of these proven and successful elements of RGGI could apply equally well to a federal cap-and-trade program. Auctioning nearly 100 percent of allowances will avoid windfall profits and result in the most efficient allocation of allowances. Incorporating the RGGI auction design elements will help to avoid market manipulation and collusion. Finally, reinvesting auction proceeds in energy efficiency, renewable energy and other GHG emission reduction programs will simultaneously increase the program’s effectiveness and reduce its overall cost.

12. See, e.g., POTOMAC ECONOMICS, POST-SETTLEMENT AUCTION REPORT: REGIONAL GREENHOUSE GAS INITIATIVE CO₂ ALLOWANCE AUCTION 2, available at <http://www.rggi.org/docs/Auction%202%20Post%20Settlement%20Auction%20Report.pdf> (last visited Feb. 26, 2009).

13. N.Y. COMP. CODES R. & REGS. tit. 21 § 507.4(d) (2008).

B. *New York's Multiprong Approach to Addressing Climate Change*

Many states have approached the climate change issue by developing climate plans, which set GHG reduction goals (often 80 percent by 2050) and identify dozens of strategies for achieving those reductions. New York has taken a different path, developing—and, importantly, implementing—a variety of strategies for reducing fossil fuel use in New York and lowering GHG emissions. Taken together, these strategies place New York on a path to begin making the transformative changes needed in the use of fossil fuels.

The largest individual sources of GHG emissions are found in the power sector, even though the power sector's share of GHG emissions in New York falls below that of the transportation and building sectors. The programs that have the effect of reducing GHG emissions from the power sector include RGGI, a direct emission reduction program and nonregulatory efforts such as the renewable performance standard (RPS) of 25 percent by 2013 (being increased to 30 percent by 2015) and the state's goal of achieving a 15 percent reduction in electricity use by 2015. Merging these latter two programs, Governor Paterson announced in his "State of the State" speech this year that New York would strive to achieve a "45 by 15" goal, under which New York would satisfy 15 percent of its energy demand with energy efficiency and achieve a 30 percent RPS by 2015.

New York's other efforts to reduce GHG emissions from the power sector include support for the nation's first coal-fired power plant to deploy carbon capture and sequestration (CCS) and the development of a CO₂ performance standard for the power sector, which would require new and rebuilt power plants to have the CO₂ emissions profile of a natural gas-fired plant.¹⁴ These two efforts are complementary: while the CO₂ performance standard will have the effect of precluding the construction of new coal-fired power plants without CCS, New York is supporting the construction of plants that implement CCS. These efforts also together complement RGGI and the "45 by 15" program by ensuring that the construction of new power plants does not increase power sector GHG emissions.

14. The proposed terms for the CO₂ performance standard were released to stakeholders in February 2009, but have not yet been formally proposed. CO₂ Emission Limitations for Combustion Installations and Gasification Sources, N.Y. COMP. CODES R. & REGS. tit. 6 § 251 (proposed 2009).

In the transportation sector, New York's policies address the "three legs" of the transportation "stool" by reducing vehicles' GHG emissions, vehicle miles traveled (VMT) and the carbon content of fuels. To address the first leg of the stool, New York has adopted California's GHG emission standard for motor vehicles. Implementation of the standard beginning this year will result in a reduction in GHG emissions from new passenger vehicles of 37 percent (24 percent for light trucks) by 2016.¹⁵ President Obama's order that EPA reconsider its prior denial of a waiver under Clean Air Act (CAA) section 209(b)¹⁶ for California to implement the standard appears likely to ultimately clear the way for California, New York and the dozen other states that have adopted the standard to begin implementing it.

Second, in response to a recommendation of the Renewable Energy Task Force convened by then-Lieutenant Governor Paterson, DEC is chairing an interagency task force charged with developing strategies to reduce VMT by 10 percent below projected levels within ten years. Among the VMT policies being considered are: (1) support for public transit, car pooling and van pools, and other alternative transportation measures; (2) fees such as congestion pricing, parking fees, and increased gas taxes or taxes on VMT; and (3) policies to promote transit-oriented development or other smart growth measures. Recommendations are expected by the end of 2009.

Third, New York is working with the nine other RGGI-participating states and Pennsylvania to develop an LCFS for the Northeast. The eleven states' framework agreement, announced in early January 2009, expresses the participating states' goal of ensuring that life cycle emissions from ethanol and other biofuels will be fully evaluated and considered in the implementation of a standard.¹⁷ The agreement expresses the states' goal of completing its work to draft a memorandum of understanding concerning the development of an LCFS program by December 2009.¹⁸ Related to the development of an LCFS is New York's development of a biofuels "roadmap" in response to another recommendation

15. See N.Y. COMP. CODES R. & REGS. tit. 6 § 218-8 (2008); 13 CAL. CODE REGS. tit. 13 § 1961.1 (2008).

16. 42 U.S.C. § 7543(b) (2008).

