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CHAPTER

Subnational Climate Policy Action in the United States and Canada: Past Progress and Future Insufficiency

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Abstract

Institutional climate action, in the form of public policy change, has historically been led by subnational (state and provincial) governments in the United States and Canada, rather than by national governments. This chapter documents this subnational climate leadership and provides insight into the politics that have produced it, including the role of interest groups and social movement organizations. At the same time, it argues that—especially when it comes to electricity governance, the linchpin of an "electrify everything" strategy for decarbonization—the ability of subnational governments to move the needle on climate change mitigation has a ceiling, which we are fast approaching. Therefore, future climate action must also concentrate on advancing an unprecedented degree of centralized coordination, best achieved at the national (and ideally international) level.

Keywords: public policy, subnational leadership, United States, Canada, electricity governance

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Introduction

This chapter deals with "institutional" forms of climate action (Almeida et al., 2023a); specifically, its subject is policies to *mitigate* (as opposed to adapt to) the impacts of climate change. The geographical focus is on the United States and Canada. More specifically, the focus is on *subnational* (state and provincial) climate action: the role it has played historically, the impact it has had, and the advantages and disadvantages of it relative to national-level action in the political and institutional contexts of these two North American countries. The chapter concludes with a provocation. I argue that, while subnational climate action has been indispensable in enabling progress despite gridlock at the national level (especially in the United States), going forward, it will yield diminishing returns. We have reached a moment in which the scale and magnitude of the climate crisis demand a level of centralized planning and coordination that national governments are best positioned to deliver. I illustrate this with the case of the US electricity sector, the cornerstone of President Biden's strategy to "electrify everything" (transport, buildings, industry, etc.) as a means of achieving economy-wide decarbonization (Harper et al., 2023).

In what follows, I first provide background about the United States and Canada that illustrates their importance individually and together when it comes to action to mitigate climate change in the face of a global climate crisis. Next, I review some of the major subnational policy achievements in each country, highlighting the significance of subnational action in the two political and institutional contexts. Finally, I provide evidence from the US electricity sector of the challenges moving forward that I argue will yield diminishing returns if action continues to be pursued mostly or entirely at the subnational level rather than at the national (and ideally, international) one.

The United States and Canada: Two Wealthy, High-Emitting Neighbors With Empowered Subnational Governments

The United States and Canada are the world's second and third largest greenhouse gas (GHG) emitters per capita, respectively (Government of Canada, 2024a).[1] Both countries are also extremely wealthy. In gross domestic product (GDP) per capita, the United States is twelfth and Canada is twenty-first (World Bank, 2024). In both countries, the transportation sector generates a high percentage of the country's total emissions, about 28% in the US case and about 22% in Canada. In the United States, the plurality of emissions comes from transportation, followed closely by electricity (25%), where coal-fired and gas-fired power plants continue to drive emissions in this sector despite recent progress in adding unprecedented quantities of renewables to the grid. In Canada, the oil and gas sector constitutes the plurality of emissions (31%) and electricity makes up a much smaller share (7%) due to the fact that the vast majority of Canada's electricity is generated from nonemitting hydropower and nuclear sources (Basseches & Ikenze, 2022; Government of Canada, 2024b; US Environmental Protection Agency, 2024c).

The two countries are also worth examining together because their climate policy destinies are intertwined in several ways. First, they are physically interconnected in terms of their electricity grids, with electrons (whether "clean" or "fossil fueled") routinely crossing the political border—which happens to be the longest national border in the world (Basseches & Ikenze, 2022). Second, although Canada's government is a parliamentary system while the United States' is a presidential system, both are characterized by two dominant political parties with often opposing views on climate policy action: Democrats and Republicans, in the case of the United States, and the Liberal Party and Conservative Party, in Canada (Basseches et al., 2022; Macdonald, 2020).[2] Third, there is a similar dynamic in terms of the political geography of their energy production and consumption, whereby in both countries energy production tends to take place in their rural areas while energy consumption tends to take place in their urban and suburban areas. Given the size of the two countries,

as well as correlates between geography and the demographic strongholds of the two major, opposing political parties, this tends to create patterns of mutual resentment among their populaces, and correspondingly, among each party's political leadership (Macdonald, 2020; Oatley, 2023).

