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Not Waiting for Washington: Climate Policy Adoption in California and New York

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Not Waiting for Washington:
Climate Policy Adoption in California and New York

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ABSTRACT

In the absence of strong U.S. national climate change policy, California and New York, among other states, adopted relatively comprehensive and ambitious policies to cut greenhouse gas emissions during the 2000s. They adopted these policies despite political-institutional and other structural barriers similar to those found nationally, which shows that political actors have significant scope for taking effective action even under structural constraints. This article explains the adoption of climate policies in these two leading states by using a windows of opportunity approach, which analyzes how the convergence of problem and political events produces policy windows and hence opportunities for advocacy coalitions to mobilize successfully for the adoption of major policies. It uses this framework to explain four episodes of state-level climate policy adoption, including: motor vehicle emissions and renewable energy policy in California (2002); emissions reduction targets, a low-carbon fuel standard, and emissions trading in California (2006-2008); a renewable portfolio standard and emissions trading in New York (2002-2003); and an energy efficiency standard and stricter renewable portfolio standard in New York (2007-2010). The convergence of problem and political events, including scientific reports, focusing events, election results, political leadership, and interest-group mobilization, led to these bursts of innovation, which helped to overcome structural barriers to climate policy adoption.

INTRODUCTION

The United States' federal climate change mitigation policies are widely seen as weak and ineffective, especially in cross-national comparison.¹ Before the Obama administration, these policies were limited mainly to voluntary measures and were not guided by overall emissions reduction targets. Partly as a result, U.S. greenhouse gas emissions increased by 10.4 percent from 1990 to 2010.² But in the absence of strong national action, many state governments adopted climate policies beginning in the early 2000s. The main policies include: greenhouse gas emissions targets and climate action plans; support for energy efficiency improvements and renewable energy development; energy efficiency and CO₂ emissions standards for vehicles, appliances, buildings, and power plants; and mandatory cap-and-trade systems for greenhouse gases.³ The governments of about a dozen states, clustered in the Northeast and on the West Coast, have adopted *relatively*

strong climate policies. That is, they have ambitious goals, have pursued a very wide range of policies, started policy making earlier than other states, and have made reasonable progress in implementation.⁴

This article focuses on two states, California and New York, chosen because they are among those with the strongest climate policies in the United States, have led other states in their regions, and are large, important entities in their own rights. Of the two, California clearly has the stronger policies; it is the only state with emissions reduction targets that are simultaneously economy-wide in their scope, ambitious, and legally binding.⁵

Why have California and New York adopted relatively strong climate policies? Why are California's policies outstanding? This article, which is drawn from a recent book,⁶ addresses these empirical questions in the context of a range of theories drawn from literatures on climate and other environmental policies. These literatures, surprisingly, bifurcate between structural and process theories. As described in the theoretical section below, one body of work focuses only on structural explanations, and hence implies that institutions and other structures are determining and that actors and processes do not matter; a different body of scholarship focuses only on actors and processes, and hence implies that *those* are adequate, and that structural constraints do not matter. Hence, taken as a whole, these literatures contains an implicit debate about how much "room for maneuver,"⁷ or scope for effective action, political actors have, and yet the implicitness of the debate means that this overarching theoretical question is left unaddressed.

Therefore, while answering this article's empirical questions, I also aim to delineate the room to maneuver that political actors have in cases of climate policy adoption in the United States. I will do this by assessing the usefulness of both structural and process theories for explaining

policy adoption in California and New York. In the above-mentioned book, I tried to give equal attention to both sets of theories, but for reasons of space, this article mainly will make the case for process theories of climate policy adoption, and for the windows of opportunity theory as a representative of those process theories. Although the structural accounts are useful for helping to explain inaction by the U.S. federal government, they go too far in implying that structural barriers make climate change policy impossible in the United States; in particular, they cannot explain the adoption of climate policies by some states. I will argue that even under serious structural constraints, when the right kinds of events converge, actors have opportunities to gain the adoption of strong climate policies. At the same time, certain structural advantages in California and New York also contributed to the outcomes there, a consideration to which I will return in the conclusions.

I will be using the California and New York cases for two kinds of comparison: a universalizing comparison, seeking to identify what they have in common that could account for the similarities in their outcomes; and a variation-finding comparison, aiming to explain why California's policies are stronger than New York's.⁸ For reasons of space, I will not be able to discuss other states that have relatively strong climate policies, such as Massachusetts, to explain why certain policies have been adopted rather than others (such as emissions trading rather than carbon taxes), or to provide a full account of why California is the pre-eminent example of state-level climate policy. However, in the conclusions, I will discuss some additional reasons for that state's exceptional policies.

In the next four brief sections, I discuss the theoretical issues, explain why I chose California and New York, describe their climate policies, and assess how well several of the main

structural theories can explain those two states' policies. Then the article analyzes four episodes of climate policy adoption in these two states by using the windows of opportunity theory. I conclude by summarizing the empirical findings in terms of the theories considered, explaining why California's policies are stronger than New York State's, considering some additional alternative explanations, and discussing the implications for theories of climate policy.

THEORIES

Scholarly literatures on climate policies and other environmental policies, both cross-national and on the United States, have in common a bifurcation between structural and process theories.⁹ One theoretical strand has emphasized the presence or absence of certain structural barriers to climate policy making. The first of these is the fragmentation of governmental authority, such as in presidential rather than parliamentary systems and in systems with strong independent judiciaries, which is held to make vigorous government intervention on the climate change issue unlikely or impossible.¹⁰ Second, pluralist interest group systems, in contrast to neocorporatism, have encouraged business groups to take an adversarial attitude toward environmental regulation since the 1980s, and hence those groups have resisted climate policy.¹¹ Fragmented authority and pluralism each increases the number of veto points at which powerful producer interests can block climate policies.¹² Third, climate policies are less likely if the dominant ideology is economic liberalism and hence is generally hostile to government intervention.¹³

Finally, the structural theories also posit the importance of the composition of the energy sector. If a country or state is a net fossil fuel importer, it will favor climate policies, which tend to reduce fossil fuel consumption, since these policies reduce its dependence on potentially unstable

external energy supplies and also reduce its payments for them. Conversely, jurisdictions with large domestic fossil fuel supplies will oppose climate policies since they lack those energy-security and financial motivations, and also because they have powerful domestic interest groups favoring fossil fuel use.¹⁴

According to the structural theories of climate policies, the weakness of the United States' national climate policies is an inevitable result of these major barriers.¹⁵ The United States has a presidential system with exceptionally fragmented authority (including an unusually strong upper chamber of Congress and independent federal courts), a highly pluralist interest group system, a large domestic fossil fuel industry, and a political culture marked by economic liberalism. These structural features have allowed business and fossil fuel interests to promote the denial of climate change science, persuade Congress to block climate legislation, and limit executive regulatory action through threatened or actual litigation.

Yet there are several problems with the structural theories. They imply that significant climate policies are not possible in the United States, given its structural disadvantages; political actors appear to have no room to maneuver. But in fact some states have adopted relatively strong climate policies, as will be detailed below, and sometimes even the federal government has done so. For example, under pressure from state governments, the Supreme Court's decision in *Massachusetts v. EPA* (2007) opened the door for the federal EPA during the Obama administration to regulate greenhouse gas emissions from motor vehicles, power plants, and other sources on the basis of the Clean Air Act, without additional congressional legislation.¹⁶ Another weakness in the structural account is that research seldom evaluates structural factors alongside political process variables, partly because in large-N studies it is difficult to get comparable, reliable data on the

latter.

Process theories of climate policy making offer an alternative that can help to explain why some state governments in the United States have adopted strong climate policies despite unfavorable structural features. State-level studies indicate several conditions under which actors can influence climate policy adoption. First, the studies find that focusing events may raise awareness of climate change issues, spur political commitment, and neutralize business opposition. Such events include fossil fuel price increases or supply disruptions, and environmental disasters such as storms, wildfires, or drought; the publication of new scientific findings can have similar effects.¹⁷ Second, leadership by politically ambitious state-level elected officials, such as governors or attorneys general, as well as by directors of state government agencies, can be an important driver of climate policies.¹⁸ Third, advocates' use of appropriate framing processes may ease the acceptance of climate policies, by interpreting a region as ecologically vulnerable or emphasizing the policies' co-benefits for economic development, energy security, or air-pollution control.¹⁹

In seeking a comprehensive, coherent theoretical framework that can subsume the above process variables as well as others, I decided to use Kingdon's windows of opportunity theory of agenda setting and policy making,²⁰ for several reasons. First, an initial examination of cases of state-level climate policy adoption showed that major policy changes clustered in relatively brief episodes that alternated with longer periods of stability. The windows of opportunity theory attempts to identify and explain moments of unusual openness, when policies that are usually stable may change rapidly; in this regard, it is similar to punctuated equilibrium theory.²¹ Second, unlike the latter theory, it includes prominent roles for external focusing events and changes in scientific knowledge, which have been important in case studies of climate policy adoption. More generally,

Kingdon's theory aims to identify the factors that trigger instability in the policy system; like the structural theories, it seeks to explain why, rather than merely how, change occurs.

In Kingdon's theory, an issue is most likely to reach officials' decision-making agenda when intense problem awareness, viable policy solutions, and strong political commitment converge. Each of these elements is affected both favorably and adversely by streams of events and other processes, which are largely independent of each other. When problem and political streams converge to produce the perception of a severe, urgent problem and also the political commitment to address it, a policy window is created. The window may be exploited by policy entrepreneurs who promote particular policy solutions, which already have been generated and tested in their own complex, slow-moving stream.²²

Here I will focus on how the problem and political streams create policy windows, and leave aside the policy stream. Doing so will simplify this article's comparative case-study analysis and provide a somewhat tougher test of process theory, since policy streams are those most amenable to influence by political actors. Moreover, it is unlikely that climate policy development in California and New York was constrained by a lack of available, acceptable policy solutions. A large number of climate policy instruments were developed by the late 1990s and had been tried out in a number of states.²³ Many of these instruments meet basic requirements of technical feasibility, fit in with dominant values, are workable in budgetary terms, and have been widely communicated to policy communities across the United States. In addition, states like California and New York, due to their size and geographic proximity to other leading states, likely have had good access to information about policy proposals.

The *problem stream* concerns which problems are seen as most important and hence worth

putting on policy makers' decision-making agendas. The problem stream can be altered significantly through extraordinary focusing events, dramatic information about indicators of environmental conditions, and feedback from existing policies.²⁴ The *political stream* concerns who holds power, their ideological or value-based commitments, and the political constraints they face or anticipate. This stream is affected by election results, changes in governmental leadership positions, shifts in public opinion, and mobilization by organized groups.²⁵

While the theory of policy windows was initially formulated to explain how issues get onto the agenda and become ripe for action by policy makers, it has also been used to explain policy adoption.²⁶ Nonetheless, to use the policy windows theory for this purpose, it is helpful to supplement it with aspects of advocacy coalition theory, in order to capture the role of interest groups in the policy-making process and to help explain how the rise of an issue on the agenda sometimes leads to policy change.²⁷ The stream of political events affects not only the degree of political commitment to an issue by elected officials, but also the balance of power between the coalition of advocates for a policy direction and the coalition of their opponents. Both kinds of coalition can draw on specialists in a variety of governmental and private organizations, including government agencies, political parties, legislatures, interest groups, non-profit organizations, social movement organizations, research institutions, and media outlets.²⁸

To summarize the process theory used here, when problem and political streams converge, they open a policy window. At such times, if the advocacy coalition is more powerful and mobilizes more energetically and wisely than the opposition coalition, new or strengthened climate policies will be adopted.