17. See Letter of Intent Signed by Representatives of all Participating States, Northeast/Mid-Atlantic States Low Carbon Fuel Standard Program (Dec. 31, 2008), available at http://www.mass.gov/Eoeea/docs/pr_lcfs_attach.pdf (last visited Mar. 2, 2009).

18. *Id.*

of New York's renewable energy task force. In addition to evaluating issues regarding the carbon footprint of liquid biofuels, this effort will also seek to evaluate the issues regarding establishment of the carbon footprint of using wood and other solid biomass as a fuel. Also related to the LCFS effort is the establishment of a battery research consortium that Governor Paterson announced in his State of the State address in January of this year.

New York is also developing and implementing a multiprong effort to reduce energy use in, and GHG emissions from, the residential and commercial building sectors. This effort includes the promulgation of updated energy efficiency construction codes by the New York State Department of State (DOS) and the Green Building Tax Credit implemented by DEC.¹⁹ In addition, a variety of funding programs administered by the New York State Department of Public Service (DPS) and NYSERDA—including programs being funded by proceeds from the auction of RGGI emission allowances, discussed below—provide a source of funding for energy efficiency programs directed at reducing on-site fuel use and electricity use. In addition, the eleven states participating in the development of an LCFS intend for the standard to encompass the use of heating oil and other fuels used in the building sector.

Finally, New York is seeking the assistance of its municipalities to reduce local GHG emissions, including emissions attributable to further sprawl. In February 2009, four New York agencies—DEC, DOS, DPS and NYSERDA—joined in the announcement of a “Climate Smart Communities” initiative to seek the participation of New York's cities, towns and villages in efforts to reduce GHG emissions.²⁰ To participate, each participating municipality will pledge to reduce energy use 15 percent by 2015, to establish emissions baselines and goals for emission reductions, and to adopt land use policies to promote smart growth and transit-oriented development. Under the operating plan under development for use of proceeds from the auction of RGGI allowances, funding will be available to support the measures needed to participate in the Climate Smart Communities

19. See Energy Conservation Construction Code of New York State (2007); N.Y. TAX LAW § 19 (2008).

20. See STATE OF NEW YORK, CLIMATE SMART COMMUNITIES: A GUIDE FOR LOCAL OFFICIALS (Feb. 2009), available at http://www.dec.ny.gov/docs/administration_pdf/cscguide.pdf (last visited Mar. 2, 2009).

program. Governor Paterson has also established a Smart Growth Cabinet to develop and implement other smart growth measures statewide.

As a final measure, DEC has developed a comprehensive approach to consideration of energy use, GHG emissions, and climate change impacts in environmental reviews conducted under the State Environmental Quality Review Act (SEQRA).²¹ This policy will require consideration of the climate change impacts of projects funded or permitted by DEC. Notably, in contrast to the federal National Environmental Policy Act (NEPA),²² SEQRA requires that significant impacts be mitigated to the extent practicable. When implemented, this policy will provide an incentive for project sponsors to implement renewable energy and energy efficiency measures in major development projects subject to SEQRA's requirements, including new industrial facilities, shopping malls, and other large commercial buildings and large housing developments. It will also promote the siting of such projects near public transit infrastructure.

Recognizing that climate change will have adverse effects in New York, regardless of the success of policies to reduce GHG emissions, New York is developing measures to facilitate adaptation to the effects of climate change. Most significant is New York's Sea Level Rise Task Force, convened in accordance to a statutory mandate to convene the Task Force and produce a report with findings and recommendations for dealing with sea level rise by December 2009.

Finally, no discussion of New York's climate measures is complete without mention of the efforts of New York City under its PlaNYC. New York City has adopted a target of reducing GHG emissions 30 percent by 2030, to be achieved through a combination of strategies, including energy efficiency strategies focused on the city's enormous building stock, deployment of renewable energy, transit improvements and other transportation strategies. In addition, given that New Yorkers already have a carbon footprint that is a fraction of the national average, accommodating an additional 900,000 residents in New York City rather than elsewhere will result in substantial GHG reductions.²³

21. N.Y. ENVTL. CONSERV. LAW § 8-0101 (2008).

22. 42 U.S.C. § 4321 (2008).

23. See *PLAN NYC: A GREENER, GREATER NEW YORK, CLIMATE CHANGE: Reduce Global Warming Emissions By More Than 30%*, available at <http://www.nyc.gov>.

IV.