Over the years, there have been numerous examples of cross-national coordination on climate and energy policy, between the two national governments but perhaps even more so between *subnational* jurisdictions within each country (VanNijnatten & McWhinney, 2022). For instance, California and Quebec have a linked cap-and-trade program (California Air Resources Board, 2024). Since 1973, the six New England states[3] and the five eastern Canadian provinces[4] have coordinated through the New England Governors and Eastern Canadian Premiers Working Group, which includes a "Climate Change Steering Committee" (CONEG, 2024). Also, recently a "green grid" planning task force has been assembled with numerous stakeholders from these same jurisdictions (Sosland, 2023).

The United States and Canada also have parallel—though certainly not identical—dynamics in terms of their systems of federalism; that is, "a system of constitutionally derived and apportioned authority where state and national governments retain sovereignty and yet at the same time are interdependent" (Scheberle, 2013, p. 395). Of course, in the Canadian case we are referring to "provinces," not states, but conceptually, they are parallel forms of subnational government. Constitutionally, Canada's national government is stronger relative to its provinces than the United States' is relative to its states. However, Macdonald (2020) documents how this has shifted over time in favor of subnational provinces having more power vis-à-vis the national government. Furthermore, in the realm of energy specifically, even the Canadian Constitution is explicit that the primary governing role is reserved for the provinces (Gattinger, 2015); however, the Canadian federal government maintains jurisdiction over nuclear/atomic energy (Macdonald, 2020).

In the United States, the Tenth Amendment, among other constitutional and jurisprudential guidance, establishes a strong role for state governments in general (Rosenthal & Joseph, 2021). In the domain of energy and climate policy in particular, certain states have seized upon this constitutional autonomy (e.g., Basseches et al., 2022; Bromley-Trujillo et al., 2016 ; Rabe, 2011). Although many states acted on climate decades before the US Congress finally did so with the recent passage of the Inflation Reduction Act in 2022, and Rabe (2004) writes about features of state-level policymaking that may have facilitated this early leadership, it is important to note that state-level climate policymaking has been highly uneven across the states (Basseches et al., 2022). In general, it has tended to be wealthier, less energy-intensive, and Democratic Party-controlled states that have taken on the mantle of state-level climate policy action leaders, and the inverse has tended to be state-level climate policy laggards (e.g., Bromley-Trujillo et al., 2016 ; Coley & Hess, 2012; Trachtman & Meckling, 2022). In the next section, I provide some specific examples of subnational leadership—even in the absence of national government climate action.

Subnational Climate Policy Leadership in the United States and Canada

In both the United States and Canada, certain subnational governments have attempted a whole-of-government approach at tackling the climate crisis through the policy instrument of economy-wide greenhouse gas (GHG) emissions stabilization/reduction targets. While the sectoral scope of such policies is broad (they are "economy-wide"), their enforceability and the degree to which subnational governments also implement other complementary policies in pursuit of these high-level goals vary considerably from one jurisdiction to the next (Glasgow et al., 2021). In Canada, Quebec was the first province to adopt such a target in 1992, aiming to stabilize overall provincial GHG emissions by returning them to their 1990 levels by 2000. British Columbia then did the same in 1995. By 2012, all the Canadian provinces had one of these economy-wide GHG emissions targets in place except for the "carbon province" of Alberta, "which refused to give itself an absolute limit on emissions" (Macdonald, 2020, p. 77). Several of these provincial targets were amended over the years to become more ambitious (Macdonald, 2020). Similarly, in the case of the United States, 23 states have adopted economy-wide GHG targets. Of these, 13 were adopted legislatively and 10 were adopted through executive order (Center for Climate and Energy Solutions, 2024). The ones that were adopted legislatively are generally more "durable" (Rabe, 2016), though even their quality varies considerably from one adopting state to the next (Basseches, 2024b).