CASE SELECTION AND RESEARCH DESIGN

Case study comparisons are well suited for capturing process variables and linking them to outcomes.²⁹ The two states analyzed in this article initially were selected simply in order to construct a universalizing comparison of two cases with climate policies that were clearly relatively strong in the U.S. context. I also wanted to choose states that were inherently important because they were large enough and were leaders rather than followers in their regions; the latter feature has the added advantage of making their climate policy making large independent of other states' politics and hence reducing the number of explanatory factors to be considered. In addition, however, since one of the cases is California, and it proved to have by far the strongest climate policies of all the U.S. states, this afforded the opportunity to conduct a second kind of comparative analysis – a variation-finding comparison that explains why California's policies are notably stronger than New York's.

Hence, there were three reasons for choosing these two states. First and foremost, compared with other U.S. states, California and New York have adopted advanced climate policies. Every year since 2008, both have ranked among the top five U.S. states in the rankings published by the Center for Climate and Energy Solutions, which are based on counts of about two dozen different state-level climate policies concerning electricity generation, buildings, and transportation, as well as cross-cutting measures such as greenhouse gas targets and registries.³⁰ While useful for identifying the strongest cases in the United States, the rankings do not capture another salient fact: California is the pre-eminent example of state-level climate policy in the United States. It is the only state with legally binding, economy-wide emissions targets, and these are enforced by a state agency (the Air Resources Board) with the largest administrative capacity and broadest policy

portfolio of any similar state-level agency. As Barry Rabe, the leading expert on state-level climate policies, put it, “California has surpassed every other U.S. state in the sheer range of climate policies enacted and the boldness of its overall emissions reduction plan.”³¹

Second, both states have been leaders, influencing other states or the federal government. For example, California has spearheaded a coalition of states promoting electric and hybrid vehicles and greenhouse gas emissions standards for cars, which led to the federal government adopting regulations on the latter during the Obama administration. New York State was the leading force in creating the Regional Greenhouse Gas Initiative, an emissions trading system for electric utilities in the Northeast.³²

Third, these are also important cases in the U.S. and even the global context. If California were an independent country, its GDP, approximately \$2.0 trillion in 2012, would make it the 10th largest in the world, about the same as Italy, Russia, India, or Canada. Its population of about 37 million would place it 35th, about the size of Poland or Canada. Its greenhouse gas emissions, around 440 megatons CO₂-equivalent in 2010, would make it the world’s 19th largest emitter, similar to France or South Africa.³³ New York State is not far behind California on these dimensions. Worldwide, it would rank about 14th in GDP, 60th in population, and 38th in emissions if it were an independent country.

CALIFORNIA AND NEW YORK’S CLIMATE POLICIES

In this section, I will briefly summarize these two states’ climate policies in order to show that both have relatively strong policies, and that California’s are more ambitious and stringent than New York’s. I will also show that the adoption of their main policies was concentrated in several

episodes: during 2002 and 2006-2008 in California, and during 2002-2003 and 2007-2010 in New York.

Both states adopted greenhouse gas emissions targets and emissions trading systems in the 2000s. While New York's targets are nominally more ambitious, California's actually require greater reductions relative to business-as-usual scenarios. California adopted ambitious greenhouse gas reduction targets in the Global Warming Solutions Act (AB 32) in 2006. AB 32 legally requires and authorizes a state agency, the California Air Resources Board (CARB) to achieve a target of no growth from 1990 to 2020 in the Kyoto-regulated gases from all significant sources, including electricity imports. This target is more ambitious than it appears, since it requires a cut of 15 percent from 2006 emissions and of 29 percent from the business-as-usual scenario, given the state's actual and projected rapid population growth during the 1990-2020 period.³⁴

For its part, New York officially adopted a greenhouse gas emissions target four years before California, in June 2002, when Governor George Pataki released a comprehensive energy plan drawn up by the New York State Energy Research and Development Authority (NYSERDA). The plan set a goal of reducing emissions 5 percent from 1990 to 2010 and 10 percent by 2020.³⁵ Since emissions had already risen 12 percent from 1990 to 2000, this means a reduction of 20 percent from the 2000 emissions rate will be needed over the next 20 years. An estimate of the targeted reductions relative to a business-as-usual scenario is not available. However, New York's population growth rate, which totaled 10 percent over 1990-2015, is much slower than California's 31 percent increase in that period. Hence, I estimate that the per-capita reductions in emissions required by the statewide targets in New York will be only about 20 percent over the 1990-2020 period, compared with about 27 percent in California.³⁶

While New York also adopted emissions trading earlier than California, the latter's system is much larger in scope and has required steeper declines in emissions than New York's. To help implement its 10 percent reduction goal, New York State spurred the establishment of the first greenhouse gas emissions trading system in the United States, the Regional Greenhouse Gas Initiative (RGGI), which covers CO₂ emissions from electricity generation. In 2003, Governor Pataki invited the governors of Northeastern states to participate in the system, which went into effect in 2009, with ten states participating (although New Jersey withdrew in 2011). However, in California, CARB created a much broader cap-and-trade program to help implement AB 32, which took effect in 2013 for large industrial facilities and electric utilities and in 2015 for distributors of transportation and heating fuels.³⁷ Since RGGI is limited to electricity generation, it includes only 27 percent of total greenhouse gas emissions in New York State,³⁸ but CARB's system covers 85 percent of California's emissions. While RGGI was designed to reduce emissions by 10 percent over its first 10 years, the cap in CARB's system was set to decline much more steeply, by 19 percent over its first 7 years.³⁹

In both states, a wide range of sectoral policies supports greenhouse gas reduction targets.⁴⁰ In California, these include an electricity performance standard adopted in 2006, requiring new power plants or import agreements to not exceed the carbon emissions of a combined-cycle natural gas plant; New York followed suit in 2012. Energy efficiency gained a renewed focus in New York in 2007 when Governor Spitzer announced a goal of reducing electricity consumption by 15 percent below the business-as-usual level in 2015 (the "15 by 15" initiative).⁴¹ This was implemented the next year when the Public Service Commission established an energy efficiency portfolio standard to implement this goal, with three-year interim targets, incentives for utilities, and a system benefits

charge that provides funds to the utilities.⁴²

California's renewable energy policies have made it a national leader in that area since the late 1970s. Although its generous tax credits and feed-in tariffs adopted in the 1976-1982 period were discontinued in the mid-1980s, new legislation has supported the industry since 2000, when the large utilities were required to collect \$1.35 billion from ratepayers over the next ten years to subsidize renewable energy.⁴³ Moreover, the legislature adopted an ambitious renewable portfolio standard in 2002 (revised in 2006 and 2011), ultimately calling for 20 percent of the state's electricity to come from renewable sources by 2013, and 33 percent by 2020. A large solar initiative, the "million roofs" program, committed \$3 billion in funding for residential installations in 2006, at the time the second largest solar program in the world, after Germany's.⁴⁴ By 2015, about 30 percent of electricity generated in California was from renewable sources, including 23 percent from solar, wind, geothermal, and biomass.⁴⁵

By contrast, although it has large hydropower resources, New York developed very little new renewable energy before the 2000s. However, since 2000, New York has adopted more supportive policies, including state purchasing of renewable energy, research and development funding, and a renewable portfolio standard. The latter was adopted in 2002 and later, in 2010, accelerated to a goal of 30 percent renewable energy (including hydropower, which provides about 19 percent of consumption) by 2015.⁴⁶ These policies have helped New York become a regional leader in wind power, with 1638 Megawatts installed by the end of 2012, generating about 2 percent of the state's electricity demand.⁴⁷ However, on the whole, California's targets for new renewable energy sources are more ambitious than New York's, according to comparative studies of the stringency of such targets, and California is also closer to meeting its goals.⁴⁸

In the transportation sector, California has been a national leader, due partly to its right to initiate tougher standards under the federal Clean Air Act. The California legislature passed the pathbreaking Pavley bill in 2002, which directed CARB to develop greenhouse gas emissions standards for cars that would reduce emissions per mile by 37 percent for cars and 24 percent for trucks over the 2009-2016 period.⁴⁹ With 17 other states intending to join it, the new standard was blocked by carmakers' lawsuits and by the EPA in 2008, before ultimately being permitted by an EPA ruling in June 2009. Moreover, the Pavley standard was effectively implemented nationwide through an agreement between the Obama administration and ten global carmakers in 2009, which required them to cut vehicles' CO₂ emissions per mile by 30 percent in 2016.⁵⁰ California also has tried to spur the development of all-electric and plug-in hybrid vehicles through regulatory mandates in its zero-emission vehicle program, and it adopted a low carbon fuel standard for road fuels in 2007 and a transportation planning law with greenhouse gas reduction targets in 2008.⁵¹

For the most part, New York's policies on motor vehicle pollution and energy efficiency have followed California's. New York announced in 2003 that it would adopt California's CO₂ emission standards for motor vehicles, and it also adopted California's zero-emission vehicle standards and goals in 1990 and 2013. However, New York has not adopted a low-carbon fuel standard, and the efforts of eleven Northeastern states to develop one since 2010 have not yet borne fruit.⁵²

The descriptions in this section show that the adoption of major climate policies in California and New York clustered in relatively short periods, which alternated with periods in which major policies were not adopted. These clusters define four policy adoption episodes that will be the focus of the analysis later in this article:

- California's adoption of standards for the emission of greenhouse gases by motor vehicles and for renewable energy purchases by utilities (in 2002);
- California's adoption of binding emissions reduction targets, the authorization of CARB to implement them through emissions trading and other measures, the adoption of a low-carbon fuel standard and an electricity performance standard, the tightening of the renewable portfolio standard, the million roofs solar program, and the transportation planning law (2006-2008);
- New York's adoption of greenhouse gas emissions targets and a renewable portfolio standard, and the initiation of RGGI (2002-2003);
- New York's adoption of an energy efficiency initiatives and an energy efficiency portfolio standard, and the tightening of its renewable portfolio standard (2007-2010).

Of course, implementation of these policies by state agencies occurred gradually, and during the periods between the policy adoption episodes. But the focus of this article is on explaining policy adoption.

STRUCTURAL EXPLANATIONS OF CALIFORNIA'S AND NEW YORK'S POLICIES

Can the structural theories of climate policies, with their focus on political institutions and socioeconomic structures, explain the degree to which California and New York have adopted ambitious climate policies? According to the structural theories, when governmental authority is unified and hence fewer veto points are available to opponents, strong climate and other environmental policies are more likely. However, although U.S. states do vary somewhat in the powers of their governors and the professionalization of their legislatures, neither California nor New York has a political system with highly concentrated authority. Indeed, California has a governmental system that is even more fragmented than those in most other U.S. states, including New York. California has a highly plural rather than a unitary executive, currently with ten statewide elected officials, who are frequently from different parties, conflict over policy, and even

litigate against each other.⁵³ In New York, by contrast, executive power is more concentrated in the hands of the governor, who shares the stage only with the lieutenant governor, attorney general, and state comptroller, a relatively small number compared with most states.

