The Durability of Carbon Cap-and-Trade Policy

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Abstract

The surge of American states' adoption of policies to mitigate climate change in the late 1990s and 2000s appeared to constitute a first wave of expanding use of market-based policy tools such as carbon cap-and-trade in the absence of binding federal constraints. Instead, a substantial number of states have rescinded earlier policy commitments, as have Canadian provincial partners, while others have remained engaged or even expanded their policies. This article examines the durability of the three regional cap-and-trade zones that were established with comparable structure and intent but met very different fates. The analysis of these regional entities places particular emphasis on their political resilience across election cycles, their ability to be flexible and adapt administratively through mid-course adjustments, and their capacity to build constituency support through benefit-allocation to offset opposition linked to cost-imposition.
Just a half-decade ago, American policy to mitigate climate change through greenhouse gas emissions reduction appeared to be set on a fairly clear path. The absence of comprehensive federal legislation or engagement in international treaties had been supplanted by an unexpectedly robust set of state government policies. These policies emerged in virtually every region of the nation, garnered fairly broad political support that often crossed partisan lines, and found champions among a diverse set of governors and policy professionals. They proved attractive politically for their anticipated ability to not only reduce greenhouse gas emissions but also provide environmental co-benefits and economic development opportunities as clean-energy technologies emerged. They also held out the possibility that early-mover jurisdictions might secure favored terms in transitioning into any future federal regime, prompting other states to emulate them. When matched with substantial local government policy engagement and expanding state collaboration with neighboring Canadian provinces, these developments appeared to portend an active process of policy implementation and additional expansion.

A cornerstone of this sub-federal policy development process was a growing political embrace of carbon emissions trading (cap-and-trade), which had become “the central pillar of climate policy mixes in the industrial world” and had broadly “outcompeted carbon taxes, regulatory standards, and voluntary climate policy” (Meckling 2011, 3, 48). The United States had, in many respects, been the homeland of this policy tool, most notably in its application to sulfur dioxide through the 1990 Clean Air Act, which triggered a vast and often-effusive set of scholarly assessments that elevated it into a “living legend” in environmental policy circles. This experience was aggressively transferred by policy advocates to the case of carbon, leading to a major European Union carbon-trading system and a proliferation of other experiments with this tool in North America and beyond (Hoffmann 2012; Harrison and Sundstrom 2010). The underlying assumption was that emissions trading could offer a perfect policy blend that maximized compliance flexibility and cost-effectiveness while delivering a straightforward path to steady emissions reductions. Many states also experimented with a wide range of other climate mitigation policies but cap-and-trade retained a unique allure and saliency.

The United States appeared poised to burnish its role in the use and development of carbon cap-and-trade, building on a rapid pace of state adoption. Massachusetts and New Hampshire launched their own cap-and-trade programs in the early 2000s. By December 2008, some 23 states had formally committed to participation in cap-and-trade within one of three regional partnerships established after 2005. Participating states spanned the American continent, with state members located in every time zone and reflecting every possible combination of partisan control of state government. These state partnerships expanded to include four Canadian provinces.
This significant expansion and the strong ideational support for cap-and-trade as the preferred mechanism to pursue greenhouse gas emission mitigation suggested a near-inevitable path toward further intergovernmental diffusion by late-2008. One option was continued horizontal diffusion, with additional states (and provinces) adopting some version of emissions trading, following a long-standing pattern of policy diffusion within federal systems. Such diffusion often begins with a small set of early adopters but gains momentum as multiple states adopt home-tailored versions of the same policy (Karch 2007). A second option was continued clustering of jurisdictions into regional pacts, either through added membership in the three established regional groupings, formation of additional regional clusters, or mergers between two or more of the existing entities. This would follow a long-standing pattern of formal and semi-formal, multi-jurisdictional alliances to address varied environmental and natural resource challenges (Craik, et al., 2013). A third option was some form of vertical diffusion, whereby a sufficient number of states enact variations of a policy and establish a “tipping point,” compelling the federal government to create a nationalized version that standardizes rules and may preempt or restrict pre-established state programs (Posner 2010). Regulated industry frequently embraces vertical diffusion when a cross-state “patchwork quilt” of policies emerges, restricting its capacity to function nationally.

All of these diffusion options seemed quite plausible politically by late-2008, although none had been realized by 2015. Perhaps most familiar is the failure of vertical diffusion, notably the collapse of congressional consideration of a federal cap-and-trade bill in 2009-2010. Numerous accounts have emerged that revisit the rise-and-fall of federal cap-and-trade, following hundreds of hearings in the 2000s and narrow 2009 House passage of the American Clean Energy and Security Act (ACESA). These interpretations have focused on such themes as federal agenda saturation given an overriding focus on economic recovery and health reform, partisan Senate divides, well-funded opposition to climate policy and climate science, the rise of the Tea Party as a formidable political force, and the failure to build a broad, supportive constituency (Pooley 2010; Layzer 2011).

Markedly less scholarly attention has been paid to the plunge in state and provincial commitments to their own versions of cap-and-trade. Contrary to the much-anticipated path of expanded adoption through some form of diffusion, state and provincial commitment to cap-and-trade reversed course. More than half of the states and three-quarters of the provinces that made formal commitments by December 2008 abandoned these within five years. No other states or provinces adopted cap-and-trade during this period. One of the three regional pacts disappeared entirely while another lost 9 of its 11 members. In contrast, cap-and-trade policies in 10 states and 1 province remained operational and appeared quite durable. Nonetheless, this rapid reversal pattern leaves carbon cap-and-trade a far
more marginalized policy tool at the sub-federal level than it was just a few years ago.