The most prevalent state-level climate policy instrument in the United States is renewable portfolio standards (RPS), which, having been adopted in 37 states,[5] are targeted squarely at electricity-sector emissions. The design of these policies varies considerably from one state to the next, but broadly speaking they mandate that certain percentages of utilities' electricity load originate from renewable or clean energy sources (Basseches, 2024a). In Canada, the preferred electricity sector provincial policy instruments have been Ontario's coal phase-out (Macdonald, 2020) and feed-in tariffs (Stokes, 2013). The RPS and feed-in tariff approach each have their advantages and disadvantages, but one advantage of the latter is that it tends to be more transmission-dependent (Rowlands, 2007), whereas RPS policies have often required additional, supportive policies to ensure adequate transmission; an example would be the competitive renewable energy zones (CREZ) policy in Texas (Hurlbut, 2008).

Cap-and-trade policies—although controversial (Cullenward & Victor, 2020), especially from a climate justice perspective (Basseches et al., 2021; Mendez, 2020)—have also been implemented by subnational jurisdictions in both countries. While Ontario failed to adopt a durable cap-and-trade program (Raymond, 2020), Quebec and California each have linked cap-and-trade programs. The Regional Greenhouse Gas Initiative (RGGI), which includes several states in the US Northeast, is regarded as being especially successful in its allowance allocation methods, which rely heavily on auctions (Raymond, 2016). By contrast, the California-Quebec program has more loopholes and exemptions, and the California regulations provide for a significant share of free or discounted allowances, which can undermine program effectiveness. On the other hand, the California program has greater sectoral coverage, whereas RGGI applies only to the electricity sector (Cullenward & Victor, 2020). Washington State recently adopted a statewide cap-and-trade program as well, though it currently faces the possibility of repeal through a ballot measure (Mulkern, 2024).

A variety of other subnational climate policy instruments have also been used. These include various forms of tax incentives, net metering and interconnection standards, and energy efficiency policies (Carley, 2011). Energy efficiency policies can take multiple forms, including public benefit funds (PBFs), which Prasad (2023) considers a form of a carbon tax, and energy efficiency resource standards (EERS), whose design more closely resembles an RPS than a PBF (Carley, 2011). The majority of these subnational-level policy instruments are focused on the electricity sector, GHG emissions from which Cullenward and Victor (2020, p. 64) argue governments have a "larger toolkit" to address.

One especially promising electricity sector policy, provided in California and a handful of other states, is known as community choice aggregation (CCA). Under this policy, municipalities can leverage their greater purchasing power of bulk electricity to assemble a greener portfolio of resources than the incumbent utility might be offering but retain access to the transmission and distribution system of the utility (US Environmental Protection Agency, 2024a). This policy innovation, which was actually born in Massachusetts as part of its 1997 electric sector restructuring legislation, is also notable for its "bottom-up" approach to energy policy reform, empowering local communities to lead on the energy transition (Hess, 2019; Hsu, 2022).

By comparison, given the significant share of total emissions in both countries that come from the transportation sector, there have been far fewer policy instruments to address these emissions. The exception would be low-carbon fuel standards (LCFS) in states such as California and Oregon (Center for Climate and Energy Solutions, 2024), as well as subsidies and tax credits for electric vehicle (EV) purchases (Huether et al., 2023). There is also the California waiver of the US Environmental Protection Agency (EPA)'s vehicle emissions standards under the Clean Air Act (US Environmental Protection Agency, 2024b)—something which has been the subject of ongoing litigation (Solis, 2022).

The next frontier of state-level climate policy instruments targeted at transportation sector emissions will undoubtedly have to do with promoting widespread adoption of EVs. This has already been incentivized through the Inflation Reduction Act (The White House, 2023), and there are some initial indications that these incentives have been effective (Heatmap News, 2024). However, many barriers to widespread adoption remain, and some states will undoubtedly work to lower them through state-level climate policy action. For example, in 2021, Massachusetts passed a state law requiring adjustments to utility rate making intended to lure private investment in EV charging infrastructure to the state (Kaiser, 2024). At the same time, mirroring the general pattern by which states have diverged into being leaders or laggards based largely on factors like partisanship, certain "red states" have responded to pro-EV policies with backlash. For example, the Louisiana legislature recently passed a bill that would prevent state agencies from "discriminating" against certain types of vehicles based on their fuel source, a move intended to "protect the 'freedom of choice' to buy gasoline vehicles" (Aton, 2024). There are also concerns about whether such policies will be designed with equity in mind, as preliminary data suggest that the tax benefits of the Inflation Reduction Act have flown primarily to wealthier Americans (Pontecorvo & Meyer, 2024).