In several other ways, California's governors have average institutional powers, while New York's are more powerful than average. Governors are limited to two four-year terms in California, but there is no term limit in New York. The governor's budgetary powers are co-equal with the legislature's in California, but the New York governor has a line-item veto. As a result, New York ranked first among all states in the formal power of the governor in the late 1990s, with 4.3 points on the 1-5 scale of Morehouse and Jewell; California scored only 3.2, slightly below average, in this index.⁵⁴

As is the case at the federal level, the executives in California and New York share power with bicameral state legislatures. Moreover, the potential for conflict and deadlock between governor and legislature is, if anything, even greater in these states than in the average U.S. state, since their legislatures have unusually high capacities. Along with only eight other states, they both have full-time legislatures, and on Squire's legislative professionalism index, they ranked first and second in the country.⁵⁵

In addition, strong direct-democratic procedures in California further limit the executive, by making governors subject to recall and diffusing the legislative power. Ballot initiatives (since 1911) and referendums are important methods of policy adoption and policy blockage in the state, with about a dozen ballot measures voted on each year. New York is much more restrictive in terms of direct democratic procedures, allowing only legislatively referred constitutional amendments and averaging only two ballot measures per year since 1996.⁵⁶

In short, both states overcame fragmented government institutions to adopt climate policies. Indeed, if fragmented government is a recipe for inaction on climate and environmental policy, then California should have policies that are weaker than the average U.S. state. New York, though showing signs of concentrated gubernatorial authority, still has a system where the governor must contend with other statewide executive elected officials and a highly professional legislature.

A pluralist interest-group system is the second political-institutional feature that is prominent in structural theories. The United States as a whole ranks quite high in pluralism, in contrast to corporatism, whether in the context of economic or environmental policy making.⁵⁷ California and New York show no signs of departing from the U.S. model. Their interest groups are multiple and competitive, engage heavily in electoral politics through campaign finance, and energetically lobby the legislature. In California, interest groups write over 60 percent of the bills introduced in the legislature and are often in adversarial relationships with government, including litigation.⁵⁸ In New York, interest groups are also very numerous and spend much money on lobbying; 3,600 registered groups spent \$120 million in 2003. However, they are relatively defensive in their lobbying and initiate only an estimated 20 percent of bills.⁵⁹ Accordingly, Thomas and Hrebenar classify California as a system with stronger power for interest groups than New York.⁶⁰

The rampant pluralism in California is evident in the climate policy arena, where public utilities and the oil and gas industries were the third and fourth largest contributors to electoral campaigns in 2008, totaling \$60 million in spending.⁶¹ The Pavley bill was fought fiercely by oil companies, car dealers, and conservative talk shows.⁶² Interest groups are also generally very active in direct-democratic politics. AB 32 was targeted by the oil industry, which spent over \$10 million

in support of Proposition 23, an unsuccessful attempt to overturn the climate law in 2010.⁶³ With New York's climate policy pursued mainly through executive rather than legislative action, the role of interest groups has been less visible, but still important, in supporting and opposing gubernatorial initiatives, as described in the case studies below.

Third, the structural theories argue that where the dominant ideology is opposed to state intervention, climate policy is less likely. Indeed, this barrier is weaker in California and New York than in most states, as their citizens have been more "liberal" (i.e., more supportive of government intervention) than the average in the United States. The Berry index of citizen ideology, derived from election results for congressional candidates, shows that California's voters were more liberal than the U.S. average during the 2000-2010 period.⁶⁴ However, California is not extraordinarily liberal on this measure when compared with the United States as a whole and it is less liberal than New York. California ranked only 16th among all states, with scores 12 percent higher than the national average, while New York ranked 7th, 34 percent above the national average. An alternative measure of liberalness, using average presidential election voting for the Democratic candidate during the 2000-2008 period, shows both states to be somewhat more liberal than the Berry index does. California ranks 10th among all states, at 56 percent of the vote, while New York continues to rank higher; it is in 4th place with an average 61 percent Democratic vote.⁶⁵

Moreover, greater liberalism in general does not always directly translate into greater public support for, or interest in, climate policy. In the 1998-2000 period, just before California's 2002 episode of climate policy adoption, its residents were actually less supportive of environmental policy than a U.S. sample, and only about as likely to assess global warming as a serious threat.⁶⁶ Moreover, in California, public interest in climate change was extremely low in the 1999-2002

period, when less than 1 percent named it the most important environmental problem in the state; public interest in the issue rose only beginning in 2006, after the governor and legislators called for limits on greenhouse gas emissions.⁶⁷

Finally, the energy sector is another structural feature that has been related to climate policy. Peterson and Rose write that “the most progress in climate action plans has been in states that are not major fossil energy producers or users.”⁶⁸ New York fits this pattern well. While the state has a small amount of natural gas production, which increased after 2000, it still ranked 22nd among all states in that activity and 27th in crude oil production in 2013, and it has no coal mining.⁶⁹ Hence, New York State produced an average of only 1 million BTUs/person of fossil fuel energy per year in the 1995-2000 period, compared with 174 million BTUs/person for the United States as a whole.

But California is an important exception to this generalization, since it is a major producer of crude oil and refined petroleum products.⁷⁰ The state had 16 percent of U.S. crude oil reserves, with an estimated 3,389 million barrels, in 2006.⁷¹ In 2005, California had the third largest oil production among U.S. states. It has had about 12 percent of U.S. oil production over the last three decades, basically the same as its share of the U.S. population.⁷² Refineries are also major economic actors in California; 11 percent of the nation’s refinery capacity was located there in 2011.⁷³ Thus, the California case is evidence against the structural thesis that large fossil fuel industries make vigorous climate policy impossible because they give rise to political lobbies that promote fossil fuel production and consumption and that block climate policy. Although California’s fossil fuel industries are large enough to form formidable political actors, as noted in the above discussion of pluralist interest group politics in the state, they have been largely unsuccessful in the climate policy area.

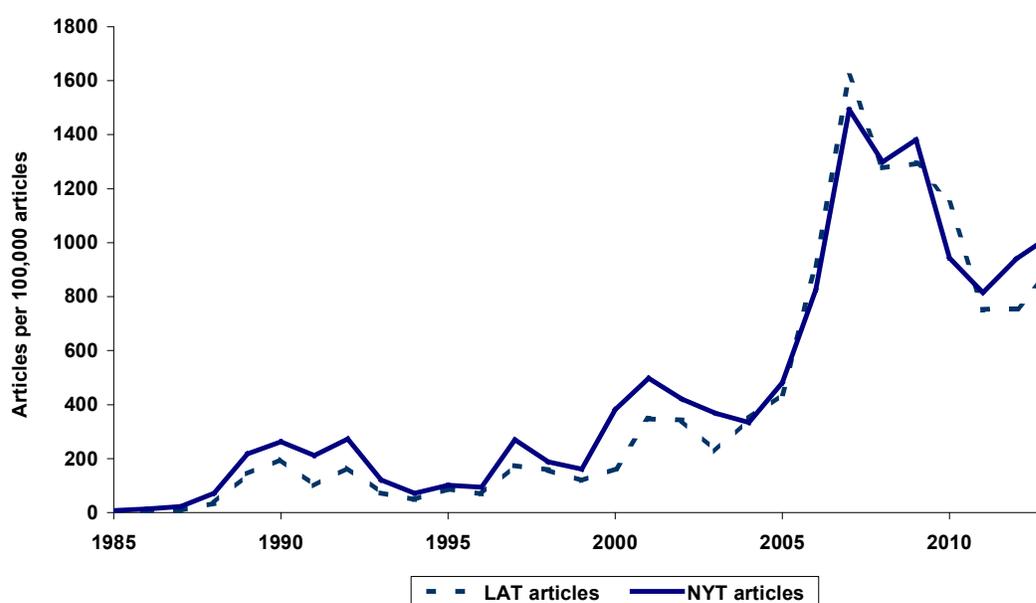
In sum, the structural factors considered here, with the exception of liberal citizen ideology in both states and the weakness of the fossil fuel industry in New York, cannot help explain California's and New York's climate policies. In addition, the differences between these two states concerning the fragmentation of government, interest group pluralism, and fossil fuel production would predict stronger climate policies in New York than in California, while the opposite is actually the case. Political-process theories are needed to help explain why relatively strong climate policies are found in these states, and why California's are notably stronger than New York's.

THE PROBLEM AGENDA AND THE POLITICAL AGENDA IN CALIFORNIA AND NEW YORK

The policy windows theory holds that events in the problem stream help to put an issue on the public agenda, which creates opportunities for policy entrepreneurs to put the issue on the political decision-making agenda. Hence, to help explain episodes of climate policy adoption, I began by examining when the global warming or climate change issue got onto the public agenda in these two states. I measured public attention to the issue in California and New York State by coverage in the *Los Angeles Times* and the *New York Times*, respectively. Figure 1 shows that the two states experienced the same four peaks in public attention to climate change.⁷⁴ While this figure also shows a fairly sustained increase in public attention to climate change after 2007, a decline to a previous low level of attention is not required by the policy windows theory; what matters is that there were clear peaks in public attention, which can be linked to episodes of policy adoption. Moreover, other, national-level data sources, such as television reporting or public opinion salience, show a decline to relatively low levels of public attention after 2009.⁷⁵ I focus

here on newspaper reporting because the *Los Angeles Times* and *New York Times* provide state-level data.

FIGURE 1
Global Warming/Climate Change Issue in the Los Angeles Times
and the New York Times, 1985-2013



Sources: see note 74.

According to Kingdon, public attention is driven by problem events, which include reports about problem indicators, focusing events, and feedback from policies that are seen as inadequate. Indeed, the first small peak in public awareness, during 1990-1992, resulted from scientific announcements about the discovery of global warming (a kind of indicator report) and the political responses to that discovery, including congressional hearings on the issue and the 1992 Rio conference on the environment.⁷⁶ By contrast, the second peak in 1997 was driven mainly by

political developments, namely the international negotiations over the Kyoto Protocol, rather than scientific discoveries. In any case, in the 1990s the federal government was the focus of climate policy, not the states, as Congress put attention on climate change as part of air pollution and energy legislation, and the executive branch participated in the Rio conference and Kyoto negotiations.

A third peak in public attention, in 2001, was driven by President George W. Bush's rejection of the Kyoto Protocol that year, his retreat from his initial support for mandatory greenhouse gas regulation, and the critical response to those moves by foreign and state governments, as well as by climate policy advocates.⁷⁷ Bush's clear signal of federal inaction was a kind of policy feedback. It indicated that the problem of global warming would only get more severe in the coming years, which created a sense of urgency and increased the expected scope for state-level policy making, leading many states to undertake climate-policy initiatives.⁷⁸

Finally, public attention to climate change began rising in 2006 and reached a large peak during 2007-2009. This rise in attention was due to a combination of focusing events – damaging Atlantic hurricanes in 2005 (Wilma, Rita, and Katrina) – and political responses that were partly related to them. These responses included campaigns by environmental organizations, which began to embrace the climate change issue at this time, and rapid shifts in business and media positions toward accepting rather than denying mainstream climate science.⁷⁹

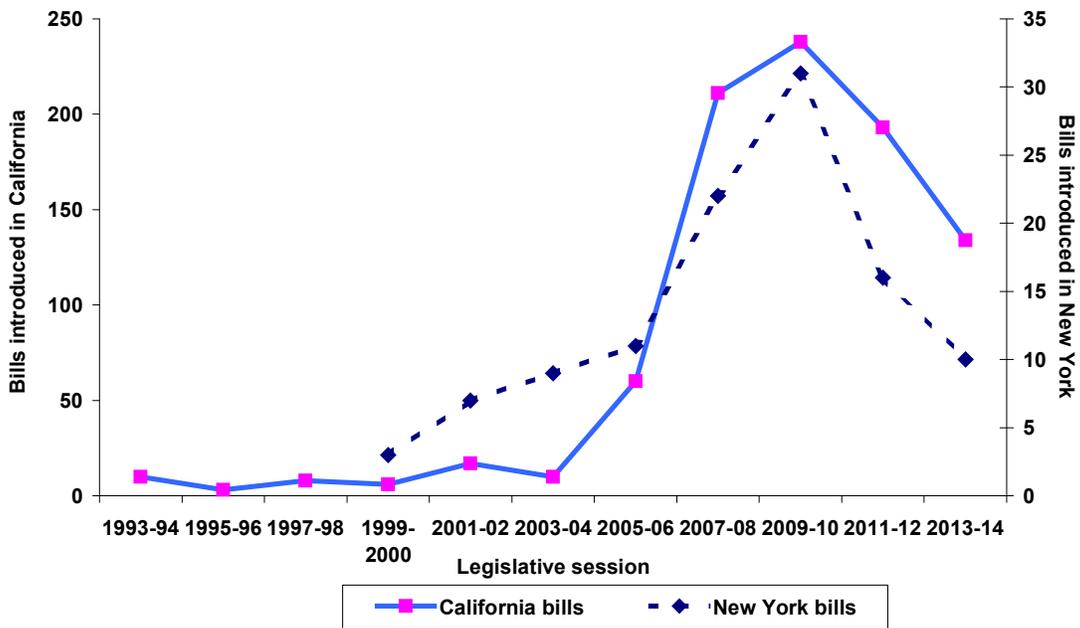
In sum, the climate change issue's peaks on the public agenda since the late 1980s were driven by a combination of changes in scientific knowledge, focusing events, feedback from the federal government's retreat from climate policy, and efforts by political actors to make climate change more salient to the public.