Remarkably little scholarly literature gave serious consideration to the possibility that new cap-and-trade policies could either prove difficult to administer, fail to endure politically if initially adopted, or ultimately prove unable to attain their emission reduction targets. The case for cap-and-trade was so path-dependent upon the revered sulfur dioxide experience that it was widely assumed that any application to greenhouse gases would self-implement in a cost-effective manner without political challenges. In turn, the overwhelming focus of scholarly analysis on cap-and-trade considers optimal policy design in a world free of political constraints or managerial challenges. This article will explore these governance issues in examining why so many states and provinces abandoned their policy commitments to cap-and-trade in such short order whereas others remained fully committed. It constitutes a first attempt to apply key lessons from evolving research on policy durability to market-based environmental policy instruments.

Contrary to Herbert Kaufman’s familiar claim that government programs assume “immortality” once created, there is substantial evidence that at least some can be formally terminated or essentially abandoned through funding evisceration (Kaufman 1976; Derthick and Quirk 1985; Burden, et al. 2010; Patashnik 2008; Conlan, et al. 2014). This body of research, however, has been almost exclusively focused in the United States at the federal level, with sub-federal scholarship far more heavily concentrated on cross-state policy diffusion and proliferation patterns. Nonetheless, the cap-and-trade findings indicate that there may be far more volatility, and even “reverse diffusion,” in state policy development than generally understood, hence the need to apply durability questions to the sub-federal level.

Despite enthusiastic policy launches and competing claims of global leadership, states and provinces clearly faced significant challenges to sustaining cap-and-trade programs after 2008. The collapse of American federal policy development removed any foreseeable incentive for states to remain active to curry favor in a future federal process. State elections in 2010 brought sweeping changes throughout the country, including significant shifts toward Republican control of governorships and legislatures in every region and the departure of some key gubernatorial champions from both parties. State executive branch capacity was impacted by massive state agency budget cuts linked to the Great Recession, particularly in policy areas outside of education. In turn, public opinion shifted markedly around the country not only in terms of declining belief in the existence of human-induced climate change but also declining support for policy initiatives like cap-and-trade at both state and federal levels.
But not all state and regional programs succumbed to these pressures, raising the question of why nearly half of the original sub-federal adopters have not only hung on but have proven quite durable and are entering advanced rounds of operation. This article will explore why we see such a divided pattern in state responses so shortly after the sweeping embrace of cap-and-trade during the previous decade. It will conclude with consideration of lessons from recent experience that might guide any future reintroduction of cap-and-trade into American climate policy debates.

The Question of Policy Durability

This article will consider this divergent pattern of cap-and-trade policy durability, applying three distinct but inter-related components of durability to this relatively brief period of sub-federal policy development. One, does the policy survive intact through at least one election cycle and the departure of initial policy champions, continuing to operate for at least a half-decade and give signs of political resiliency beyond that initial phase? Conlan, Posner, and Beam’s 2014 analysis of dozens of prominent federal policies demonstrates that many struggle to meet this test of resiliency whether due to vehement public opposition from anticipated beneficiaries that leads to collapse (1988 Medicare Catastrophic Coverage), steady reversal of key provisions opposed by organized interests (1986 Tax Reform and 1995 Freedom-to-Farm), or withering partisan assaults that repeatedly challenge survival (2010 Affordable Care).

State climate policies, notably cap-and-trade, may have faced particularly strong challenges to political resiliency. Many were heavily dependent on entrepreneurial and ideational support from elected executives and their appointees, raising the question of whether they could endure inevitable election cycles and shifts in leadership and partisan control (Rabe 2004). Indeed, many initial cap-and-trade commitments entailed gubernatorial executive orders, which would be far easier for successor governments to reverse than measures approved by legislatures or through ballot propositions. In many cases, initial agreements involved dramatic signing ceremonies and even photo opportunities with celebrities. But once initial hoopla faded, states clearly divided in their ability to move beyond this initial phase and weather inevitable leadership shifts.

Two, does the policy provide governing agencies sufficient flexibility to take advantage of policy learning through mid-course adjustments once performance indicators emerge and trouble spots become evident? This reflects needed flexibility in policy design and skill to identify problems and respond accordingly. Intergovernmental relations studies demonstrate that adaptive capacity is a particularly significant challenge at state and local levels, where staffing levels and disciplinary range vary markedly and yet tailoring policies to changing localized
circumstances may be essential to their long-term survival. This may be a particularly challenging issue in cases where multiple states are attempting to work together and must find ways to adapt within-state and regionally.

Such flexibility may be especially crucial in complex policies such as cap-and-trade, which essentially try to chart the future of a state’s energy demand and supply in developing a plan for emissions reduction that is expected to last nearly a half-century (Carlson and Fri 2013). In turn, states may only have attempted to operationalize cap-and-trade in one prior instance, the sulfur dioxide case in which responses to sulfur emissions were readily available via minable coal with low-sulfur content or viable emissions-control technology. States launching their own version of cap-and-trade for carbon in confederation with other jurisdictions faced far greater complexity, lacking any overarching federal framework to make needed adjustments, federal agency support for state operations, readily-accessible energy alternatives to fossil fuels, or viable emissions-abatement technology. State policy professionals attempting to sustain operations of a new carbon cap-and-trade arrangement would not only need some continued support from elected principals through various election cycles and leadership changes but also analytical skills, reliable data, and managerial latitude to navigate inevitable bumps following initial adoption.