It is also worth noting that subnational climate action in both the United States and Canada takes place at the local and/or municipal level, in addition to the state/provincial level. There are numerous examples of this in both countries (Hughes, 2019; Krause & Hawkins, 2021). An interesting line of research involves the *process* by which such local action comes about, and who participates in decision making. Almeida et al. (2023b) examine participation in local climate policymaking meetings in Fresno, California, and find that ties to existing forms of civic engagement, such as through unions and community-based organizations, were important in facilitating participation in such local climate policy meetings.

Given the multitude of political and economic conditions confounding the relationship between subnational climate policies and overall GHG emissions, as well as heterogeneity in policy design itself, measuring the effectiveness of any single policy instrument or combination of policy instruments is challenging. Still, Martin and Saikawa (2017) undertook an analysis of the impact of specific policy instruments on electricity sector carbon emissions and found that certain mandatory state-level policies such as mandatory GHG reporting and power plant–level emissions performance standards are significantly associated with a decline in electricity sector emissions while others are not. Bergquist and Warshaw (2023) created a quantitative index which aggregates 25 individual state-level policies to develop a stringency score for the overall "climate policy regime" of each of the 50 US states. They find that increased stringency of a state's overall climate policy regime was associated with declining per capita carbon emissions both in the electricity sector and economy-wide.

Clearly, the climate has benefitted from subnational mitigation policy action in the absence of national action and despite occasional rollbacks of subnational policies after their initial adoption (Stokes, 2020). Given the decades of gridlock, climate denial, and climate delay that have resulted from intentional obstruction on the part of a well-resourced network of fossil fuel interests (Brulle & Downie, 2022; Fisher, 2024), the climate has benefitted from leadership on the part of *subnational* governments in both the United States and Canada. Indeed, Rabe (2004, 2008) makes note of the unique benefits of states' ability to act as "laboratories of democracy" in the climate policy domain.

Although research finds social movement influence over the finer details of policy design to be limited (Basseches, 2019), there is no question that grassroots mobilization has been helpful in getting climate action on the policy agenda for those subnational governments that have led in this area (Basseches, 2024b). Moreover, social movement scholars have used empirical research to generate recommendations for further innovation in tactics and strategy which may be even more likely to yield policy results (Fisher, 2024).

However, climate and energy federalism are not without their pitfalls as well. Karapin (2020), who refers to energy federalism as a "double-edged sword," acknowledges the advantages of state-led climate policy in the United States but also highlights its drawbacks, concluding that overall its impact on renewable energy policy is "ambivalent" rather than positive (p. 29). Although recent growth in US renewable energy has been remarkable, it has lagged that of European countries like Spain, Germany, and the United Kingdom. Moreover, it has been highly uneven, led by a handful of states, including California.

This mirrors the uneven subnational policy dynamics by which certain states' policy action has been met with backlash from other states, and the national government has failed to play the strong, guiding role it has elsewhere. Karapin notes that state-led action "is limited by economic competitiveness concerns, because [state-level policies] create costs that are borne by business as well as residential consumers of electricity" (Karapin, 2020, p. 27). This leads to the (sometimes credible and other times not) threat of businesses fleeing to other states, with laxer climate and energy regulations. This concern is especially acute with firms that are energy-intensive and/or trade-exposed (Basseches, 2024b). Not only has the lack of national-level leadership created economic competitiveness concerns for those states that have elected to take action, thereby limiting the ambition of that action, but also it has created a situation in which state governments that have *not* acted on climate have become enclaves in which anti–climate action forces such as the fossil fuel industry have been able to take refuge and consolidate and grow their power. From an institutional perspective, the number of veto points afforded by the US system of federalism has hindered the potential that the best ideas from certain states can be adopted on a necessarily large enough scale (Karapin, 2020).