The peaks in public attention during 2001 and 2007-2009 can help to explain the increase in

attention to the issue by elected officials in both states, as shown in the next two figures. Figure 2 shows that the California state legislature increased its attention to global warming and climate change to a small degree in its 2000-2001 session, and then to a much greater degree in its 2005-2006 and later sessions.⁸⁰ Similarly, in New York, notable increases in legislators' attention to climate change occurred in 2001-2002 and in 2007-2008 and later. These increases showed more inertia than the increases in public attention, a pattern that other researchers have also identified.⁸¹

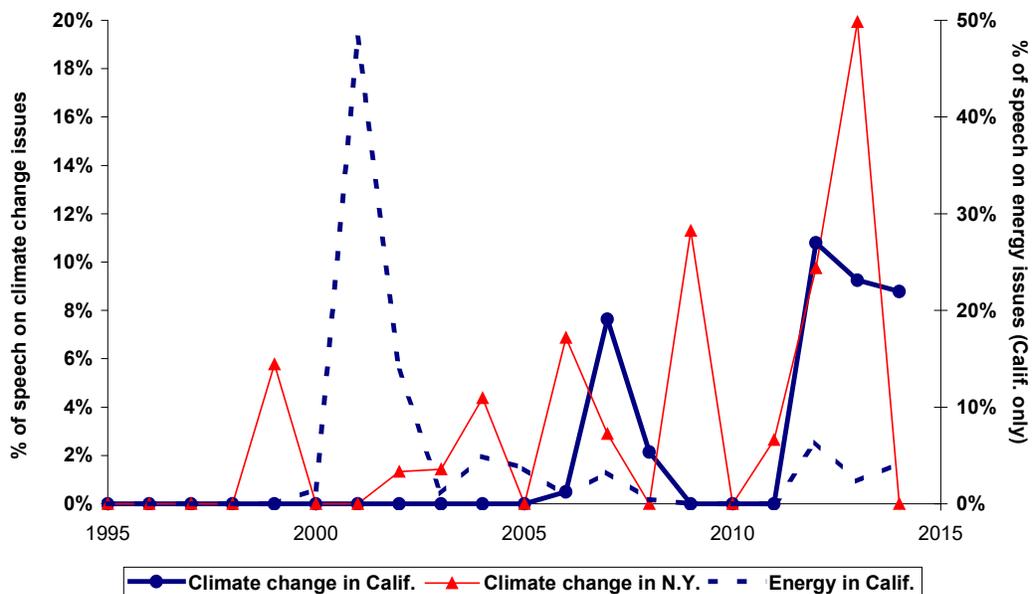
Figure 3 shows that these states' governors' attention to climate change also increased, though less predictably, in their annual State of the State addresses.⁸² California's governors put attention on the climate change issue in 2007 (Arnold Schwarzenegger) and in the 2012-2014 period (Jerry Brown); in addition, there was a large spike in attention to energy problems in 2001 under Gray Davis. In New York State, governors increased their attention to climate change, in fits and starts, after 2003. The relatively poor correspondence between Figure 3 and the peaks in the other figures may mean that governors' State of the State speeches are not adequate for measuring governors' attention to particular issues. For example, Schwarzenegger gave much attention to climate change in several major speeches in 2005-2006, but not in his State of the State addresses in those years.⁸³

FIGURE2
Legislative Agenda in California (1993-2014) and New York (1999-2014): Climate Change Bills



Sources: see note 80.

FIGURE 3
Governor's Agenda in California and New York: Climate Change and Energy Issues in State of the State Speeches, 1995-2014



Sources: see note 82.

These data on public and elite decision-making agendas generally support the policy windows theory. Driven in large part by external focusing events and policy feedback, public and elite attention to climate change clustered in two periods (2001 and 2007-2009) that roughly correspond to the episodes in which major climate policies were adopted in California and New York. In the case studies that follow, I will discuss how these and other, state-specific problem events also helped to raise awareness of the climate change problem in California and New York.

POLICY WINDOWS IN CALIFORNIA

Motor Vehicle Emissions and Renewable Energy Policy in 2002

In the early 2000s, the problem and political streams converged in California and made it possible for climate policy advocates to gain the passage of two pieces of major legislation in 2002: the adoption of a new policy on CO₂ emissions from motor vehicles (the Pavley bill, AB 1493); and an ambitious renewable portfolio standard. In addition to the Bush administration's retreat from the Kyoto Protocol, two sets of events specific to the state raised public awareness of energy and global warming problems in California at this time. First, the state experienced a major electricity crisis in 2000-2001, which resulted from partial deregulation and market manipulations by energy traders and which led to high prices and blackouts.⁸⁴ The dramatic electricity shortages had many political consequences, including increased public and elite interest in the reliability of the state's energy supply, which paved the way for the adoption of a renewable portfolio standard that was justified in terms of energy security and diversification.⁸⁵ Since natural gas prices had also spiked during the electricity crisis, policy makers sought to curb rather than increase natural gas consumption, and hence turned to renewable energy rather than the construction of new gas-fired power plants.

Second, the Union of Concerned Scientists had issued a report on the effects of global warming on California's ecosystems in 1999. Written by eleven top scientists, the report was widely distributed to state agencies and played a large role in educating policy makers about climate change.⁸⁶

At the same time, three political developments increased political commitment to act to reduce the state's greenhouse gas emissions. The first was the leadership of a new Assembly member, Fran Pavley. She held hearings on AB 1493 throughout the state in order to counter charges by oil companies, car dealerships, and the California Chamber of Commerce about the bill's economic impacts. These hearings were successful in winning over public opinion.⁸⁷ Second, environmental organizations mobilized strongly in support of AB 1493 and the renewable portfolio standard bill. These included the Union of Concerned Scientists, the Bluewater Network (which wrote the Pavley bill), the Sierra Club, and Vote Solar.⁸⁸

Third, the proponents of both bills successfully framed them in terms of their co-benefits and downplayed their economic costs. Although the Pavley bill was aimed at global warming, the justifications for it included major emphases on air pollution and health. By contrast, the renewable portfolio standard bill was justified mainly on the basis of energy security, with global warming only an afterthought that was not even mentioned in the bill.⁸⁹ Moreover, the Pavley bill required cost-effective emissions reductions; that is, increases in new car prices borne by consumers were to be paid for with savings in gasoline costs.⁹⁰ Also, both bills called for delayed or gradual implementation, which pushed most costs off to later years.

This framing strategy was effective, given public opinion at this time. Although climate change was not a salient issue among the public, and newspaper editorials ignored or opposed action on climate change, the public was very concerned about air pollution and electricity supply.⁹¹

Hence, the advocates' efforts to frame the bills in terms of those co-benefits succeeded in gaining public and hence political support for the bills. A poll by the Public Policy Institute of California in June 2002 showed massive (80 to 85 percent) public support for both bills when they were pending in the legislature, including over 80 percent of Republicans and over 75 percent of sport utility vehicle owners.⁹² The release of that survey prompted the initially hesitant Governor Davis to sign the Pavley bill.⁹³

Climate Policy to Cut Statewide Greenhouse Gas Emissions in 2006-2008

The next episode of major climate policy adoption in California began four years later, when the AB 32, a low-carbon fuel standard, and a transportation planning law were adopted. These measures set greenhouse gas emissions reduction targets and providing for implementation through a wide range of regulatory measures, including a cap-and-trade program. These dramatic policy changes were made possible by the confluence of several developments in the problem and political streams. Public awareness of climate change in California was spurred by national events – the hurricanes, advocacy campaigns, and business and media shifts noted in the section on agendas – but also by two sets of problem events specific to the state. First, natural disasters in California during this period were linked to climate change. Major droughts in the Central Valley during the 2002-2003 and 2007-2009 periods triggered states of emergency, and concerns about drinking water supplies arose due to reduced snowfall. Wildfires began to occur year-round (rather than for the usual two months a year) beginning in 2003, which saw \$2 billion in damage from over four thousand fires.⁹⁴

Second, the publication of major reports by expert bodies drew attention to climate change

as a problem and to solutions that would build in part on existing strengths in the state's policies. The Union of Concerned Scientists published a new report on the impacts of climate change in California, in both scientific and public versions, in 2004. This report was more detailed, with finer-grained quantitative analysis, and had grimmer predictions concerning heat waves and water shortages than the organization's 1999 report had.⁹⁵ The Union of Concerned Scientists succeeded in creating a unified scientific voice on climate change in California, which gained much media attention, shaped the climate debate in the state, and helped build support for the controversial enacting regulations of the Pavley bill, which CARB issued in 2004.⁹⁶ Moreover, a 2005 executive order issued by Schwarzenegger created the California Climate Center, which ran a scenarios exercise involving seventy scientists. It delivered a report on climate policy strategy to the legislature and governor in March 2006, which influenced the passage of AB 32.⁹⁷

At the same time, four developments increased the degree of political commitment for climate policy adoption, and hence helped to create a window of opportunity for advocates. First, Arnold Schwarzenegger, a Republican, was elected governor in October 2003; two years later, he became strongly committed to climate policy, in contrast to his cautious Democratic predecessor, Gray Davis. Schwarzenegger's election was extraordinary; it came about through a recall of Davis, only the second time in U.S. history that a governor has been removed in that way. Moreover, the recall election procedure did not require a primary election, which made it possible for a relatively moderate Republican such as Schwarzenegger to win. In his campaign, Schwarzenegger endorsed enhanced climate policy measures, including an acceleration of the renewable portfolio standard target, but then took little action during his first two years in office.⁹⁸

However, Schwarzenegger's political ambitions ultimately drove him to a stronger position

on climate policy.⁹⁹ With his 2006 re-election campaign pending in a liberal state, Schwarzenegger sought to portray himself as a moderate Republican in contrast to President Bush, and climate policy was an area where he could draw a sharp contrast to the president.¹⁰⁰ But since Republicans in the governor's office and the California Chamber of Commerce resisted stronger climate policy, Schwarzenegger did not call for emissions targets until June 2005, when he issued an executive order that did so.