THE CASE FOR FEDERALISM: APPLICATION TO
GLOBAL CLIMATE CHANGE

The inactivity of the Bush Administration in the area of climate change over the past eight years has led to a flowering of state actions, like those described above in New York State, from state renewable performance standards and energy efficiency programs to the development of RGGI and other emerging state cap-and-trade programs. These programs have had, and will continue to have, tremendous value as they reduce GHG emissions, build a thriving green energy economy, and serve as the laboratory for further efforts at the federal, international or multi-state level. Once the federal government finally begins meaningful action—whether in the form of federal cap-and-trade legislation, administrative regulation of GHG emissions, or otherwise—the role for continued state and local efforts will be equally critical, or even more essential.

A federal program should take advantage of the progress that has been demonstrated at the state level. The recent history of climate regulation demonstrates that many of the traditional economic incentives that have led to a so-called “race to the bottom” in some areas of environmental policy are reversed in the case of climate change, as it is often in a state’s self-interest economically and otherwise to work towards additional GHG emission reductions. Furthermore, there are collective benefits that will accrue to the nation as a whole from allowing states to continue to operate unfettered in the climate change context, even after the federal government finally establishes its climate change policy. Finally, there is no legitimate federal policy reason for preventing a state or region from implementing additional climate change policies that impose additional costs only on its own sources. Indeed, a state’s interest in positioning its sources to compete effectively in an interstate marketplace provides a sufficient constraint on state exuberance.

When determining the appropriate roles for the different levels of government in climate change policy, the question is not simply whether or not federal climate change legislation should preempt state and local laws. Instead, the question is whether the federal government can enact policies that fully address cli-

mate change in the most effective manner possible. Undoubtedly, the most efficient and effective method of addressing climate change includes state and local governments continuing to operate in a manner that is long-accepted under our system of federalism, wherein they are collaborative partners with the federal government in working to address a complex and wide-ranging problem. Without this kind of cooperative federalism, solving the climate change crisis may be further delayed or even become impossible, and powers traditionally left to the states will be precluded by the federal government without any resulting collective benefit.

A. *Climate Change and the Dynamics of Cooperative Federalism*

While the climate change crisis may differ from other environmental problems in many ways, it is similar in that the best approach to mitigate and adapt to the problem requires a comprehensive approach involving multiple levels of government. Over the past several decades, many of the major success stories in environmental law contain some type of cooperative federalism approach; restraining one or both levels of government in the overall equation often has negative results.²⁴ Recognizing the value of state action, Congress has rarely enacted laws that preempt state and local action completely, especially when that state and local action supplements the protection of public health and the environment provided by the federal statute.²⁵ In the rare instances that Congress has preempted state action, its policy choice has been dictated by the interstate and international nature of commerce at issue.²⁶

24. See generally Robert L. Glicksman, *From Cooperative to Inoperative Federalism: The Perverse Mutation of Environmental Law and Policy*, 41 WAKE FOREST L. REV. 719 (2006) (recounting the history of cooperative federalism, particularly in the CAA and Clean Water Act, and explaining how the approach has been weakened in recent years to the detriment of public health and the environment).

25. See, e.g., Endangered Species Act, 16 U.S.C. § 1535(f) (2008); Surface Mining Control and Reclamation Act, 30 U.S.C. § 1255 (2008); Clean Water Act, 33 U.S.C. § 1370 (2008); Oil Pollution Act, 33 U.S.C. § 2718 (2008); Resource Conservation and Recovery Act, 42 U.S.C. § 6929 (2008) (hazardous waste); 42 U.S.C. § 6991g (2008) (underground storage tanks); Clean Air Act, 42 U.S.C. § 7416 (2008); Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9614 (2008).

26. See, e.g., 42 U.S.C. § 7573 (creating a unitary federal standard by preempting inconsistent State regulation of any kind for air pollutant emissions from airplanes).

The fairly short history of environmental regulation in the United States has been characterized by an ebb-and-flow of action at the state and federal levels. Prior to the enactment of the major federal environmental laws starting in the 1960s, the states were the primary forces in protecting environmental quality, relying on nascent state laws as well as the common law of public nuisance. After Congress passed a multitude of federal laws and created the Environmental Protection Agency in the 1960s and 1970s, the space for states to act seemed less important. But times change, and as Washington became gridlocked on environmental policy in the 1990s and continuing into this decade, the initiative returned to the states, especially in the realm of climate policy.²⁷ Although it appears that we are moving into another period of federal action, the pendulum will undoubtedly swing back again in the future.