Three, does the policy have the capacity to produce demonstrable outcomes or benefits that can build and sustain constituency support, especially in the face of future political challenges? Both developmental and redistributive policies have long relied on the tried-and-true method of distributing either cash or visible social services to recipients, thereby building a base of familiarity among recipients and support for policy continuation (Mettler 2005; Campbell 2003). Eric Patashnik has referred to such programs as having “a massive tangible impact on citizens’ lives on a daily basis” (Patashnik 2008, 29). Indeed, redistributive programs have frequently been adjusted to reach larger constituencies over time, in part to expand their constituency base (Peterson, et al. 1986) and a wide range of social welfare programs have proven remarkably durable even after major political challenges (Pierson 1994). Analysis of the Affordable Care Act anticipated that the early rollout of new health care benefits would serve to build constituency support and dampen opposition (Skocpol and Jacobs 2011).

Regulatory policies have generally lacked this opportunity. Reliable measurement of their impacts often remains unclear, limiting their capacity to produce clear-cut deliverables for citizens. This challenge would appear especially great in an area such as reducing short-term fossil fuel use and greenhouse gas emissions in hopes of decreasing long-term climate risks. Most Americans are likely unaware that national emissions have declined by more than 10 percent in the past decade due to a range of policy, economic, and shale-based energy development factors, much less
comprehend how they personally have benefitted from this occurrence. Political efforts to frame climate mitigation as an economic development or “green jobs” strategy have proven extremely difficult to assess credibly in economic terms, let alone demonstrate benefits to the general citizenry. Initial public support or indifference may turn to opposition if increased energy costs related to cap-and-trade fail to generate any clear-cut benefits and thereby undermine its prospects of becoming a durable policy.

This article applies these factors that contribute to policy durability to the sub-federal cases of carbon cap-and-trade in attempting to come to terms with their dramatic variation in response after rapid horizontal diffusion. It suggests that political resiliency, adaptability, and constituency building played out very differently in jurisdictions that jettisoned cap-and-trade from those that sustained or intensified initial commitments. Any future reintroduction of cap-and-trade might draw important lessons from this experience, particularly the more durable cases. This would include building a sufficiently broad base of political support to endure opposition and give agencies adequate latitude to adapt to emerging circumstances in volatile economic and energy markets. It would also include use of an allowance allocation technique pioneered for cap-and-trade in the Northeastern states that can generate revenues and build constituency support if targeted in effective ways.

Uneven Durability of Cap-and-Trade

It is difficult to envision more rapid policy diffusion than occurred with carbon cap-and-trade. Whereas two states had committed to this policy as of 2004, 21 more followed suit by late 2008. Four Canadian provinces adopted similar policies during this period. As a result, nearly one-half of American and more than one-half of Canadian citizens resided in a jurisdiction that had made some formal commitment to carbon cap-and-trade; additional expansion appeared entirely plausible politically at that point. These states and provinces clustered into three regional pacts: the Regional Greenhouse Gas Initiative or RGGI (10 Northeastern states); the Western Climate Initiative or WCI (7 Western states and 4 provinces scattered across Canada); and the Midwestern Greenhouse Gas Reduction Accord or MGGRA (6 Midwestern states and 1 central Canadian province). All were open to allowing other jurisdictions to sign on as “observers,” with the expectation that they might well become formal members over time. Negotiations had begun by 2009 between these entities about possible collaboration and even convergence through a so-called “Three Regions” process.
But this high-water mark was followed by numerous reversals, most notably in the WCI and MGGRA cases. In the WCI, Arizona, Montana, New Mexico, Oregon, Utah, and Washington withdrew by late 2011; the provinces of Manitoba and Ontario disengaged while not formally withdrawing. This left California as the dominant remaining player among WCI partners, launching operations in 2013. Quebec joined as a full partner in 2014, but British Columbia backed away from participation. MGGRA imploded by late-2011, leaving not even a website in operation. In contrast, RGGI endured the loss of one member when New Jersey withdrew in 2011 but otherwise retained its full membership. RGGI took a major collective step in 2013 to modify a key provision of its initial agreement to increase its longer-term impact and durability. The overall pattern of state and provincial cap-and-trade adoption is outlined in Table One, with key design factors contributing to regional program durability outlined in Table Two.

**Full Collapse: Midwestern Greenhouse Gas Reduction Accord**

The MGGRA was so short-lived and lacking in political resilience that it is impossible to know whether flexibility and constituency-building provisions might have contributed to durability had it endured its formative stages. This accord did represent a formal agreement signed by six governors and one premier in November 2007 that called for the “complete development” of a cap-and-trade system within one year. This pact also endorsed the creation of a Midwestern system that would “enable linkage to other jurisdictions’ systems to create economies of scale, increase market efficiencies, diversity and liquidity, while reducing costs.” The list of signatories included Minnesota Republican Tim Pawlenty and Michigan Democrat Jennifer Granholm. The Midwestern Governors’ Association, one of the more active regional governors’ organizations in the United States, played an important convening role. There was no comparable involvement of other elected state officials, such as legislators and attorneys general, reflecting the fact that this initiative relied heavily on governors via executive orders rather than statutes vetted by legislative chambers.

This coalition produced a detailed report outlining key elements of a regional cap-and-trade program. This included greenhouse gas emission reduction targets that were 20 percent below 2005 levels by 2020 and 80 percent below 2005 levels by 2050. The report also addressed such issues as allowances, state-by-state allocation decisions, and possible use of auctions, offsets, and emissions reporting mechanisms. It was followed by the introduction of formal MGGRA guidelines for a regional cap-and-trade system and provisions to create a hybrid system for allocating emission allowances. This would initially blend free allocation and auctioning to contain early-stage compliance costs and then gradually increase the amount of auctioning and potentially facilitate constituency-building. There was no
specific plan for the use of auction proceeds or to guide multi-state management of the program.