Second, advocacy campaigns by environmentalists and a rapidly growing acceptance of climate change by news media in the mid-2000s helped to shift public opinion across the United States, perhaps especially in California, which has a concentration of environmental organization members that is almost double the national average.¹⁰¹ Although some national environmental organizations had been active on global warming since the 1990s, others joined them in the early or mid-2000s, and private foundations more than doubled their annual spending on climate and energy issues to \$120 million in 2006.¹⁰² In addition, major news media, including the *San Francisco Chronicle*, shifted sharply away from climate change denial during 2004-2006.¹⁰³ Al Gore's *An Inconvenient Truth* documentary, which was released in May 2006 and became a box-office hit and a media sensation, had an especially strong impact on California officials. In one study, almost every policymaker interviewed in the state mentioned the influence of the film on public opinion and elected officials.¹⁰⁴

As a result, public opinion in the United States shifted toward greater interest in climate change, combined with high levels of support for specific policies.¹⁰⁵ In California, energy (at 12 percent) and global warming (8 percent) became the second and third "most important environmental issue[s]" named by respondents to open-ended questions in 2006, up from only 3

percent and 1 percent, respectively, in 2003.¹⁰⁶ The targets in Schwarzenegger's 2005 executive order (no growth in emissions from 1990 to 2020, an 80 percent decline by 2050) were supported by a massive 65 to 19 percent margin in a poll the next year, while the Pavley law was supported by an even larger 78 to 16 percent margin.¹⁰⁷

Third, partly in response to public opinion, the Democrats in the state legislature, led again by Fran Pavley, competed for votes by introducing AB 32, which embodied stronger climate policies than Schwarzenegger initially had favored. Ultimately the two sides compromised to pass the bill, with the Democrats getting CARB rather than the California Environmental Protection Agency as the implementing agency and Schwarzenegger getting authority for the governor to delay implementation if there were a "threat of significant economic harm." Emissions trading (favored by Schwarzenegger) was included, but only as one option for CARB to consider.¹⁰⁸

Fourth, a very large and broad advocacy coalition for climate policy developed in California by the mid-2000s, encompassing environmentalists, certain business sectors, labor unions, newspapers, health advocacy organizations, and local governments.¹⁰⁹ In a state with strong environmental organizations and large high-technology and venture-capital sectors, the Natural Resources Defense Council formed an important partnership with Silicon Valley businesses, called Environmental Entrepreneurs, which lobbied for the Pavley bill and AB 32. The firms liked the bills' implications for renewable energy technology and electric vehicles, and argued that AB 32 would "stimulate innovation, efficiency, and economic benefits."¹¹⁰ In addition, the Sierra Club initiated a broad "blue-green alliance" with labor unions in 2006, calling for 1.6 million jobs in renewable energy, and engaged in the 2006 gubernatorial election.¹¹¹ When Schwarzenegger and the legislature became deadlocked on AB 32, the *Sacramento Bee* and the *Los Angeles Times*

pressed for passage.¹¹² The advocacy coalition was strong enough to overcome the opposition to AB 32 by much of business, including the state Chamber of Commerce and the Western States Petroleum Association, and later to defeat a 2010 campaign sponsored by oil refineries to overturn the law by referendum.¹¹³

POLICY WINDOWS IN NEW YORK

2002-2003: Pataki, Kyoto, Bush, and 9/11

New York State's first burst of explicit climate policy adoption occurred because problem events and political developments came together beginning in 2001 to create both a sense of urgency about climate change and the political commitment to address it with climate and energy policies. Although the problem events affected many states, in New York they led to major policy changes because they coincided with Governor Pataki's increasingly strong interest in environmental protection and the development of a broad advocacy coalition of businesses and environmental groups.

The first problem event was President Bush's rejection, in March 2001, of U.S. participation in the Kyoto Protocol. In June, three months after Bush's announcement, Pataki made his own: he issued an executive order requiring a 35 percent cut in energy use by state buildings and the creation of a state Greenhouse Gas Task Force, which he charged with finding ways to reduce carbon dioxide emissions and global warming.¹¹⁴ The task force's recommendations led to the adoption of emissions targets and the initiation of RGGI during the next two years.

Second, the Bush administration's energy policy, announced in May 2001, and al-Qaeda's attacks on New York and Washington, D.C. on 11 September 2001 increased the salience of energy

policy for national policymakers and the public during 2001-2002. The Bush administration's energy policy downplayed renewable energy and sought to increase U.S. fossil fuel supplies by increasing oil and natural gas extraction and by building more pipelines. Pataki responded by taking a different tack in his State of the State speech in January 2002, one intended to address both energy security and climate change. He called for New York to develop renewable energy in order to improve the environment and "reduce our dependence on imported foreign energy," as well as create jobs, diversify energy supplies, and increase security.¹¹⁵

This rising attention to the problem of climate change took place at a time when political developments in New York State also favored action in this area. First, George Pataki, who was personally interested in environmental protection and had a strong environmental record in previous elected offices, had been re-elected governor in 1998.¹¹⁶ Pataki's environmental appointees also shared his orientation, including John Cahill, his closest aide, who was the Environmental Commissioner from 1997 to 2001 and Pataki's chief of staff from 2001 to 2007.¹¹⁷

Despite his environmental interests, Pataki's record on environmental issues had been at best mixed during the first half of his twelve years as governor. Similar to Schwarzenegger, Pataki had aides who were divided between pro-environmental and anti-regulation camps, the latter influenced by his political patron, Alphonse D'Amato.¹¹⁸ However, Pataki's desire to be re-elected governor and later to run for president led him increasingly to emphasize environmental issues. As a Republican governor pressing the legislature for spending cuts and tax cuts in a liberal state, Pataki faced declining approval ratings. In 1996, he found that he could reverse the decline through environmental initiatives, starting with a \$1.5 billion environmental bond referendum that was carefully crafted to appeal to a very wide range of interests through spending on sewer projects,

landfills, and toxic waste cleanups throughout the state.¹¹⁹

After his re-election in 1998 by a 21 percent margin, Pataki was still a Republican governor seeking spending cuts in a liberal state and needing to shore up his support. Moreover, the Democrat Eliot Spitzer had been elected attorney general that year. Spitzer was a former prosecutor and consumer rights lawyer, and Spitzer immediately began vigorous action against a variety of polluters and became seen as a likely candidate for governor. Hence, Pataki found that he had to compete with Spitzer for the support of environmentalists.¹²⁰

Therefore, partly because of this competitive pressure, after the climate change issue rose in the late 1990s and Bush turned his back on the Kyoto Protocol, Pataki seized on the issue to bolster his reputation and environmental credentials with voters in New York. In January 2002, he announced the renewable portfolio standard goals, and then pushed for their adoption by the Public Service Commission and worked with regulators to ease siting constraints.¹²¹ Sometime after his 2002 re-election, Pataki set his sights on the White House, which may help to explain why he announced the RGGI initiative in 2003 and, over the next two years, followed through to help create a ten-state regional initiative.

The second source of political commitment to climate policy was the development of a strong coalition of climate policy advocates, who came together in the early 2000s for several reasons. In 1996, electricity industry restructuring in New York State led to altered incentives for politicians and utilities. Utilities were forced to sell off their generating facilities and to purchase power from independent power producers. With rate increases now largely determined by market forces operating on wholesale electricity prices, elected officials paradoxically became more willing to take action that would increase rates, as RGGI was expected to do. The utility side became

divided between energy producers, who would be required to buy emissions allowances under RGGI, and wires-only utility companies, which supported the auctioning of allowances, since the revenue would help fund their existing energy efficiency programs.¹²²

Moreover, environmental and consumer advocates joined with business associations to support climate policy in the early 2000s. Environmental groups (the Natural Resources Defense Council and the Pace Law School Energy Project) began working with wind power interests in the Renewable Energy Technology and Environment Coalition to promote the renewable portfolio standard, beginning in 2003. The main conflict between advocates and opponents concerned the renewable portfolio standard, in which the advocacy coalition faced an opposing coalition of industrial companies (Multiple Intervenors), which argued that the standard would increase costs and reduce system reliability.¹²³ The advocates prevailed in the Public Service Commission in September 2004, after sixteen months of hearings involving over one hundred parties.¹²⁴

Governor Pataki facilitated the formation of this advocacy coalition through stakeholder consultation processes that his administration initiated. In June 1996, Pataki convened a key meeting of the state's leading environmental organizations, including the Environmental Defense Fund, to get their support for the bond act, and within a week had also gained that of business and labor organizations.¹²⁵ Pataki also conducted broad stakeholder consultations for a 1997 agreement to protect New York City's upstate watershed, in a 1998 task force on Superfund sites, and for the renewable portfolio standard and RGGI.¹²⁶ Pataki's Greenhouse Gas Task Force included four members from industry, five from environmental organizations, and six from state government, and the members of the renewable energy coalition overlapped with that group.¹²⁷

2007-2010: Democratic Governors and New National Opportunities

The next episode of climate policy adoption in New York included the adoption of new energy efficiency initiatives and an energy efficiency portfolio standard, as well as a tightening of the renewable portfolio standard. These policy changes, which markedly accelerated the state's climate policy, were driven by events in the problem stream, which put attention on the climate change issue nationally and in New York, and by a political shift toward the Democratic Party, which put people into office who appeared to be more strongly committed to policy change than Pataki had been. Problem awareness was heightened by the national problem events of the mid-2000s, described in the section on agenda changes: the intense Atlantic hurricane season of 2005, the business and media shift toward accepting climate science and supporting climate policy, and advocacy campaigns by environmental organizations.

At the same time that the problem stream was highlighting climate change, Democrats took control of the New York State and federal governments. Nationally, Democrats after 2008 pursued climate policy through the 2009 federal stimulus bill (which provided major funding for renewable energy), attempts to pass cap-and-trade legislation, and EPA actions to regulate greenhouse gas emissions in transportation and power generation. In New York State, a series of Democrats who were committed to climate policy became governor, beginning with Eliot Spitzer, who won the 2006 governor's election by a massive 69 to 29 percent margin. Spitzer had a strong record on environmental protection and corporate regulation in his eight years as attorney general, including as the lead plaintiff in a ten-state federal lawsuit against the EPA for failing to regulate CO₂.¹²⁸ Three months after taking office, Spitzer announced ambitious initiatives to cut energy consumption by 2015, including appliance standards, building standards, conservation in state

buildings, and an energy-efficiency target, and his first budget proposal included a new climate change office and an increase in environmental agency staff.¹²⁹ Spitzer also raised the renewable energy target in the state's renewable portfolio standard to 30 percent by 2015.¹³⁰

When Spitzer resigned due to a sex scandal in March 2008, the lieutenant governor, David Paterson, who was a veteran, liberal Democratic assemblyman, succeeded him and continued Spitzer's climate policy course during his three years in office. In his first State of the State speech, Paterson repeated Spitzer's calls for 15 percent in savings through energy efficiency and a 30 percent target for the renewable portfolio standard, and also called for the development of plug-in hybrid vehicle industry in the state and the creation of an energy policy institute.¹³¹ Under Paterson, the state government also adopted an energy efficiency portfolio standard to implement the goal of a 15 percent reduction by 2015, set a long-term 80 percent reduction goal for greenhouse gas emissions, tightened state building codes, and commissioned a 2010 climate action plan.¹³²

CONCLUSIONS

In sum, the California and New York cases provide more support for the windows of opportunity approach than for the main structural theories; there is some scope for actors to make a difference, despite the structural constraints. This is evident in explaining both why these two states have strong climate policies and why California's are stronger than New York's. The main structural barriers advanced in the literature, including fragmented government authority, a pluralist interest group system, and (in California) a large fossil-fuel industry did not prevent the adoption of relatively strong climate policies in these states. In fact, the separation of powers appears to have facilitated climate policy making indirectly, by creating multiple pathways for state-level advocates