In Canada, Macdonald (2020) points to the pitfalls created by the system of strong federalism there. As in the United States, there is an unfortunate interaction between political economy and federalist institutions, making overall climate progress more difficult. Specifically, in Canada, Macdonald argues that political economy divides its provinces into two categories: "carbon provinces" such as Alberta and Saskatchewan, in which the operations of the oil and gas industries are concentrated and in which overall GHG emissions rose significantly between 1990 and 2017, and "hydro provinces" such as Ontario and Quebec, in which vast amounts of clean electricity from hydropower fuel more service-based and information-based economies (as opposed to natural resource extraction economies) and in which overall GHG emissions fell between 1990 and 2017. The climate ambition of the Canadian national government, not unlike in the US case, has oscillated back and forth depending on the political party in power in Ottawa, but, Macdonald argues, even the plans of climate-forward national governments like Trudeau's are held back by Canadian federalism. As Macdonald puts it, "A coordinated federal-provincial [policy] program is the only means of achieving a given [GHG emissions reduction] target" (Macdonald, 2020, p. 6).

Both Karapin and Macdonald take a bird's-eye view of the challenges that US and Canadian federalism have presented for meaningful climate action, looking at overall renewable energy growth (in Karapin's case) and at

overall, economy-wide GHG emissions reduction targets (in Macdonald's case). However, the governance and policy coordination challenges that federalism poses for addressing the climate crisis can also be seen at a very technical and granular level when we look at electricity policy. In the next section, I will focus on the US case (the case that I know best from my own empirical research) to provide an important example of how, despite subnational climate policy action having historically been far preferable to no action at all, it is not sufficient for getting us where we need to go next, which is achieving 100% clean electricity so that as we begin to "electrify" the rest of our economy (transportation, buildings, industry, etc.) and consequently demand on the electricity grid surges, we can meet that demand without burning more fossil fuels.

State-Level Renewable Portfolio Standards Policies Meet an Electricity Grid Without Political Borders

Let us begin with a stubborn set of five facts. First, electrons are physically indistinguishable from one another once they enter onto the electricity grid; some originated from fossil-fueled sources such as coal and gas plants while others originated from clean or renewable sources such as solar, wind, and hydropower, but once they enter the grid, they become physically indistinguishable from one another. Policymakers that want to track their source because they are concerned about their origin for environmental reasons do so through an accounting system called renewable energy credits (RECs). One REC is produced per unit of electricity generated from a qualifying source. Depending on the state, RECs can be bought, sold, or traded independently from the electrons that created them to comply with state policy; these are known as "unbundled RECs" (Basseches, 2024a).

Second, the most prevalent state-level climate policy instrument is renewable portfolio standards (RPS) policies, which require that specified percentages of the electricity loads of utilities delivered *within* the state originate from renewable generation sources, tracked through RECs (Basseches, 2024a). A state legislature which would pass an RPS to be implemented through its public utility commission (PUC) has jurisdiction over the regulated electric utilities within its borders. However, third, the electricity system—one of the greatest engineering feats of the 20th century—is divided into three physical components: generation, transmission, and distribution; all three are necessary for a functioning electricity grid, and yet only one or two of them (depending on the state[6]) actually fall within a state's regulatory jurisdiction (DeLosa et al., 2024).

Fourth, most transmission, and especially most of the transmission that will be needed in the future is *interstate* transmission, which is regulated by the Federal Energy Regulatory Commission (FERC), not state governments. Through its Orders 888/889 and 2000, FERC authorized the formation of voluntary, quasi-governmental independent system operators (ISOs) and regional transmission organizations (RTOs), to which it delegated governance of electricity transmission in many parts of the country; in the rest of the country, the transmission system is not operated by state governments but rather by incumbent monopoly utilities (many but not all of which are privatized) that are ostensibly regulated by the state PUCs (DeLosa et al., 2024), though concerns about regulatory capture of these PUCs abound (Basseches, 2024b). Figure 1 shows which regions of the United States fall under the purview of these ISOs/RTOs; as the figure shows, these regions transcend state political borders.