The recent history of climate change regulation has defied the conventional wisdom that states, left to their own devices, will engage in a so-called “race to the bottom,” in which some states eschew environmental requirements in order to gain a competitive advantage economically over the other states. Federal environmental laws have been seen as necessary to counter the “race to the bottom” by the states. Under this scenario, a federal response to the environmental problem is often necessary to set a uniform regulatory “floor” that requires each state to at least meet a minimum level of environmental protection. In fact, it is largely because of this dynamic that the major federal environmental laws of the early 1970s, including the Clean Air Act, came to fruition.²⁸

Instead of a “race to the bottom,” climate change has engendered what may be called a “race to the top.”²⁹ In many ways, the reasons for the “race to the top” are similar to the reasons for the “race to the bottom,” in that states are trying to gain an eco-

27. MCGRORY KLYZA, CHRISTOPHER & DAVID SOUSA, *AMERICAN ENVIRONMENTAL POLICY, 1990-2006: BEYOND GRIDLOCK* 254-58 (2008).

28. See, e.g., Kirsten H. Engel, *State Environmental Standard Setting: Is There a “Race” and is it to the “Bottom”?*, 48 *HASTINGS L.J.* 271 (1997) (concluding that the answer to both questions in the title is “yes”).

29. See, e.g., Kirsten H. Engel, *State and Local Climate Change Initiatives: What Is Motivating State and Local Governments to Address a Global Problem and What Does This Say About Federalism and Environmental Law?*, 38 *URB. LAW.* 1015, 1028 (2006) (noting that climate change “turns upside down numerous ‘givens’ within the world of environmental law and policy”).

conomic advantage.³⁰ In fact, states have seen many policies that address climate change not as a burden on commerce, but as an economic opportunity. Research, manufacturing and deployment of “green” technologies can generate well-paying jobs in the short term and create new anchor industries in the long term. These technologies can then be sold to the rest of the country and the world, providing additional economic and environmental benefits. Part of the reason for a particular state to act even in the absence of federal action is to be a leader in new and emerging markets.

In the event Congress finally enacts some form of comprehensive climate change legislation, states will still have many of the same motivations to engage in a “race to the top,” with potential changes only in terms of degree. With a properly designed piece of legislation, the continuing “race to the top” can have numerous positive effects, in terms of national and state economic benefits, as well as national and state GHG emission reductions.

B. *Collective Benefits of State and Local Government Action to Combat Climate Change*

State and local efforts to reduce GHG emissions have already played a valuable role in reducing GHG emissions in the United States. Such efforts have also helped in developing strategies for reducing GHG emissions that can serve as a model for federal and international action, and in positioning the United States to join in and lead international efforts to reduce GHG emissions. Even if the federal government finally implements real measures to address climate change, state and local action will continue to have substantial benefits.

1. States as “Laboratories” and the Need for Ongoing Innovation

One of the primary benefits of state environmental action is that it enables states to develop new and more effective or efficient models of environmental regulation. As Justice Brandeis observed, while a state may incur additional expenses or decide to impose extra risk on itself, “[i]t is one of the happy incidents of the federal system that a single courageous State may, if its citi-

30. See Barry G. Rabe, Mikael Roman & Arthur N. Dobelis, *State Competition as a Source Driving Climate Change Mitigation*, 14 N.Y.U. ENVTL. L.J. 1, 53 (2005) (arguing that State regulation of GHGs can be explained in terms of an interjurisdictional competition among states for economic development).

zens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country.”³¹ In this sense, allowing states the ability to develop their own strategies to further reduce GHG emissions operates as a sort of insurance policy for the national economy. This is because an innovation that fails at the state level will, of course, have less of an impact on the national economy than a federal attempt at innovation that fails.

State efforts to date are influencing the development of a federal program profoundly. In particular, RGGI has provided an important template for action by the federal government and other states in several ways. It is demonstrating the mechanics of developing a cap-and-trade program for carbon dioxide. This is especially true in areas such as offsets and the auctioning of CO₂ allowances. Prior to the development of RGGI, there was little discussion in Washington about auctioning CO₂ allowances. Now, given RGGI’s example of auctioning nearly 100 percent of CO₂ allowances, the only debate seems to be how quickly to move to 100 percent auctioning of allowances.³² In fact, President Obama’s recent budget proposal makes clear the administration’s intent for the forthcoming federal cap-and-trade program to include 100 percent auctioning of allowances.³³ The actual process for conducting RGGI auctions will also serve as a detailed model for federal legislation or regulation, particularly given the success of the RGGI auctions to date.

Once comprehensive federal climate change legislation is finally enacted, the need for ongoing innovation and additional development of policy mechanisms will not just disappear. Continued improvements in policy will likely be necessary to develop new means of further reducing GHG emissions. State and local level action is often the most effective way to accomplish this continual policy enhancement. Even if a particular state innovation does not result in net reductions within a federal cap, it

31. *New State Ice Co. v. Liebmann*, 285 U.S. 262, 311 (1932) (Brandeis, J., dissenting).

32. New York auctions approximately 97% of its CO₂ allowances pursuant to its CO₂ Budget Trading Program, N.Y. COMP. CODES R. & REGS. tit. 6 § 242, the regulation implementing RGGI in New York State. Region wide, RGGI participating states currently auction approximately 80% of CO₂ allowances.