Consequently, it is difficult to dismiss this as merely a symbolic effort. Instead, MGGRA demonstrates the possibility that a new policy initiative lacks the political foundations to have any chance of resiliency once inevitable leadership changes occur. MGGRA faced a near-immediate storm of criticism from state legislators who had not been consulted on its design and quickly took steps to scuttle it through hearings and introduction of resolutions to withdraw their states from further participation. The American Legislative Exchange Council provided a generic template for these resolutions, as it did with state legislators from around the nation. None of these resolutions were adopted but formal legislative actions were not ultimately needed to facilitate full-state withdrawal.

Instead, MGGRA collapsed soon after its signatory gubernatorial champions departed office en masse in early 2011, along with their appointed environmental and energy agency heads. These departures were linked to term limits, retirement, pursuit of federal office, or imprisonment. This left a huge political vacuum, especially since no incoming governors had championed cap-and-trade in previous roles. Four states experienced shifts from Democratic to Republican gubernatorial control. But states that either shifted Democratic (Minnesota) or remained so (Illinois) also folded their efforts and MGGRA essentially evaporated after 2011.

### Partial Collapse: Western Climate Initiative

The WCI has also disbanded but cap-and-trade has not disappeared among all of its members, making the region’s collapse only partial. Its dominant state, California, has generally proven quite durable, as has its one sub-federal partner, Quebec. These jurisdictions lack a formal title or acronym but remain second to only the European Union’s Emissions Trading Scheme as the world’s largest operational cap-and-trade system, attributable to both the sheer scope of California’s economy and the wide range of emissions ultimately planned for inclusion under its cap-and-trade umbrella. Indeed, the state’s total greenhouse gas emissions greatly exceed those of all of its former partners when combined. The very creation of the WCI bore a strong “made-in-California” quality, as it followed on the heels of the state’s 2006 Global Warming Solutions Act (AB 32). The Act did not specify cap-and-trade as the preferred policy tool for achieving its goals of a 15-percent emissions reduction from 2005 levels by 2020 but clearly considered it a plausible option. Soon after enactment, Governor Arnold Schwarzenegger embraced cap-and-trade as the central cog in California’s climate strategy and began to search actively for possible partners.
Much of the WCI alliance hinged on agreements between like-minded state governors and provincial premiers and often lacked legislative buy-in or supportive legislation. In some cases, this built upon established cross-state environmental partnerships for California, such as those with Oregon, Washington, and British Columbia. But these historic relations were less robust in other cases such as Arizona, Manitoba, Montana, New Mexico, Ontario, Quebec, and Utah. California moved quickly toward AB 32 implementation and underwrote many of the costs of WCI meetings and operations, including reports on key governance issues. Many WCI proposals bore a strong resemblance to emerging regulatory approaches from the California Air Resources Board. But full WCI implementation would require complete regulatory development in each participating jurisdiction, either through statute or rule-making processes.

**Lack of Political Resilience**

At this important evolutionary point, the WCI showed signs of limited resilience. New Mexico successfully passed a full set of rules during 2010, the final year of the governorship of Bill Richardson, WCI’s most enthusiastic elected supporter after Schwarzenegger. California quickly declared these to be “functionally equivalent” to its own rules under AB 32. But both Oregon and Washington failed in sustained efforts to pass authorizing legislation and other states and provinces did little more than attend WCI events. Tensions surfaced on key program issues such as the role of offsets and the allowance allocation process.

Perhaps the best indicator of waning WCI fortunes was the rapid shift in Arizona’s approach to the regional cap-and-trade proposal once Democratic Governor Janet Napolitano resigned to enter the federal Cabinet and was replaced in 2009 by Republican Attorney General Jan Brewer. Brewer openly questioned Arizona’s role in WCI, both for economic reasons and her personal doubts about the existence of human-caused climate change. She promptly issued an executive order removing the state from WCI after taking office and in 2010 signed legislation that required legislative consent for Arizona to return to the organization.

Subsequent gubernatorial transitions further weakened the WCI, suggesting a thin base of political support. Utah’s Republican Governor Jon Huntsman had supported the WCI but his departure for the Ambassadorship to China led to a reversal under his successor, Republican Gary Herbert. In New Mexico, both 2010 major party candidates to succeed Richardson expressed concerns about the WCI but Republican Susana Martinez was more aggressive in her remarks. She wasted no time in reversing Richardson’s position upon taking office in early 2011. In her very
first days, she attempted to stall any WCI rules through a 90-day suspension process and then fired the entire Environmental Improvement Board that had approved them the previous year. All other WCI states aside from California quickly dropped like dominoes during 2011, and only Quebec remained engaged among provinces.

The WCI failed to develop a larger and more politically resilient base of support beyond its initial cultivation of a set of governors and premiers eager to ally with the charismatic governor of California at his political peak. All key facets of the WCI process were dominated by California, allowing other states to ride along at minimal expense. This worked for a short time but began to unravel as the potential program launch neared, the possibility of securing state advantage in federal legislation evaporated, and a new wave of governors emerged in 2009 and 2010 with far less concern about climate change. California's coalitional dominance discouraged the development of any potential flexibility provisions or broader constituency-building efforts that might have helped sustain the coalition and promoted resilience. As a result, much of the WCI essentially collapsed, though leaving open the question of durability among its surviving members.