(through the legislature *or* the governor) and by laying the institutional groundwork for competition between actors seeking public support on a popular issue (e.g., Schwarzenegger vs. Pavley, Pataki vs. Attorney General Spitzer). Klyza and Sousa argue that the separation of powers has these effects in many areas of national environmental policy making.¹³³ It also did so in national climate policy, where, facing the intransigence of the Bush administration and congressional gridlock, advocates turned to state governments and the federal courts. This led to the Supreme Court's *Massachusetts v. EPA* decision, which made it possible for the Obama administration to pursue greenhouse gas regulation through the EPA, without new congressional legislation.¹³⁴

Nonetheless, structures do affect what political actors can achieve. Some structural features were underlying causes of policy adoption in California and New York, as I have described in more detail elsewhere.¹³⁵ Both states have relatively well-educated, liberal populations and high memberships in environmental organizations per capita. Moreover, both had severe air pollution problems in the 1960s, and by the 1970s they had created large agencies to regulate air pollution and energy, which played key roles in climate policy adoption and implementation in the 2000s; hence, there is a degree of path dependence in their climate policy making.¹³⁶ In particular, CARB's large, science-based administrative capacities and its independence from the legislature have helped it to implement the most far-reaching climate policies in the country.¹³⁷

In addition, the federal Clean Air Act has made it possible for California to take a leading role in some important areas of climate policy. Since 1967, federal law has given California the right to apply for exemptions from federal motor vehicle air pollution standards in order to adopt its own stricter standards, and since 1977 it has given other states the right to adopt California's rules if they choose. These legal rights formed the basis for California's leading role in promoting electric

and hybrid vehicles and in regulating greenhouse gas emissions from motor vehicles.¹³⁸

For its part, the windows of opportunity theory generally is well supported by the case studies of climate policy adoption in California and New York. The evidence offered in this article includes the quantitative measures of changes in public and elite agendas, the identification of problem and political events that plausibly drive those changes, and, in the narrative sections, the mechanisms that link those events to each of the four episodes of policy adoption. In each of those episodes, the convergence of problem events and political events – by enhancing awareness of the problem of climate change and political commitment to adopt mitigation policies – created relatively brief periods of openness that could lead to major policy change. In California, the electricity crisis of 2000-2001, drought and wildfires, scientific reports, Pavley's leadership, mobilization by environmental organizations, Schwarzenegger's election, and his strategic shift toward the climate issue came together to produce major policies in two different episodes. In New York State's two policy adoption episodes, the convergences involved Pataki's election and his turn toward environmental issues, mobilization by a broad coalition of climate-policy advocates, and the election of Spitzer to the governorship in 2006, at a time of peak public interest in climate change. In both states, the Kyoto process and Bush's rejection of the Kyoto Protocol were important in raising attention to the issue. Also, in both states, the shift by the mass media and parts of business toward support for climate policy created a more favorable political context for climate policy, as did the increasing capacity and activity on this issue by specialized state agencies that had been created by the 1970s: CARB, the California Energy Commission, the California Public Utility Commission, and NYSERDA.

Generally, problems, politics, and solutions came together to create windows of opportunity

that were used by legislators such as Pavley, by governors (such as Schwarzenegger, Pataki, and Spitzer), and by others in the governors' administrations to advance key policies at the four critical junctures analyzed in the case studies. However, the policy adoption episodes are longer than one might expect from Kingdon's theory. This may be due in part to the persistence, in the climate change issue area, of high levels of public attention, elite attention, and political commitment by elected officials, especially in the period beginning in 2006 (See Figures 1-2 above).

Political and problem events also can help to explain why New York's climate policies have been weaker than California's, especially in the areas of enforceable targets, emissions trading, and low-carbon fuel standards. First, Pataki was not spurred by competition from a legislature that was active on the issue. He did have competition from the New York attorney general, but in that role Spitzer could not pass his own proposals on state buildings, the renewable portfolio standard, or RGGI; he could not force Pataki to negotiate over climate policy, as the Democrats in the California legislature did with Schwarzenegger. With the 1996 environmental bond referendum, Pataki effectively circumvented the legislature, and he continued to do so with his climate policy initiatives. But there are legal and political limits to what the governor can do on his own, even in New York State; legally binding targets and a comprehensive emissions trading system such as those adopted in California probably would require legislative approval. The executive branch strategy chosen by Pataki resulted in less conflict over climate policy than in California, but ultimately perhaps in less public and legislative support and certainly in a weaker policy overall.

Schwarzenegger, on the other hand, was unable to overcome or evade the legislature in his first years in office, although he tried. After losing on four major ballot measures that he had proposed in 2005, Schwarzenegger then shifted strategy toward working with the legislature on

climate policy. If Schwarzenegger had chosen to implement his climate policy through executive orders and actions by CARB and the California Environmental Protection Agency rather than through legislation, California's policy would probably resemble New York's, without enforceable targets or an economy-wide cap-and-trade system.

Second, New York's problems related to climate and energy policy were smaller and the perception of them in the early 2000s were less intense and urgent than were California's. There was no major electricity crisis in the wake of deregulation in New York, and no major report on climate change impacts in New York State until 2011, twelve years after the first report by the Union of Concerned Scientists in California. Other relevant problem events were about equally large, but different in the two states: California had droughts, wildfires, and a large, environmentally vulnerable agricultural sector, while New York had an electricity blackout of a major urban area in 2003 and the unique event of the 9/11 attacks. Moreover, the weakness of legislative involvement made the impacts of focusing events less important in New York, because the causal path from public attention on such events to policy adoption was also less important there than in California.

However, climate policy adoption is not simply a story of political responses to the emergence of concentrated costs in the form of climate change impacts such as drought or storms, due ultimately to the size of ecological vulnerabilities. Growing scientific knowledge and certain kinds of weather events may highlight the threats of climate change, but for attention and concern to translate into policies designed to mitigate climate change, appropriate framing and political commitment is also required – partly because the costs of climate change are probabilistic, uncertain, temporally distant, and controversial. Hence, the strong Atlantic hurricanes of 2005

sparked climate policy efforts in the Northeast and on the West Coast, rather than in the Gulf Coast states that have the largest hurricane risks and were most affected by those storms. On the other hand, windows for climate policy could be created by problem events, such as the California electricity crisis or the 9/11 attacks in New York, that were not directly related to climate change but could be used by committed actors to justify climate policy.

This analysis of the California and New York cases suggests that some revisions to theories of climate policy are needed. Strong climate policy does not require one particular set of institutional and economic factors. Strengths in political processes sometimes can overcome the structural barriers found in the United States, and political actors at times have significant room to maneuver. Unified governmental authority is not necessary if specialized administrative agencies have been created, election results put committed leadership into positions of power, and societal coalitions become broad enough. Corporatism and strong ecological parties are not necessary if the pluralist interest group system comes to have a strong environmental component. Indeed, the fragmentation of authority in the United States sometimes gives climate policy proponents additional opportunities, such as when blockage by the Bush administration at the federal level led to state-level policy adoption or when the California legislature and governor competed to press for a stronger climate policy there.

At the same time, the policy windows theory overstates the independence of problem events and political events in the climate policy domain.¹³⁹ Political events and actors strongly influenced problem perception in the cases analyzed here. For example, in California in the early 2000s, influential scientific reports on climate change impacts were produced by a political actor, the Union of Concerned Scientists. Also, the sharp and sustained rise of the global warming issue on

public and political agendas in both states after 2005 owes more to political mobilization by environmentalists and to shifts in position by business corporations and the news media than to changes in the objective problem or in scientists' understanding of it. Thus, politics potentially permeates the problem stream, rather than the problem stream being an objective, separate set of events. This is good news for climate policy advocates. They can help to create their own opportunities, by trying to affect both problem perception and political commitment, rather than needing to wait for extraordinary problem events to occur.

NOTES

1. Judith Layzer, *The Environmental Case*, 3rd ed. (Washington, DC: CQ Press, 2012), 270-307; Lamont Hempel, "Climate Policy on the Installment Plan," in Norman Vig and Michael Kraft, eds., *Environmental Policy*, 6th ed. (Washington, DC: CQ Press, 2006), 288-310; Paul Brewer and Andrew Pease, "Federal Climate Politics in the United States," in Hugh Compston and Ian Bailey, eds., *Turning Down the Heat* (New York: Palgrave Macmillan, 2008), 85-103; Kathryn Harrison, "The Road Not Taken," *Global Environmental Politics* 7 (November 2007): 92-117.
2. United Nations Framework Convention on Climate Change, "National Greenhouse Gas Inventory Data for the Period 1990-2010," 16 November 2012, accessed at <http://unfccc.int/resource/docs/2012/sbi/eng/31.pdf>, 3 January 2013, 14; excluding land use and forestry changes.
3. Barry Rabe, *Statehouse and Greenhouse* (Washington, DC: Brookings Institution Press, 2004); Center for Climate and Energy Solutions, "Climate Change 101: State Action," January 2011, accessed at <http://www.c2es.org/docUploads/climate101-fullbook.pdf>, 28 July 2012.
4. Barry Rabe, "States on Steroids," *Review of Policy Research* 25 (2008): 105-128.
5. Michael Hanemann, "How California Came to Pass AB 32, the Global Warming Solutions Act of 2006," Department of Agricultural and Resource Economics, University of California, Berkeley, March 2007, accessed at <http://escholarship.org/uc/item/1vb0j4d6>, 23 April 2012, 3; Barry Rabe, "Governing the Climate from Sacramento," in Stephen Goldsmith and Donald Kettl, eds., *Unlocking the Power of Networks* (Washington, DC: Brookings Institution Press, 2009), 34-61.
6. Roger Karapin, *Political Opportunities for Climate Policy: California, New York, and the Federal Government* (New York: Cambridge University Press, 2016).
7. Cf. Timothy Hellwig, *Globalization and Mass Politics: Retaining the Room to Maneuver* (New York: Cambridge University Press, 2014).
8. Cf. Charles Tilly, *Big Structures, Large Processes, Huge Comparisons* (New York: Russell Sage, 1984), chaps. 6-7.
9. Exceptions on climate policy include Kathryn Harrison and Lisa Sundstrom, "Introduction," *Global Environmental Politics* 7 (November 2007): 1-18; Rober Falkner, *Business Power and Conflict in International Environmental Politics* (New York: Palgrave Macmillan, 2008); Brewer and Pease, "Federal Climate Politics."
10. Nana Künkel, Klaus Jacob, and Per-Olof Busch, "Climate Policies," unpublished manuscript, Environmental Policy Research Centre, Free University of Berlin, 2006, 18-19; Harrison and Sundstrom, "Introduction," 9-10; Jeffrey Lantis, "The Life and Death of International Treaties," *International Politics* 43 (2006): 24-52; John Busby and Alexander Ochs, "From Mars and Venus Down to Earth," in David Michel, ed., *Climate Policy for the 21st Century* (Washington, DC: Johns Hopkins University Press, 2004), 35-76, at 51; Nivas Dolsak, "Mitigating Global Climate Change," *Policy Studies Journal* 29 (2001): 414-36, at 424. U.S. literature making this point includes Walter Rosenbaum, *Environmental Politics and Policy*, 9th ed. (Washington, DC: CQ Press, 2014), 90-97, 112-116; Layzer, *Environmental Case*, 556-557; Barry Rabe, "Introduction," in Rabe, ed., *Greenhouse Governance* (Washington, DC: Brookings Institution, 2010), 18-19; Barry Rabe, "Can Congress Govern the Climate?" in Rabe, ed.,

Greenhouse Governance (Washington, DC: Brookings Institution, 2010), 260–85, at 266-275, 282-283.