33. See OFFICE OF MGMT & BUDGET, A NEW ERA OF RESPONSIBILITY: RE-NEWING AMERICA’S PROMISE, at 100, available at http://www.whitehouse.gov/omb/assets/fy2010_new_era/A_New_Era_of_Responsibility2.pdf (last visited Feb. 26, 2009) (fiscal year 2010 proposed budget).

could provide a policy model for reducing emissions further into the future.

2. State and Local Programs Can Reduce the Cost of Meeting a Federal Cap

State and local programs can facilitate compliance with a federal program by reducing the overall cost of a given level of nationwide emissions reduction. Even advocates of preemption recognize the value of complementary policies at the sub-national level, including in areas such as “appliance efficiency standards, building codes, land use decisions, performance standards, public transit, and incentives to increase efficiency.”³⁴ These policies address market imperfections and barriers such as lack of consumer information about the financial benefits of efficient products, disconnect between the buyers and users of equipment (e.g., rental housing), entrenched energy systems, research and development spillover effects, and other related issues. By reducing the demand for carbon-intensive energy, these state programs and policies reduce the pressure on achieving a given federal GHG goal. Ignoring these barriers could potentially result in the federal program accruing higher costs and higher allowance prices than necessary.

State programs that reduce the demand for carbon-containing energy through measures such as state efficiency programs and standards, improved land use and transportation planning, renewables deployment and cap-and-trade³⁵ will reduce the cost of federal allowances by lowering the demand for such allowances.³⁶ Reduced federal allowance prices will result in reduced consumer price impacts and reduced costs for other

34. HOUSE COMMITTEE ON ENERGY AND COMMERCE, CLIMATE CHANGE LEGISLATION DESIGN WHITE PAPER: APPROPRIATE ROLES FOR DIFFERENT LEVELS OF GOVERNMENT 2 (2008), available at http://energycommerce.house.gov/images/stories/Documents/PDF/selected_legislation/white%20paper%20st-lcl%20roles%20final%202-22.pdf (last visited Feb. 26, 2009).

35. At least 250 different policy options that States can utilize to combat climate change have been identified. See Robert B. McKinstry & Thomas D. Peterson, *The Implications of the New “Old” Federalism in Climate-Change Legislation: How to Function in a Global Marketplace When States Take the Lead*, 20 PAC. MCGEORGE GLOBAL BUS. & DEV. L.J. 61, 76-84 (listing the options under the broad general categories of Energy Efficiency and Conservation, Development of Renewable and Low Emitting Energy, Forest Land and Farmland Conservation, Reducing and Recycling Waste, Transportation and Land Use Efficiency, Improving Industrial Processes, and Education, Reporting, and Registries).

36. These programs might be more or less expensive than achieving an equivalent level of reductions from the federal allowance price signal. This is largely irrelevant

covered entities outside of the state. Because costs of compliance and consumer price impacts are both significant political variables in policy design, these effects could create the political opportunity for the federal government to further ratchet down the federal cap over time. In other words, aggressive state action, even if it is more expensive for the state, can lead to additional benefits by facilitating more stringent federal action.

Certain redundancies that result from an overlapping cooperative federalism approach are actually desirable. Many federal laws contain some form of redundancy in authority among the different levels of government. Although such redundancy may not be perfectly efficient, it is sometimes more effective than a less redundant approach.³⁷ Other approaches—including those that are more purely federal, exclusively state-controlled or more precisely divided between the two levels—have certain benefits, but also notable flaws. A cooperative and sometimes redundant approach still realizes these benefits—including a reduced overall cost of a given level of national GHG emission reductions—while also avoiding most of the costs.³⁸

3. Enabling Further Action in the Future

Allowing for the possibility of continued state innovation also gives states the ability to encourage and affect further federal action. With climate change, this has happened over the past several years in an environment of federal inaction. Even if Congress finally does pass some form of comprehensive GHG emission reduction legislation, additional efforts may become necessary in the future. New technologies will likely be needed on an ongoing basis. Just as the auction of allowances was a new

to this discussion as the question is what impact this will have on the other states and the cost of the federal program.

37. See Glicksman, *supra* note 24, at 801 (“The existence of overlapping federal and state authority to adopt environmental protection programs allows citizens to have access to multiple forums for seeking government assistance in promoting the protection of health, safety, and the environment.”).