Durability in California

California's commitment to continue pursuit of cap-and-trade was not guaranteed. Along with losing so many state and provincial partners, the state also faced fundamental tests of political resilience some four years after AB 32 enactment. The legislation had been forged through a coalition between a Republican governor and Democratic legislature eager to establish their state as a national and even global leader on climate change while positioning themselves for political advantage heading into 2006 state elections. But two 2010 developments posed significant tests of the resilience of California's cap-and-trade policy, including a gubernatorial election and ballot proposition designed to reverse state climate policy. The campaign to succeed Schwarzenegger featured two candidates with very distinctive stands on AB 32's cap-and-trade provisions. Republican Meg Whitman sought to distance herself from the increasingly unpopular Schwarzenegger on a few salient issues, most notably cap-and-trade. She vowed if elected to freeze implementation for at least one year to allow for careful review of long-term commitments. In contrast, Democrat Jerry Brown embraced full pursuit of cap-and-trade and all aspects of AB 32.

Political Resilience

Unlike its WCI partners, however, California decisively demonstrated political resilience in surmounting two electoral challenges to cap-and-trade. Climate policy was hardly the lone gubernatorial campaign issue but Brown’s decisive victory
indicated continuing cap-and-trade support for at least the next four years despite executive branch transition. Direct democracy posed a more fundamental challenge to the future of California cap-and-trade. The state’s extensive use of ballot propositions for environmental and many other policy issues is well-established, and the 2010 ballot included an up-or-down vote on Proposition 23, which proposed placing AB 32 into a prolonged freeze barring sustained reductions in unemployment. Public opinion broke decisively against the ballot proposition in mid-Fall and never shifted. This led to a decisive rejection of Prop 23 by a 61-to-39 percent margin, suggesting that, at least in California, cap-and-trade had endured initial leadership transition and a frontal opposition campaign. As a result, it could continue moving toward full implementation, a key test of its resilience while WCI coalition partners began to falter.

Design Flexibility

California included a number of flexibility provisions in the design of its cap-and-trade program. These acknowledged the uncertainties and complexities involved in launching carbon trading and also built in part upon some lessons emerging from earlier experience in Europe as well as RGGI. California’s version of cap-and-trade was designed to be phased in gradually through an expansion over time in the number of covered entities. In turn, it allowed for a gradual increase in the percentage of emission allowances that will be auctioned rather than allocated without charge, beginning at 10 percent in 2012 and reaching 25 percent by 2020. The auctioning method, discussed more fully in the RGGI case, is designed to generate government revenue for an array of purposes, with some parallels to a carbon tax.

The initial statewide auctions went smoothly and largely uneventfully, with no glitches and a carbon price that gradually increased from $10.09 per ton in late-2012 to $14 per ton in mid-2013 before settling in between these levels by 2015. But the state prepared for any auction price volatility that might either impose an unusually steep initial cost or lead to a plunge in purchase prices. At one end, the California Air Resources Board (CARB) established an Allowance Price Containment Reserve, a pool of additional allowances that could be made available to the market if permit prices exceeded specified levels, thereby creating a price ceiling of sorts to deter potential price spikes. At the other end, the state established a “price floor,” beginning at a rate of $10 per ton for 2012-13, before rising at a rate of five percent per year, plus inflation, in 2014. Collectively, these provisions were designed to give California considerable flexibility to make a smooth transition into an era of carbon cap-and-trade and to provide officials with tools to respond quickly in the event hard-to-anticipate problems emerged in the early years of implementation. The state transitioned into the next phase of its cap-and-trade program, addressing transportation sector emissions, in 2015.
Building Constituency Support

The gradual transition toward auctioning and price-stabilization mechanisms helped guard against major cost spikes that might have triggered negative political reactions. In turn, the auctioning process created a potential mechanism to create and expand constituency support, while possibly enhancing emissions reductions through targeted investment of proceeds in climate-friendly projects. Indeed, a major political attraction of allowance auctioning is revenue generation that can be used directly for related climate mitigation projects or relief from established taxes and fees for either individuals or businesses. California projected annual auction yields of up to $1 billion in the initial years and considerable expansion thereafter, creating a potentially large body of revenues that might serve to further bolster constituency support.

However, the state struggled to establish a clear and compelling plan for revenue allocation, even after initial auction activity began in late 2012; there was no binding statutory language on this matter, leaving considerable room for prolonged political jockeying. Numerous elected officials and interest groups have continually advanced a potpourri of proposals for possible funding use in recent years, with the absence of a clear revenue-use plan serving to divide such potential program supporters as environmental justice groups, local governments, and renewable energy developers. As a senior Schwarzenegger advisor noted, “It’s a land grab and everyone’s going to have their tin cup out.”

Brown’s return to the governorship featured a number of trial balloons for potential auction revenue allocation, including proposals to shift substantial funds for the state’s ambitious but financially troubled plans to create a high-speed rail system throughout the state. Each shift in proposals triggered new complaints and claimants. Ultimately, the legislature and governor agreed on two 2012 bills that were intended to provide some structure for revenue use but only generated new controversy given their very broad definitions of what might be eligible for auction funding support. One CARB official lamented that “there’s no real guideline, and virtually everything qualifies” for auction funds. “Once you help create a pot of money, there’s going to be a lot of people that see themselves as part of the solution.”

Brown further undermined confidence that revenues might be used in a credible and constructive way by announcing in 2013 plans to borrow $500 million from the initial auctions to support deficit-reduction goals. State officials announced that the loan would be short-term and funds would be repaid with interest, but this hardly
inspired confidence in a state with a diminished credit rating, recent history of severe fiscal problems, and no announced plan for fund repayment. One leading environmental justice advocate said that this was a “heartbreaking disappointment,” insisting that “you can’t steal from poor people and the planet and get away with it in California.”