11. Miranda Schreurs, *Environmental Politics in Japan, Germany, and the United States* (New York: Cambridge University Press, 2002), 242-243; Künkel, Jacob, and Busch, “Climate Policies”; Henrik Selin and Stacy VanDeveer, “Federalism, Multilevel Governance, and Climate Change Politics Across the Atlantic,” in Paul Steinberg and VanDeveer, eds., *Comparative Environmental Politics* (Cambridge, MA: MIT Press, 2012), 341-368, at 346.

12. Detlef Jahn, “The Politics of Climate Change,” paper prepared for the ECPR Joint Sessions of Workshops, 11-16 April 2008, Rennes, France.

13. Mathew Paterson, *Global Warming and Global Politics* (New York: Routledge, 1996), 81-82; Schreurs, *Environmental Politics*, 256. On the United States, see Evan Ringquist, *Environmental Protection at the State Level* (Armonk, NY: M.E. Sharpe, 1993); Daniel Matisoff, “The Adoption of State Climate Change Policies and Renewable Portfolio Standards,” *Review of Policy Research* 25 (2008): 527-545, at 538-540; Martha Derthick, “Compensatory Federalism,” in Barry Rabe, ed., *Greenhouse Governance* (Washington, DC: Brookings Institution, 2010), 58-72; Vivian Thomson, *Sophisticated Interdependence in Climate Policy* (London: Anthem Press, 2014), 38-39; Luke Fowler and Joseph Breen, “The Impact of Political Factors on States' Adoption of Renewable Portfolio Standards,” *Electricity Journal* 26 (March 2013): 79-94, at 86.

14. Paterson, *Global Warming*, 77-82; Dolsak, “Mitigating,” 424. On the United States, see Ringquist, *Environmental Protection*; John Byrne et al., “American Policy Conflict in the Greenhouse,” *Energy Policy* 35 (2007): 4555-4573, at 4566; Karen Griffin, “State Government Conservation Programs,” in John Sawhill and Richard Cotton, eds., *Energy Conservation* (Washington, DC: Brookings Institution, 1985), 205-236, at 215-216.

15. For example, see E. Donald Elliott, “Why the United States Does Not Have a Renewable Energy Policy,” *Environmental Law Reporter* 43 (2013):10095–10101; Sarina Keller, “Sources of Difference,” *Energy Policy* 38 (2010): 4741-4742.

16. Karapin, *Political Opportunities*, chap. 9.

17. Rabe, “States,” 107; Barry Rabe and Philip Mundo, “Business Influence in State-Level Environmental Policy,” in Michael Kraft and Sheldon Kamieniecki, eds., *Business and Environmental Policy* (Cambridge, MA.: MIT Press, 2007), 265-297, at 280; Amanda Rosen, *Emission Impossible?*, Ph.D. dissertation, Department of Political Science, Ohio State University, 2009, 173.

18. Allison Chatrchyan and Pamela Doughman, “Climate Policy in the USA,” in Hugh Compston and Ian Bailey, eds., *Turning down the Heat* (New York: Palgrave, 2008), 241-262, at 253; Rabe and Mundo, “Business Influence,” 273-274; Rabe, “States,” 107; Amanda Rosen, “Climate Change Policymaking in the United States,” paper presented at the European Consortium for Political Research conference, Barcelona, Spain, 25-27 August 2008, 12-14.

19. Peter Koehn, “Underneath Kyoto,” *Global Environmental Politics* 8 (2008): 53-77; Barry Rabe, “Contested Federalism and American Climate Policy,” *Publius* 41 (2011): 494-521, at 501-504; Matisoff, “Adoption,” 539, 543.

20. Kingdon, John, *Agendas, Alternatives, and Public Policies*, second ed. (New York: Longman, 2003); Nikolaos Zahariadis, “The Multiple Streams Framework,” in Paul Sabatier, ed., *Theories of the Policy Process*, 2nd ed. (Boulder, CO: Westview Press, 2007), 65-92.

21. Frank Baumgartner, and Bryan D. Jones, *Agendas and Instabilities in American Politics* (Chicago: University of Chicago Press, 1993).
22. Kingdon, *Agendas*, 15-18, 203.
23. Rabe, *Statehouse*.
24. Kingdon, *Agendas*, 197-98.
25. Kingdon, *Agendas*, 198.
26. Kingdon, *Agendas*, 210-221; Zahariadis, "Multiple Streams," 65; Layzer, *Environmental Case*, 16-17.
27. Paul Sabatier, "An Advocacy Coalition Framework of Policy Change and the Role of Policy-Oriented Learning Therein," *Policy Sciences* 21 (1988): 129-168; Paul Sabatier and Christopher Weible, "The Advocacy Coalition Framework," in Sabatier, ed., *Theories of the Policy Process*, 2nd ed. (Boulder, CO: Westview Press, 2007), 189-220. Advocacy coalition theory also emphasizes belief systems and long-term changes in ideas, which are not analyzed here.
28. Martin Jänicke, "Trend Setters in Environmental Policy," *European Environment* 15 (2005): 129-142, at 138; Gesine Jost and Klaus Jacob, "The Climate Change Policy Network in Germany," *European Environment* 14 (2004): 1-15; Rie Watanabe, "A Comparative Analysis on Climate Policy Change Processes between Germany and Japan," Ph.D. dissertation, Free University of Berlin, 2009.
29. Alexander George and Andrew Bennett, *Case Studies and Theory Development in the Social Sciences* (Cambridge, MA: MIT Press, 2005), chap. 10.
30. Center for Climate and Energy Solutions data for 2008-14.
31. Rabe, "Governing," 37. Other work that recognizes that California's climate policies are advanced relative to other states includes Ann Carlson, "Regulatory Capacity and State Environmental Leadership," *Fordham Environmental Law Review* 24 (2013): 63-86, at 63; Vivian Thomson and Vicky Arroyo, "Upside-Down Cooperative Federalism," *Virginia Environmental Law Journal* 29 (2011): 1-61, at 13-14; Daniel Mazmanian, John Jurewitz, and Hal Nelson, "California's Climate Change Policy," *Journal of Environment and Development* 17 (2008): 401-423, at 401-402; Daniel Mazmanian, Hal Nelson, and John Jurewitz, "Climate Change Policy," in Ethan Rarick, ed., *Governing California*, 3rd. ed. (Berkeley, CA: Institute of Governmental Studies Press, 2013), 405-428, at 407; David Vogel, "Why the Golden State Became Green," paper presented at the Annual Meeting of the American Political Science Association, San Francisco, 3-6 September 2015, 2.
32. Ann Carlson, "Iterative Federalism and Climate Change," *Northwestern University Law Review* 103 (2009): 1097-1161, at 1109-1128; Rosen, *Emission*, 180-83; Mazmanian, Nelson, and Jurewitz, "Climate Change Policy," 2013, 419-420; Karapın, *Political Opportunities*, 8, 27-28.
33. WRI-CAIT data; where data sources are cited, calculations are by the author.
34. Michael Hanemann and Chris Busch, "Climate Change Policy in California," in David Vogel and Johan Swinnen, eds., *Transatlantic Regulatory Cooperation* (Northampton, MA: Edward Elgar, 2011), 125-160, at 127.
35. New York State Energy Research and Development Authority, *2002 State Energy Plan and Final Environmental Impact Statement* (Albany, NY: idem., 2002), 1-42 to 1-44. [note to

copyeditor: the document has page numbers in chapter-number form; the pages cited start at p. 1-42 and end at p. 1-44]

36. Extrapolated on the basis of U.S. Census data for 1990-2015.
37. California Air Resources Board, "ARB Emissions Trading Program Overview," revised January 21, 2011, accessed at http://www.arb.ca.gov/newsrel/2011/cap_trade_overview.pdf, February 7, 2013.
38. Timothy Duane, "Greening the Grid," *Vermont Law Review* 34 (2010): 711-780, at 733; Center for Climate and Energy Solutions, "California Cap-and-Trade Program Summary," January 2013, accessed at www.c2es.org, October 17, 2013, 10; New York State Climate Action Council, *Climate Action Plan Interim Report* (N.p.: idem., 2010), p. 3-10, author's calculations. [note to copyeditor: this is a single page in chapter-number format; it is page "3-10" not pp. 3-10.]
39. Karapin, *Political Opportunities*, 33-34.
40. For California, see California Air Resources Board, *Climate Change: Proposed Scoping Plan*, October 2008, accessed at www.arb.ca.gov, 29 April 2013.
41. Alice Miller, "New York State's Plan for Energy and CO2 Reductions," presentation to the Association of Energy Engineers New York City Chapter, 17 March 2009, accessed at www.aeeny.org, 12 November 2013, 3.
42. Paul Decotis, "Coming of Age in New York," *The Bridge: Linking Engineering and Society* 39 (Summer 2009): 37-43, at 43.
43. California Energy Commission, "History of California's Renewable Energy Programs," updated 26 April 2011, accessed at <http://www.energy.ca.gov/renewables/history.html>, 11 January 2013.
44. Data from dsireusa.org, accessed 7 February 2013; Nina Hall and Ros Taplin, "Environmental Nonprofit Campaigns and State Competition," *Voluntas* 21 (2010): 62-81, at 70.
45. California Energy Commission, "Total System Electric Generation," accessed at http://www.energy.ca.gov/almanac/electricity_data/total_system_power.html, 22 May 2017.
46. Henry Lambright, Sarah Pralle, and Jessica Boscarino, "Governing Energy Innovation: The case of New York State," in Dianne Rahm, ed., *Sustainable Energy and the States* (Jefferson, NC: McFarland and Company, 2006), 26-47, at 32.
47. American Wind Energy Association and NYSERDA data.
48. Sanya Carley and Chris Miller, "Regulatory Stringency and Policy Drivers," *Policy Studies Journal* 40 (2012): 730-756, at 740; Karapin, *Political Opportunities*, 44.
49. Nicholas Lutsey and Daniel Sperling, "America's Bottom-up Climate Change Mitigation Policy," *Energy Policy* 36 (2008): 673-685, at 678; Maples 2013.
50. Brownstein, Ronald, "The California Experiment," *Atlantic* 304 (October 2009): 66-76, at 68.
51. Alexander Farrell and Michael Hanemann, "Field Notes on the Political Economy of California Climate Policy," in Henrik Selin and Stacey VanDeveer, eds., *Changing Climates in North American Politics* (Cambridge, MA: MIT Press, 2009), 87-109, at 87-89; Mazmanian, Jurewitz, and Nelson, "California's Climate Change Policy," 405-406; Anthony Perl and James Dunn, "Reframing Automobile Fuel Economy Policy in North America," *Transport Reviews* 27 (2007): 1-35, at 12-13.