38. See, e.g., Benjamin K. Sovacool, *The Best of Both Worlds: Environmental Federalism and the Need for Federal Action on Renewable Energy and Climate Change*, 27 STAN. ENVTL. L.J. 397 (2008) (exploring four different theories of environmental federalism and concluding that an “interactive federalism” model would be the most effective to combat climate change); David E. Adelman & Kirsten H. Engel, *Adaptive Federalism: The Case Against Reallocating Environmental Regulatory Authority*, 92 MINN. L. REV. 1796 (2008) (concluding that an “adaptive federalism” approach that contains some parallel responsibilities and that avoids a presumption of pre-emption is necessary to combat climate change).

policy innovation, so too might a new policy mechanism be developed by state or local governments once a federal cap-and-trade program is in place. But if Congress decides to preclude ongoing progress by the state and local governments, such necessary future innovation may be impossible.

As explained above, the history of environmental regulation has been characterized by an ebb-and-flow of action between the federal and state governments. We appear to be entering an era of federal action on climate change after a lengthy period in which states filled the vacuum left by federal inaction. But the pendulum is sure to swing back in the future, and the possibility—even likelihood—of the return of a period of federal gridlock a decade or two in the future dictates the need to keep all the tools in the toolbox, including the ability to act at the state level.

Furthermore, states are able to respond more quickly than the federal government to new information and scientific and technological developments. New information is always being developed in the climate change area, including information regarding the scope and timing of the response needed, the technological options available for mitigating climate change, and the economics of responding to climate change. In areas of environmental protection, states are often able to act more quickly to adapt to new circumstances.³⁹

We must be mindful of the possibility—indeed the likelihood—that a federal response will be inadequate from the outset. It is virtually certain that any federal legislation will not be completely comprehensive; it will probably not apply to 100 percent of the nation's GHG emissions. Additionally, a federal bill might not be sufficiently stringent to avoid the most damaging effects of climate change in its first incarnation. This could be due to a variety of factors including political compromise, poor policy design choices, or lack of information. This is particularly relevant to the changing nature of climate science. As we learn more about the earth's climate system and our impact upon it, it is possible we will have to accelerate reductions beyond what is deemed to be "necessary" today.

39. For example, while the federal Clean Air Interstate Rule (CAIR) has languished, many states have expeditiously implemented programs to reduce emissions of nitrogen oxides and sulfur dioxide from power plants in order to reap the multiple environmental and public health benefits of reducing those emissions.

In this regard, the reduction targets in all the major federal bills are based on the scientific consensus on the need to keep atmospheric CO₂ concentrations below 450 parts per million, which requires emission reductions in the developed world of 80 percent by midcentury. However, there is a growing minority view—led by Dr. James Hansen and the writer Bill McKibben—that contends that we have already exceeded the safe level of 350 ppm, meaning that much more dramatic action is needed.⁴⁰ Five to ten years from now, this minority view may become the majority view, sparking recognition of the need for more action. By then, however, power in Washington may have returned to less progressive leadership, requiring states to fill the void once again.

It is difficult to predict exactly what further action, if any, may be necessary in the future. But this is precisely the reason for allowing the states to take further action if it does become necessary. The dynamic of the last eight years—in which states act in an environment of federal inaction—could very well happen again. Ignoring this history will make it even more likely that this history will be repeated, to the detriment of the nationwide environment and economy.

C. *State and Local Governments Should be Able to Incur Additional Burdens and Reap Additional Benefits*

For all these reasons, if a particular state is willing to incur additional expenses on itself and its own residents, it should be allowed to do so. While it may be appropriate for the federal government to set a minimum level of protection, it should not impede upon states' sovereignty by setting a unitary federal standard that precludes further state action. Even once comprehensive federal climate change legislation is enacted, states must be able to continue acting as laboratories in order to spur policy innovation and to hedge against risks to our national economy.

It is certainly true that if a particular state decides it is in its interest to further reduce GHG emissions, it may cause its own sources to incur additional costs beyond sources in other states that are merely complying with the federal cap. However, it should be up to each individual state to decide whether it wants to place these additional burdens on its own sources. A particu-

40. See, e.g., 350 Science, available at <http://www.350.org/en/about/science> (last visited Mar. 2, 2009).

lar state may have a variety of reasons for incurring additional expenses in its response to climate change, including the desire to realize environmental and public health cobenefits. The benefits of state efforts are wide-ranging and include development of a green economy that will enable a state to compete more effectively in a carbon-constrained future and a demonstration of the leadership needed to tackle climate change. The ability to address these types of differing motivations, political environments, and consequences is one of the primary premises of the entire system of federalism upon which this country is based.

Even if a state program does not result in any additional national GHG emission reduction beyond the federal program, it still might be appropriate for a state to enact the program without federal interference because of the numerous attendant benefits that can accompany efforts to reduce GHG emissions. In addition, the state program may also reduce the costs of compliance for sources in the states covered by the cap-and-trade program. Similarly, even if additional state-level GHG reductions are more expensive than federal-level reductions, that does not necessarily mean that those additional reductions should be prohibited. It must be up to each state whether it is worthwhile to incur additional costs in order to realize GHG emission reductions or other benefits. Indeed, the cost of additional state actions will provide a prudential check on states' exuberance, even in the absence of any constraints imposed by Congress. State and local governments do not have an interest in implementing additional programs at the state and local level that merely increase costs without realizing any kind of benefit.