There was no serious political challenge to cap-and-trade as auctioning expanded in 2014 and some indications of emerging consensus on allocating revenues consistent with broader AB 32 climate goals. But tensions endured over this issue, including Brown’s continued effort to channel 25 percent of funds for increasingly controversial high-speed rail. Hence, this opportunity to use auctioning to build constituency support was not fully realized by mid-decade, quite unlike the only durable regional cap-and-trade program.

**Durability: Regional Greenhouse Gas Initiative**

The Regional Greenhouse Gas Initiative has emerged as the most durable of the three regional entities. RGGI has retained all but one of its original members and maintained a collaborative multi-state process that has endured the departure of essentially all of its initial political and agency entrepreneurs. It has sustained an ongoing partnership between the lead environmental and energy departments in each state, working in concert with a non-profit organization based in New York City, RGGI, Inc., that operates several key program provisions on a regional basis. Moreover, it has demonstrated flexibility in making significant adjustments in core design features, including a major 2013 modification designed to increase its future impact. In turn, RGGI pioneered auctioning and has very effectively utilized revenues to build and sustain supportive constituencies. It remains focused solely on the electricity sector, with an initial emission reduction target 10 percent below 1990 levels by 2018 that has subsequently become more stringent.

Whereas the WCI was dominated by a single state that passed bold legislation and then sought to find a coalition of willing state and provincial partners, RGGI emerged after multiple years of negotiations among a set of states with a long history of cooperation on environmental protection and energy development. Initial cap-and-trade experiments in Massachusetts and New Hampshire in 2001-2002 were only one part of considerable regional experimentation with climate-related measures. New York’s governor, Republican George Pataki, began to push for a regional cap-and-trade approach, occasionally triggering concerns about political balance between respective states. But the RGGI coalition cohered through extended conversations between governors and their lead environmental and energy agency heads. The RGGI process was an extended and wonkish seminar in
cap-and-trade development, continually weighing optimal design against political realities through years of working group meetings, public hearings, and reports, creating an inter-state foundation and network transcending the other two regional efforts.

Seven states approved core agreements in 2005, following more than two full years of intensive negotiations that led to a detailed memorandum-of-understanding. Connecticut, Delaware, Maine, New Hampshire, New Jersey, New York, and Vermont were charter members. Massachusetts and Rhode Island were active participants from the outset but delayed membership until 2007. Maryland, a relative newcomer to the deliberations, also joined in that year. A number of key decisions on cap-and-trade design were taken before RGGI’s official 2008 launch and all of the original members remain except for New Jersey, which withdrew in 2011 but has begun to rethink that decision in its legislature. Under the RGGI covenant, any state can withdraw upon providing 30 days advance notice; a mechanism was created to simply remove allowances intended for that state from subsequent allocation rounds and minimize regional disruption. Each state has distinct constitutional requirements guiding participation, creating varied roles for individual governors, legislatures, and agencies when key decisions are taken. RGGI has long emphasized that it would welcome additional partners, either states or provinces, and has retained jurisdictions such as Pennsylvania, Ontario, and New Brunswick as official observers. No new members joined the partnership after 2008 and observer status has increasingly constituted symbolic value rather than a path to membership. This appeared, however, to change in 2014-15, with new interest evident from such states as Virginia, Illinois, and Pennsylvania.

**Political Resilience**

Despite its durability, RGGI has not avoided growing pains or significant governance challenges. But it has demonstrated continuing resilience in the face of potential political threats. First, the role of governors has generally loomed large, with some expressing reservations about remaining active in the partnership. Massachusetts Republican Mitt Romney and Rhode Island Republican Donald Carcieri both reversed their initial support for RGGI, delaying their states’ eventual engagement. The 2006 election of Democrat Deval Patrick led Massachusetts back to the RGGI fold in 2007 and Rhode Island soon followed without a gubernatorial change. New York Democrat David Paterson was never as enthusiastic about RGGI as Republican Pataki and began to publicly consider withdrawing his state in 2008 due to concerns that state-based businesses might move elsewhere in search of cheaper electricity. Paterson never carried through on that threat but the very idea of a wavering commitment from RGGI’s largest partner raised questions of resilience. New Jersey Republican Governor Chris Christie decried RGGI as a “failure” and a “fake tax” that had not reduced energy use as he removed his state in 2011. This time period also
saw several legislative challenges to continued RGGI participation, most notably in New Hampshire, but none were enacted.

Second, electoral cycles rapidly served to sideline nearly all of the elected pioneers responsible for RGGI's creation, along with their top agency appointees. Multiple shifts occurred in state governorships and legislatures in the region through the 2010 elections, which proved so consequential in the MGGRA and WCI cases. However, RGGI states did not see such decisive swings in the views of incoming leaders. Indeed, some new governors such as John Lynch in New Hampshire and Andrew Cuomo in New York became stalwart RGGI supporters. Like California, however, many of these states emerged overwhelmingly in Democratic Party hands after 2010 and 2012 elections, suggesting that cap-and-trade might have acquired a far more partisan edge after considerably greater cross-partisan engagement during the prior decade. Indeed, by 2015, five of the seven states in the nation with exclusive Democratic control of their governorship and both legislative chambers had one of the nation’s 10 remaining state cap-and-trade programs.

Third, RGGI faced an unanticipated threat linked most closely to severe recession. Along with its devastating impact on the regional and national economy, the recession triggered a substantial plunge in electricity demand at the very point that RGGI carbon emission caps became operational. Electricity-sector emissions in the RGGI region plummeted 34 percent below its established cap by 2009, the very point that a reliable baseline was essential to allow successful implementation. This cap represented a formal regional decision and could only be altered with unanimous support from RGGI members. In turn, electricity demand did not rebound significantly in subsequent years. At one level, this was good news for regional emissions but unexpected and potentially devastating news for the launch of the Northeast’s cap-and-trade program.