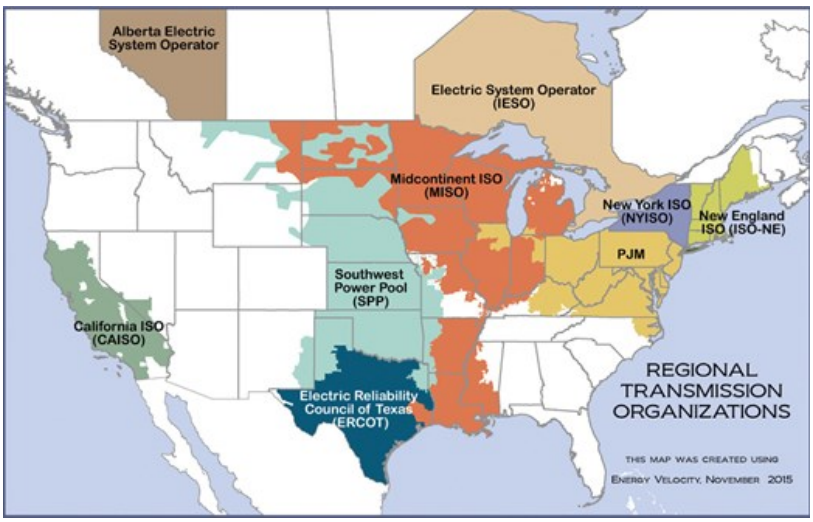

Figure 1. Map of geographic footprint of independent system operators (ISOs) and regional transmission organizations in the continental United States.

(*Source*: https://www.epa.gov/green-power-markets/power-market-structure)

Fifth, since the passage of the US Inflation Reduction Act, the single biggest hurdle the United States faces when it comes to greening the electricity grid is the lack of sufficient high-voltage transmission capacity which would be necessary to bring clean-sourced electricity from the (more often than not) rural areas in which it is generated to the (more often than not) urban and suburban areas in which it is consumed; this requires transmission lines that need to be constructed from scratch and that will inevitably cross state political borders (Harper et al., 2023). Taken together, these five facts help to illustrate why we are fast approaching a ceiling—at least in the electricity sector—in terms of subnational climate policy action's potential to take us from where we are right now to where we must go in the future to further combat the climate crisis, from a mitigation policy perspective.

To be sure, these state-level RPS policies in the approximately 30 states that have adopted durable ones have been critically important, and successful, in bringing us to where we are now. They have worked to lower the cost of renewable power and to transform the market for renewable electricity generation, since the RECs are in effect a subsidy available exclusively to nonemitting generators (Fischlein & Smith, 2013). As studies have shown, these state-level policies have contributed to real emissions reductions in the power sector, one of the largest sources of overall emissions in the economy (Bergquist & Warshaw, 2023).

And yet, because of the five facts just mentioned, and importantly for the purposes of this chapter, because RPS policies' jurisdiction is limited to the political borders of particular states, they are an instrument whose effect on the electricity system as a whole will always be limited. By themselves, they are unable to fully deliver upon the promise of an interconnected, effectively coordinated, and 100% clean-powered electricity grid because they cannot ensure adequate interstate transmission. In the broader context of challenges to effective electricity system governance that go far beyond the limitations of RPS policies (see Klass et al., 2024), I now turn to elaborate specifically upon how these five facts will limit the utility of strictly subnational clean electricity policy (in the form of RPSs) moving forward.

At its core, the target-setting aspect of state-level RPS policies is a political exercise, so that politicians can signal to (typically co-partisan) voters and organized constituencies such as environmental interest groups and social movement organizations (SMOs) that the state prioritizes renewable or "clean" electricity generation sources. However, this target-setting process, which typically occurs in state legislatures, is often divorced from the mechanics of operating the grid in real time as well as from the complex regulatory and market structures that govern things like transmission access, wholesale electricity pricing, cost allocation to

ratepayers, and so on. In other words, this target setting can often occur in a silo that is separate from the nuts and bolts of how the actual grid functions and is governed. While RPS targets are typically put forward by state legislatures where members are directly accountable to voters, how the grid actually functions as a coherent whole, in which electricity supply and demand are always perfectly synchronized, is currently determined by a patchwork of regulatory and market structures, including state PUCs, ISOs/RTOs, and FERC (Angwin, 2020; DeLosa et al., 2024; Klass et al., 2024).