Never before has the federal government prohibited a state from implementing environmental protections simply because such protections place additional regulatory or economic burdens on sources in that state or seem irrational to the federal government. Before taking away any authority of state and local governments, the federal government should conclude that there is some collective interest in depriving states of their usual authority to protect public health and the environment; the federal government must have more than merely paternalistic motivations. Therefore, the fact that a particular state or local program may impose a financial burden on that state or locality in the presence of a federal cap-and-trade program should have little if any bearing on determining the appropriate roles for the different levels of government.

Because states should be allowed to impose costs upon themselves, so-called “ceiling” preemption by the federal government is rarely appropriate. While “floor” preemption leaves room for state and local action, “ceiling” preemption often takes away the ability of state and local governments to do almost anything to address a particular problem. Congress has created a federal “floor,” but not a federal “ceiling,” with virtually all major federal environmental statutes.⁴¹ The CAA’s general preemption provision, for example, states that “[any] State or political subdivision may not adopt or enforce any emission standard or limitation which is less stringent than the standard or limitation under [the CAA].”⁴² At the same time, section 116 of the CAA explicitly retains certain state and local government authority, stating that nothing “shall preclude or deny the right of any State or political subdivision thereof to adopt or enforce (1) any standard or limitation respecting emissions of air pollutants or (2) any requirement respecting control or abatement of air pollution”⁴³ In other words, under the CAA, Congress recognized the differing impacts felt amongst the states as a result of air pollution.

Creating a unitary federal standard with preemption of state programs would not only preclude any state or local government efforts to further reduce GHG emissions, it would also take away state and local governments’ ability to respond to their own unique situations regarding the impacts of climate change. Because of this, and because ceiling preemption in the climate change context is not supported by other traditional reasons for significantly infringing state and local authority, states should be free to adopt climate change strategies that regulate their own sources.⁴⁴

41. See Glicksman, *supra* note 24; *supra* note 25.

42. 42 U.S.C. § 7416 (2008); see also 33 U.S.C. § 1370 (2008) (containing a similar “floor” preemption provision for the CWA).

43. 42 U.S.C. § 7416 (2008).

44. See Robert L. Glicksman & Richard E. Levy, *A Collective Action Perspective on Ceiling Preemption by Federal Environmental Regulation: The Case of Global Climate Change*, 102 Nw. U. L. REV. 579 (2008) (concluding that “ceiling preemption of state restrictions on GHG emissions is not supported by most of the principal justifications for federal environmental regulation, including interstate externalities, resource pooling, a race to the bottom, and NIMBYism.”).

D. *Treatment of State and Regional Cap-and-Trade Programs*

Even the supporters of preserving state authority to regulate GHGs sometimes question the value of state cap-and-trade programs like RGGI after the federal government has enacted a comprehensive economy-wide cap-and-trade program. This debate confuses a few different questions and would benefit from a clarification of those issues. Careful analysis demonstrates that the policy reasons for allowing state and regional cap-and-trade programs are no different than any other state climate change programs.

First, the question of whether it *makes sense* for a state or region to continue a state or regional cap-and-trade program should not be confused with the question of whether Congress should *prohibit* the continuation of those programs. Depending on the scope and stringency of the federal program, a parallel state or regional cap-and-trade program may not reap any additional environmental benefits from a national perspective. Such a program, however, may achieve local benefits by reducing other pollutants, providing an incentive for the development of clean energy sources, or serving as a source of auction revenues that can be used to fund energy efficiency programs or other beneficial activities, such as public transit. In any event, given that any additional burdens will be borne by sources within the state or region that is implementing the program, the state itself is in the best position to determine whether the benefits of the state program justify the additional burdens placed on in-state sources. Congress should resist the paternalistic impulse to dictate to the states what burdens they can place on their own sources.

Second, the question of whether it makes sense to *continue existing* programs should not be confused with the question of whether states should be free to *enact new* GHG cap-and-trade programs in the future. Existing programs, like RGGI, should be seen as first steps in the direction of comprehensive carbon regulation. Given the modest scope of these programs, and the modest emission reduction targets, these programs may have little environmental benefit once a federal program is enacted. But states may well choose to implement new, more stringent programs if the federal program is perceived to be inadequate to achieve the emission reductions needed to prevent the worst impacts of climate change.