Design Flexibility

RGGI endured this threat due to a pair of decisions taken during its development that gave it considerable flexibility by providing a viable rationale to continue once its emission caps were rendered essentially meaningless. There was no political appetite to make a major adjustment in the caps at the very outset of the program and considerable uncertainty whether they might indeed prove viable in the near future if electricity demand rebounded along with the economy. But two key design provisions were added to the RGGI process prior to its 2008 launch, both of which played crucial roles in weathering this transition and providing a valuable constituency-building tool while setting the stage for a major adjustment in 2013. These provisions were put into operation by teams of policy professionals at both
the state and regional levels with considerable experience in working across state borders at the intersection of air quality and energy use.

**Auctioning allowances and pricing floor.** First, the inclusion of auctioning as a primary mechanism for allocating allowances was adopted after the memorandum of understanding process. It reflected a strong push from environmental groups to reframe allowances as a “public resource, not a private one, to be used for public benefit” (Raymond 2011). These groups ultimately won support from key agency officials and then governors, with all RGGI states agreeing to auction either the entirety or vast majority of their allowances immediately. This represented a major departure from most prior experience with emissions trading, whereby allowances were customarily distributed without charge through an established formula linked to prior emission patterns and then traded to allow flexible compliance. Auctions for allowances opened the possibility that revenue from transactions would go to governments rather than trading partners. In turn, this approach proved highly attractive to those stakeholders eager not only to place an explicit price on carbon to deter fossil fuel use but also to spur development of cleaner energy sources with new government funding. In theory, revenue generated through auctions could be reallocated to advance various climate-related goals, such as promotion of energy efficiency and renewable energy. It could also be used to offset cost increases that customers might face as cap-and-trade was phased into operation, thereby dampening potential political tensions. Under the RGGI plan, each state would receive its proportional share of auction revenue and set its own priorities in determining revenue allocation.

The inclusion of auctioning provided a significant reason for RGGI to move forward despite the cap collapse and a quarterly sequence of auctioning began in 2008. Revenue began to be generated on a regular basis and gave RGGI a new lease on life through a very powerful tool that could begin to build and sustain constituent support. The success of the auctioning process was linked to another flexibility provision included in the original agreement: establishment of an official reserve price or floor below which an allowance purchase could not fall. This resembled a provision subsequently included in WCI design but was especially significant for RGGI given the very real danger that a market focused on only one industry and saturated with allowances could produce only a nominal auction price. The initial reserve price was $1.86 per allowance; subsequent auctions generally kept the price just below $2. This was hardly the robust price capable of driving major behavioral changes in fossil fuel use but was sufficient to allow auctioning to make a credible start and begin to generate significant amounts of revenue. Such a low initial price might also have provided a strategic advantage, allowing for development of operational experience and generation of some revenue but also keeping costs low before any subsequent adjustments upward. This type of a cost phase-in has also been evident in the last decade internationally in cases where new carbon taxes
have been adopted along with targeted revenue use and proven durable, including British Columbia and Ireland.

Adjusting the cap. RGGI's successful auctioning between 2008 and 2012 avoided the many problems that plagued the European Union trading system and gave it growing stature as a credible entity while buying time to see whether electricity demand would rebound and make its original cap more consequential. Once it became clear that no return to prior levels was imminent, RGGI officials began to explore a major cap readjustment to reflect new economic and energy realities. Governors such as New York's Cuomo began to emphasize a link between extreme weather events such as Hurricane Sandy with the proposal to tighten the RGGI cap to help mitigate climate change. Supporters were also emboldened by President Obama's 2012 reelection and the possibility of using RGGI to ease regional compliance with anticipated federal application of the Clean Air Act to electricity-sector carbon emissions.

RGGI officials reactivated the multi-state review process that had served it well during formation of the partnership in reviewing possible cap adjustment. This included a diverse set of stakeholder meetings, webinars, and so-called “learning sessions,” all leading to a unanimous February 2013 decision by RGGI states to substantially reduce its emissions cap. Under this agreement, RGGI's original Model Rule cap was reduced 45 percent from its original 2014 target, dropping from 165 million tons of carbon annually to 91 million tons. Subsequent cap reductions of 2.5 percent per year were scheduled annually between 2015 and 2020. Related adjustments were made to tighten the RGGI market, including withdrawal for potential purchase of any unsold allowances from previous years.

The first allowance auction following this decision saw the March 2013 clearing price jump to $2.80 per ton from the previous $1.93 level. Subsequent allowances have traded on the open market above the $3 level. RGGI states viewed this as an encouraging sign and allowance prices continued to climb during 2014, reaching a new high of $5.21 in December. One state’s environment secretary noted that RGGI’s changes “lock in the CO2 pollution reductions achieved to date from power plants across the region, while also providing a path forward for additional emissions reduction.”

Building Constituency Support

Whereas California equivocated over its plans for using auction revenues and alienated multiple stakeholders in the process, RGGI promptly demonstrated how auction funds can be targeted to a range of climate-linked projects within each
member state and thereby broaden constituency support for the program. This indicates that a climate policy can be designed not only to impose costs but also deliver near-term demonstrable benefits that can influence constituency responses (Cook 2010).