Governance of the entire physical grid is siloed, with different actors responding to different incentives (whether political, economic, or both) and focusing only on their one piece of the puzzle without seeing how the different parts of the overall system known as the electricity grid relate to one another and are dependent on one another for optimal functioning (Basseches & Ikenze, 2022; Klass et al., 2024). During the last few decades, in which grid planning that had historically operated with only least-cost-service and reliability principles in mind has begun to also incorporate environmental concerns, pushed to do so by individual state policies, state-level RPS policy has been helpful *in the absence* of any national action. However, now that the federal government has finally acted in the form of the Inflation Reduction Act of 2022, the optimal implementation of that law from a climate perspective—which would involve centralizing grid planning with climate goals in mind rather than *just* least-cost-service and reliability—is being hamstrung by the very siloed nature of grid governance that allowed past climate action on the part of only *some* subnational governments to precede national action.

Given the blind spots of state-level RPS policies (e.g., building *interstate* transmission capacity sufficient to accommodate the demand for new sources of local generation made possible by such policies as RPS and tax incentives), we have now arrived at a moment in which the national government must take the reins and impose on states the optimal policies for clean electricity grid function. Because the Inflation Reduction Act was merely a budget reconciliation bill, adhering to the US Senate's Byrd Rule in order to allow it to be passed exclusively with Democratic votes rather than the filibuster-proof 60 votes required of other major legislation to pass the Senate (Davenport & Friedman, 2022), it was unable to impose the sorts of regulatory reforms that would be necessary to truly transform our electricity grid.

When national policy finally (and hopefully) does so, it would ideally also address the distributional consequences of the renewable energy transition (Mildenberger, 2020). That is, rather than only concerning itself with rapid decarbonization, it should *also* address the monopoly power that investor-owned utilities currently exercise, which enables them to shift financial costs and risks from themselves onto ratepayers (Basseches, 2024b). This will be the bare minimum necessary to ensure an *equitable* transition.

In the absence of congressional action, FERC recently took a major positive step with its adoption of Order 1920 governing interstate transmission planning. Still, this rule is necessary but insufficient (DiGangi, 2024). Furthermore, it has sparked a backlash by state regulators and their sympathizers, who see it as a power grab by the national government at the expense of state autonomy (Howland, 2024a, 2024b). This illustrates how the durability of institutions of US federalism, which have historically been a great asset to climate policy action, now may pose one of the greatest threats.

Conclusion

In focusing on policy outcomes rather than the social processes by which policy emerges, this chapter has illustrated only one narrow piece of the many forms of climate action. Moreover, this chapter relates to just one subset of climate actions having to do with what Almeida and coauthors call "institutional climate actions" (Almeida et al., 2023a). The sociology of climate change is underdeveloped (Scoville & McCumber, 2023), and this volume thus offers an important corrective. While sociologists have rightly focused on many other aspects of climate change, the discipline has some catching up to do when it comes to a focus on climate *policy* action, and specifically, *subnational* policy action (Vasi & Walker, 2024).

In this chapter, I have argued that indeed subnational policy has been an important form of climate action. I have shown how far it has gotten us, in both Canada and the United States, in the face of powerful forces that have obstructed national action (Brulle & Downie, 2022). There are even some promising state- and local-level policy tools, such as CCA, that have the potential to combat the power that monopoly investor-owned utilities exert over grid planning and resource ownership.

Nevertheless, I have also pointed out—using the example of the US electricity sector—the limits of relying exclusively on subnational policy action as the *only* policy action. If we are serious about combatting the climate crisis, we must continue to encourage state ambition while *also* emphasizing the importance of cohesive *national* and *international* climate policy that can bring with its larger jurisdiction the type of coordination and foresight necessary to take on the "super wicked problem" of climate change (Levin et al., 2012).

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Notes

1 Overall, the United States is the second largest after China at 6001.2 $MtCO_2e$, and Canada is tenth at 736.9 $MtCO_2e$, but given Canada's much smaller population, the two countries are much closer together when measured per capita.

2 However, third parties in Canada such as the New Democratic Party (NDP) have achieved much greater gains than third parties in the United States (Johnston, 2017).

3 Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.

4 New Brunswick, Newfoundland and Labrador, Nova Scotia, Prince Edward Island, and Québec.

5 Some are purely voluntary (see Vasseur, 2014), and others have since been repealed.

6 Specifically, depending upon whether the state restructured its electric utility sector (Isser, 2015); in restructured states, generation is "deregulated" and state governments only have authority over distribution and certain *intra*-state transmission, while in traditionally regulated states, the state government has authority over generation as well.