52. New York State Climate Action Council, *Climate Action Plan Interim Report*, November 2010, accessed at <http://www.dec.ny.gov/energy/80930.html>, 16 May 2013, D-1.
53. Larry Gerston and Terry Christensen, *California Politics and Government*, 11th ed. (Boston: Wadsworth, 2012), 106, 103; Brian Janiskee and Ken Masugi, *Democracy in California*, 2nd ed. (Lanham, MD: Rowman and Littlefield, 2008), 83-84.
54. Sally Morehouse and Malcolm Jewell, *State Politics, Parties, and Policy*, 2nd ed. (New York: Rowman and Littlefield, 2003), 174-175.
55. Keith Hamm and Gary Moncrief, "Legislative Politics in the States," in Virginia Gray and Russell Hanson, eds., *Politics in the American States*, 9th ed. (Washington, DC: CQ Press, 2008), 154-191, at 155.
56. Ballotpedia, "New York 2013 Ballot Measures," accessed at https://ballotpedia.org/New_York_2013_ballot_measures, 11 March 2014.
57. Alan Siaroff, "Corporatism in 24 Industrial Democracies," *European Journal of Political Research* 36 (1999): 175-205, at 198; Lyle Scruggs, *Sustaining Abundance* (New York: Cambridge University Press, 2003), 219-228.
58. Gerston and Christensen, *California Politics*, 53-59; Janiskee and Masugi, *Democracy*, 52.
59. Rogan Kersh, "Interest-Group Lobbying in New York State," in Robert Pecorella and Jeffrey Stonecash, eds., *Governing New York State*, 5th ed. (Albany, NY: SUNY Press, 2006), 93-110, at 96; Edward Schneier and John Murtaugh, *New York Politics* (Armonk, NY: M.E. Sharpe, 2001), 248.
60. Clive Thomas and Ronald Hrebendar, "Interest Group Power in the Fifty States," *Comparative State Politics* 20 (1999, 4): 3-16, at 13.
61. Gerston and Christensen, *California Politics*, 56.
62. Rosen, *Emission*, 170.
63. Cal Access data.
64. William Berry et al., "Measuring Citizen and Government Ideology in the U.S. States," *State Politics and Policy Quarterly* 10 (2010): 117-135; updated data provided by Richard Fording, accessed at rcfording.wordpress.com/state-ideology-data, 6 May 2013.
65. Data from Dave Leip's Atlas of U.S. Presidential Elections, accessed at uselectionatlas.org, 25 November 2016.
66. PPIC and Pew Center data in Mark Baldassare et al., *PPIC Statewide Survey: Californians and Their Government* (San Francisco: Public Policy Institute of California, May 1998), 15; Mark Baldassare et al., *PPIC Statewide Survey: Special Survey on Californians and the Environment* (San Francisco: Public Policy Institute of California, June 2000), 14. The question was whether "stricter environmental laws and regulations are worth the cost"; Californians favored this view by 58 to 37 percent, a margin of 21 percentage points, while a 1996 national survey by the Pew Research Center showed the U.S. public favored it by 63 to 30 percent, a margin of 33 percentage points. By contrast, Californians were slightly more favorable to government regulation in general than was the national sample.
67. Rosen, *Emission*, 151-52, 179.
68. Thomas Peterson and Adam Rose, "Reducing Conflicts between Climate Policy and Energy Policy in the US," *Energy Policy* 34 (2006): 619-631, at 628.

69. U.S. Energy Information Administration data.
70. It produced an average of 58 million BTUs/person of fossil fuel energy in 1995-2000. On the other hand, California has very little coal production, and only 20 percent of its electricity generation is from coal; this helps make its electricity generation more diversified than the rest of the U.S.; see Rosen, *Emission*, 2009, 157; Duane, “Greening,” 730.
71. U.S. Energy Information Administration data.
72. U.S. Energy Information Administration and U.S. Census data.
73. However, its total fossil fuel production was 58 million BTUs/person in 2000, ranking 22nd in the nation.
74. For California, articles were counted through keyword searches in the Proquest archive of the *Los Angeles Times*, using the “text” database. For New York, the Proquest database for the *New York Times* was used. Keywords were “global warming” and “climate change.” Article counts were adjusted by the total number of items included in the relevant database each year, and hence the annual totals are reported as articles per 100,000 articles published. For the *Los Angeles Times*, the numerator was limited to articles, editorial articles, editorial cartoons, front page, letters, reviews, photo standalones, and tables of contents that mention the search terms. For the *New York Times*, it includes all records of articles, editorials, front-page headlines, letters to the editor, and a small number of miscellaneous items.
75. Data from the Vanderbilt Television News Archive, provided by Robert Brulle; Karapin, *Political Opportunities*, 193.
76. These and other conclusions about problem events in this section are from the author’s reading of the headlines of the news articles on which Figure 1 is based; see also Spencer Weart, “The Discovery Of Global Warming,” February 2013, accessed at www.aip.org/history/climate, 11 March 2014, 38-43.
77. Weart, “Discovery,” 50.
78. Gary Polakovic, “States Taking the Initiative to Fight Global Warming,” *Los Angeles Times*, 7 October 2001.
79. Karapin, *Political Opportunities*, 212-213.
80. California bills were searched at www.leginfo.ca.gov. Keywords were “global warming,” “climate change,” and “greenhouse gas.” Counts of New York State Assembly, Senate, and joint bills are from the New York State Assembly website (assembly.state.ny.us/leg), using full-text searches for “global warming.”
81. For example, Xinsheng Liu, Eric Lindquist, and Arnold Vedlitz, “Explaining Media and Congressional Attention to Global Climate Change, 1969–2005,” *Political Research Quarterly* 64 (2011): 405-419, at 414-415.
82. State of the State speeches in California were taken from the state legislature's *Daily Journal*. The amount of attention to climate change problems and policies was measured by counting words in full sentences, divided by the total words in the speech; keywords were “global warming,” “climate change,” and “greenhouse gas.” The climate change issue category includes implicit climate policies such as renewable energy or energy efficiency policies, with such mentions also classified as part of the energy issue.

Analysis of State of the State speeches in New York is from news sources; where full transcripts or prepared texts were not available (for 1995-2010), I analyzed the published

excerpts or news reports. The length of attention to energy or climate problems and policies was measured by counting words in full sentences or clauses, divided by the total words in the speech, excerpts, or report. The climate change issue category includes implicit climate policies such as renewable energy and energy efficiency policies.

83. Karapin, *Political Opportunities*, 155, 151.
84. Hanemann, "How California," 13.
85. Rosen, *Emission*, 166.
86. Guido Franco, "Linking Climate Change Science with Policy in California," *Climatic Change* 87 (2008, Supplement 1): S7-S20, at S14; Hanemann, "How California," 14.
87. Rosen, *Emission*, 170, 184.
88. Hall and Taplin, "Environmental Nonprofit Campaigns," 71; Karapin, *Political Opportunities*, 143-147.
89. Rosen, *Emission*, 165-166; Karapin, *Political Opportunities*, 153.
90. Farrell and Hanemann, "Field Notes," 94.
91. Baldassare et al., *PPIC Statewide Survey: Special Survey on Californians and the Environment 2000*, 7; Mark Baldassare et al., *PPIC Statewide Survey: Special Survey on Californians and the Environment* (San Francisco: Public Policy Institute of California, June 2002), 2; Rosen, *Emission*, 151-152, 168.
92. Baldassare et al. *PPIC Statewide Survey: Special Survey on Californians and the Environment 2002*, 15-16.
93. Rosen, *Emission*, 169.
94. Rosen, *Emission*, 172-173.
95. Franco, "Linking," S14; Hanemann, "How California," 13.
96. Franco, "Linking," S14.
97. Franco, "Linking," S8, S17.
98. Farrell and Hanemann, "Field Notes," 95; Hanemann, "How California," 13.
99. Mazmanian, Jurewitz, and Nelson, "California's Climate Change Policy," 407-08.
100. Hanemann, "How California," 15-17; Hall and Taplin, "Environmental Nonprofit Campaigns," 75.
101. From data provided by Robert Lowry; cf. Karapin, *Political Opportunities*, 94.
102. Karapin, *Political Opportunities*, 213.
103. Karapin, *Political Opportunities*, 213 & n. 138.
104. Rosen, *Emission*, 176.
105. Gallup data for 1989-2009.
106. Mark Baldassare et al., *PPIC Statewide Survey: Californians and the Environment* (San Francisco: Public Policy Institute of California, July 2007), 8.
107. Mark Baldassare et al., *PPIC Statewide Survey: Special Survey on the Environment* (San Francisco: Public Policy Institute of California, June 2006), 9.
108. Farrell and Hanemann, "Field Notes," 91, 102-103; Hanemann, "How California," 21, 23 n. 43.
109. Karapin, *Political Opportunities*, 144, 160.
110. Hall and Taplin, "Environmental Nonprofit Campaigns," 70-71; Brownstein, "California Experiment," 75; Karapin, *Political Opportunities*, 159-160 & n. 119.

111. Hall and Taplin, "Environmental Nonprofit Campaigns," 71-72.
112. Hanemann, "How California," 23.
113. Farrell and Hanemann, "Field Notes," 102, 103; Rosen, *Emission*, 170; Hanemann, "How California," 21.
114. Richard Perez-Pena, "Pataki Orders a Shift Toward Renewable Energy." *New York Times*, 11 June 2001.
115. New York Times, "Text: Pataki's State of the State Speech," *New York Times*, 9 January 2002; Lambright, Pralle, and Boscarino, "Governing Energy Innovation," 41; Maribeth Rubenstein, *Policy Shifts toward an Energy System Transition*, Master's thesis, Sustainable Development, Utrecht University, Netherlands, August 2012, 85.
116. Andrew Revkin, "On the Environment, Pataki Is Seen in All Shades of Green." *New York Times*, 24 January 1996.
117. Lambright, Pralle, and Boscarino, "Governing," 32.
118. Revkin, "On the Environment"; Danny Hakim, "Spitzer Budget Seeks Overhaul of Health Care," *New York Times*, 1 February 2007.
119. Andrew Revkin, "1.5 Billion Bond Act Sought By Pataki for Environment," *New York Times*, 7 June 1996; Karapın, *Political Opportunities*, 180.
120. Andrew Revkin, "Spitzer and Pataki Dueling Over Environmental Mantle," *New York Times*, 19 October 1999; Jonathan Hicks, "While Spitzer Shrugs It Off, Others Talk Of His Future," *New York Times*, 28 October 2002; Richard Perez-Pena and Patrick McGeehan, "Assault on Wall St. Misdeeds Lifts Spitzer's U.S. Profile and Makes Enemies," *New York Times*, 4 November 2002.
121. Lambright, Pralle, and Boscarino, "Governing," 40.
122. Bruce Huber, "How Did RGGI Do It?" *Ecological Law Quarterly* 40 (2013): 59-106, at 100-101.
123. Rubenstein, *Policy Shifts*, 63.
124. Rubenstein, *Policy Shifts*, 59.
125. John Cahill, "Environmental Law in New York State," *Pace Environmental Law Review* 25 (2008): 441-449, at 442.
126. Cahill, "Environmental Law," 443-444.
127. Center for Clean Air Policy, *Recommendations to Governor Pataki for Reducing New York State Greenhouse Gas Emissions* (Washington, DC: idem., 2003), 2; Rubenstein, *Policy Shifts*.
128. Danny Hakim, "10 States Sue E.P.A. On Emissions," *New York Times*, 26 April 2006.
129. Nicholas Confessore, "Spitzer Unveils Initiatives That He Says Would Have State Consuming Less Energy in 2015," *New York Times*, 20 April 2007; Hakim, "Spitzer Budget."
130. Danny Hakim, "Cuomo Offers 150 Pages of Views on Energy," *New York Times*, 9 August 2010.
131. Sewell Chan, "Paterson Warns of 'Historic Economic Challenge'," *New York Times*, 7 January 2009.
132. Patricia Salkin, "The Executive and the Environment," *Pace Environmental Law Review* 31 (2014): 706-768, at 738-741.
133. Christopher Klyza and David Sousa, *American Environmental Policy*, updated ed.

(Cambridge, MA: MIT Press, 2013), chap. 1.

134. Karapin, *Political Opportunities*, 54-55.

135. Karapin, *Political Opportunities*, chaps. 5-8.

136. For a fuller account of path dependence in these cases, see Karapin, *Political Opportunities*, 67-69, 245-248.

137. Carlson, "Regulatory Capacity."

138. Karapin, *Political Opportunities*, 30.

139. For a fuller discussion, see Karapin, *Political Opportunities*, 239-242. Zahariadis (in "Multiple Streams," 81-82) makes this point more generally for work using Kingdon's theory.