RGGI generated $1.66 billion from its first 23 auctions. RGGI, Inc., and its state constituents regularly frame the auction process as one that delivers significant benefits that include climate mitigation but also other tangible environmental and economic benefits. RGGI, Inc. routinely reports results from each auction and attempts to quantify all plausible beneficial impacts to date. It also publicizes enthusiastic statements from each state’s lead environmental agency official on the impacts of these funds. For example, Delaware’s top environmental official noted after a 2013 auction that state “reinvestment of auction proceeds in energy efficiency programs has not only avoided carbon pollution, but helped businesses and families reduce their electricity bills, and workers find jobs weatherizing homes, retrofitting outdated industrial equipment, and constructing more energy-efficient buildings.” RGGI, Inc. also publishes an ongoing set of “Success Stories,” portraying individual families or organizations that have benefited from RGGI auction support. Such stories have included a profile of a New Hampshire family restaurant that slashed its energy costs due to an energy efficiency grant and a Delaware city that purchased hybrid vehicles for public official use through RGGI auction dollars. Media accounts of RGGI frequently accentuate these kinds of cases, thereby putting a personal touch on the argument that carbon cap-and-trade can deliver tangible benefits that are very different from more elusive benefits of emissions reductions and may well offset pain imposed by any costs.

With the exception of New York and New Jersey, states have generally resisted any temptation to shift significant revenues toward such broad purposes as general funds or deficit reduction. In fact, several states are now statutorily bound to only allocate auction proceeds to climate-related programs. New York shifted $90 million to deficit reduction in 2010 but has not repeated the pattern. New Jersey transferred $65 million to deficit reduction in 2010, popularly characterized as “RGGIcide” through its deviation from original program intent one year before withdrawal from RGGI. But exits need not be final under the RGGI pact and, in fact, the New Jersey legislature has continued to press Governor Christie to return the Garden State to cap-and-trade. RGGI is also trying to parlay its new cap-and-auction mechanism into attracting other jurisdictions to consider joining, especially in light of new federal developments.

**Considerations for Any Cap-and-Trade Second Act**

The capacity of sub-federal governments to operate durable cap-and-trade programs for greenhouse gas emissions was uncertain well before they attempted...
to launch operations due to preemption provisions in numerous federal cap-and-trade bills. Indeed, the federal legislative proposal that came closest to enactment, the 2009 ACESA, would have frozen the operations of all state or regional programs for at least five years while launching a national cap-and-trade system. Ironically, application of durability criteria to ACESA suggests it may well have foundered even if it had been adopted.

This legislation operated with a very slender margin of almost purely-partisan support in the House and would have required a unique cross-partisan coalition in the Senate given Democratic misgivings, leaving it highly vulnerable to backlash after the 2010 Congressional elections. It was written with a level of complexity and specificity that was unprecedented for American environmental legislation and gave staggeringly little flexibility to administering federal agencies to adjust to rapidly changing economic and energy supply conditions. In turn, any opportunity to use auctioning to raise revenue and build constituency support was downplayed in favor of an incredibly complex allowance allocation system that instead attempted to dampen constituency opposition by negotiating favorable allowance terms on a case-by-case basis written into statute (Rabe 2010). Ultimately, the ACESA approach not only failed to gain initial passage but so dominated Congressional deliberations that it marginalized consideration of other cap-and-trade or market approaches introduced into the 111th Congress. Alternatives included a cap-and-dividend system and revenue-neutral carbon tax, both of which had some bipartisan support and clearer constituency-building provisions.

ACESA’s collapse and policy termination in the majority of cap-and-trade states might indicate this policy tool is no longer an option in American climate deliberations. But policy ideas can feature unusual resilience in the American context and may well be capable of consequential second acts. The durability of the RGGI and California experiences have clearly influenced the latest chapter in federal climate policy, whereby the Environmental Protection Agency has developed a Clean Power Plan that mandates a national 30 percent reduction of electricity-sector greenhouse gas emissions from 2005 levels by 2030. The agency is using authority under federal clean air legislation, an extremely durable federal environmental statute, to give each state its own emission reduction target and then allow it to select its methods to achieve this from a menu of approved options.

Cap-and-trade figures prominently on that list of options, as do related market-based approaches such as carbon taxes and fees. EPA Administrator Gina McCarthy, previously one of the architects of RGGI from her prior roles in Massachusetts and Connecticut, has repeatedly characterized RGGI and California not only as models for emulation but as durable programs that could incorporate additional state partners. The lead environmental officials in all cap-and-trade states have advanced
detailed proposals calling upon EPA to fully credit their early actions. They also entered active recruitment mode, encouraging other states to either revisit abandoned commitments to cap-and-trade or consider making one for the first time by joining them as formal partners. This recruitment has emphasized state experience and durability, offering a potentially attractive mechanism to meet emerging federal regulatory provisions in a cost-effective manner.

State engagement with RGGI might be a particularly attractive option for states. RGGI’s design allows for relatively easy adjustment of membership, without formal requirements that would exclude states beyond its physical borders. Unlike California, it has a proven track record in making needed adjustments, sustaining cross-state partnerships, and building constituency support through auction allocations. Partnership with RGGI would also give states access to its unique expertise in all dimensions of cap-and-trade application to the electricity sector, rather than attempting unilateral formation of a new program or collaborating with the more complex and less proven model emerging in California.

The EPA strategy raises many questions about its own durability, including its likely resilience given its creation through executive action in the final years of a term-limited presidency. However, its proposed use of state implementation plans for air quality builds upon a long-standing track record of durability, allowing considerable state flexibility in meeting a series of emission reduction targets over time. States are required to submit initial plan proposals during 2016-2017. Should those include some form of cap-and-trade, states can at least weigh lessons from prior experience on what does—and does not—contribute to the durability of such programs.
References


Table One: Patterns of Diffusion in State and Provincial Adoption of Carbon Cap-and-Trade Policies, 2001-2015

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