Third, state and regional cap-and-trade programs should not be perceived simply as GHG reduction programs. They can

serve many goals, from providing a mechanism for promoting renewable energy and energy efficiency to simply serving as an additional source of revenue for financially strapped state governments. There is no principled reason to support a ban on states raising revenues by auctioning CO₂ allowances while allowing states to raise the same amount of revenues by placing a tax on wages or profits. The first policy provides an incentive to reduce pollution, while the second provides a disincentive to socially beneficial economic activity.

Finally, policymakers should not confuse the question of whether states should be permitted to continue or enact new state or regional cap-and-trade programs with the question of whether states should be allowed to use the common currency of federal allowances in their state and regional cap-and-trade programs. For the most part, any inefficiency or redundancy of allowing parallel state and federal programs can be eliminated by allowing the states to utilize federal allowances as currency in their own cap-and-trade programs. Such a mechanism would permit the continued operation of existing regional cap-and-trade programs, such as the RGGI and the Western Climate Initiative, ensuring that they provide additional value in the process. The objective of Congress should be to design legislation in such a way that reaps the value of state efforts, rather than preempting state and local governments and creating a unitary federal standard.

If Congress has a policy preference for a single federal cap-and-trade program, it can enact that program in a way that would provide an incentive for states to transition their existing programs voluntarily, while leaving states free to enact more stringent and beneficial programs when circumstances change. One way of facilitating the integration of RGGI and other existing or planned state cap-and-trade programs into a federal program that establishes a national carbon market is to provide states with an attractive opportunity to transition their programs into the federal program. States will have an incentive to transition their existing cap-and-trade programs and performance standards into a robust and inclusive federal program that achieves the reductions needed for a vigorous response to climate change, respects and preserves the benefits of state efforts, and provides a revenue source that replaces the revenues from the state or regional program. The transition mechanism in federal law should be designed to maintain the viability of robust regional carbon mar-

kets in the period prior to the launch of a federal carbon market and to provide—for those states that choose to transition to the federal program—a fair and equitable recognition of the value of allowances issued and offsets certified under the state or regional programs. It should enable states to ensure that their climate programs have value within a federal program by, for example, allowing states to require sources within their jurisdiction to surrender federal emission allowances.

In the RGGI MOU, the RGGI states indicated their desire to transition RGGI into a comparable federal program when such a program is enacted. Given that MOU, Congress should expect the RGGI states to transition RGGI into a comparable program—one that auctions allowances, provides allowance revenues to the states and respects the allowances and offsets created under RGGI. Rather than continuing to implement RGGI, the member states will be free to devote additional resources to the development of other programs to complement a federal cap-and-trade program.

V.

CONCLUSION AND RECOMMENDED ELEMENTS OF FEDERAL LEGISLATION

It is clear that any successful effort to combat climate change must involve all levels of government. Even in the context of comprehensive cap-and-trade legislation, each state must retain the flexibility to tailor an approach that makes the most sense for itself. State initiatives to regulate GHG emissions are tailored to take into account the particular characteristics of that individual state. That is, any state program will allow for the consideration of socioeconomic, environmental, geologic, geographic and other conditions of the particular state. This consideration will almost always be done more effectively at the state level, rather than the federal level. Indeed, this is one of the many reasons for the reservation of state authority in our federal system. Moreover, states are able to leverage existing infrastructure to implement regulatory programs, and work closely with their stakeholders to overcome any barriers that might arise. One state's motivation is sure to be different from another state's motivation, as well as from the federal government's.

But while state and local authority must be preserved, state and local governments also have a strong interest in seeing Congress enact a robust federal program that is broad in scope. In

our view, the essential elements of effective federal climate legislation that helps build the green economy for the twenty-first century are the following:

- The foundation must be a federal cap-and-trade program that requires emission reductions of the magnitude recommended by scientists. President Obama's target of 83 percent reductions from 2005 levels by 2050 and interim targets are consistent with the majority scientific view.
- All allowances should be auctioned from the outset to fund complementary measures that reduce GHG emissions, such as energy efficiency and renewable energy programs.
- The states, which have experience and expertise in implementing clean energy programs, should continue to play an integral role in the investment of federal auction proceeds. At a minimum, the funds available to the states for such programs should provide a sufficient replacement for the funds that would be raised by any states participating in RGGI and other state cap-and-trade programs being developed.
- Given the critical need to engage all levels of government, federal law should expressly preserve the authority of states and municipalities to continue to develop and implement regional, state and local programs that will result in additional emission reductions from sectors within and outside the federal cap, provide for ongoing policy innovation, reduce the cost of meeting the federal cap, enable further action in the future, or result in state- or local-specific co-benefits.
- Federal legislation should allow, but not require, the transition of state and regional GHG cap-and-trade programs into the federal program, upon terms as preserve the states' investments and ensure that allowances issued in the state program are given value in the federal program.

The enactment of federal legislation with these elements will provide a solid foundation for a productive national climate change program that implements the dynamic federal-state partnership needed to address climate change the United States.