



## **Transformative Energy Policy in Federal Systems: Canada and Germany Compared**

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### **Abstract**

The transition of an energy system towards low-carbon resources requires a change in a policy regime sufficiently significant to redirect highly complex technical systems away from their previous path-dependent evolution. To assure the transition, the new path of policy development has to be consolidated. Research suggests that the institutional conditions facilitating policy innovation and consolidation vary profoundly across federal systems. ‘Dual’ federations such as Canada promote policy innovation but lack incentives to stabilize coordinated policies over time. In ‘cooperative’ federations like Germany, policy change is more difficult as such systems favor incremental evolution. Using a most dissimilar case design comparing Canadian and German energy policy developments, this article reveals policy innovation in both federations. In Canada, this was facilitated by unilateral actions of federal or provincial governments in a system characterized by dual federalism. German energy policy deviated from the incrementalism of joint decision-making as the federal government negotiated crucial terms of transformative policy directly with corporate interests and circumvented the intergovernmental arena. However, this policy innovation ‘from the center’ contributed to undermining the long-term stabilizing effects of intergovernmental coordination. Governments in Canada and in Germany changed policies but failed to establish appropriate governance structures necessary for consolidating policy change at all levels of the federation.

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## Introduction

Transforming energy systems to make possible a low carbon economy is a challenge for governments. It requires redirecting the path-dependent evolution of what is a highly complex and technical system through initiating and navigating major policy change. Once introduced, governments need to solidify this new path and shield it from efforts to reverse it. A transformative policy is typically accompanied by redistributive conflicts. In the case of an energy transition, these conflicts arise due to the reallocation of subsidies and privileges among economic sectors. Corporations differ in their energy consumption and face different costs of reducing carbon emissions. Impacts on regions differ since their economic development depends to varying degrees on non-renewable energy sources. These conflicts constitute substantial obstacles for policy innovation. They also challenge efforts to set out on a new energy path, due to power politics among parties and interest groups.

In federal systems, transformative policy is further complicated because its territorial effects and redistributive conflicts have to be addressed through intergovernmental coordination. How these effects play out and how conflicts are managed varies depending on the federal structures in question. Based on veto-player theory, one would expect a system characterized by ‘dual federalism’, where powers are separated between levels of government, to provide better conditions for significant policy innovation than a federal system where powers are shared; in the latter, federal and regional governments have to come to agreements (Scharpf 1988; Tsebelis 2002). In contrast, power-sharing federalism seems to provide better conditions for maintaining a new path of policy evolution and adjustment, whereas the separation of powers invites unilateral actions by individual governments and often leads to discontinuities in the transformation process, including significant backlash (Painter 1991).

Canada and Germany represent these two different types of federalism. The last decades of energy policy require a more nuanced evaluation of established theoretical assumptions. In both countries, energy transition has become an important aspect of climate change mitigation. In Germany, the federal government embarked on a trajectory of paradigmatic policy change by avoiding the constraints of joint decision-making with the governments of the *Länder* (states). Coalition governments and corporatist arrangements emerged as the dominant arenas for negotiating the terms of the so-called *Energiewende* (energy transition), while intergovernmental relations played a rather subsidiary role. Over time, this shift to hierarchical governance produced considerable policy inconsistencies and, eventually, retardation of transformation. In Canada, federal governments in the 1980s and 1990s identified energy transition as a policy issue without, however, making substantial progress. As elsewhere, climate change eventually became a more salient policy issue, but it did not, however, gain the same prominence in election campaigns as national unity, the economy, or health care. This created an incentive for the federal government to “pass the buck” to the provinces rather than embark on a potentially risky path of bold climate action (Harrison 1996). When the Conservative Harper government almost entirely abandoned climate mitigation policy between 2006 and 2015, and sought to establish Canada as a global energy superpower, provinces like British Columbia and Ontario became the primary venues of innovation. Since 2015, the Liberal Trudeau government has attempted to streamline these different approaches within a pan-Canadian framework, yet with modest success. While policy turns from the center undermined the stabilizing structures of institutionalized intergovernmental coordination in Germany, comparable institutional conditions favoring continuity never existed in Canada. In both countries, governments failed to revise modes of intergovernmental governance in order to meet the challenges of transformative policy.

By comparing two different federations, this article does not draw any conclusions about the relative advantages of federal or unitary systems for addressing the challenges of energy transition. Although federal systems might better organize territorial diversity, different types of federal arrangements vary in their capacities and approaches to managing conflicts arising from the transformation of an energy regime. The following section outlines the concept of transformative policy and its theoretical implications. The second section compares the territorial structures of energy provision in Canada and Germany, showing how redistributive intra- and intersectional conflicts affect territorial politics and how they interact with institutions and party politics in both federations. In light of the theoretical concept of transformative policy, the comparative analysis of energy policy in Canada and Germany in section three explains why significant policy change occurred, although delayed and less determined in Canada than in Germany, and why stabilizing this policy is still a challenge in both countries. The conclusion argues that transformative policy requires the adaptation of governance structures, which is still an issue to be addressed in both federations.

### **The Challenges of Transformative Policy**

The concept of transformation has been applied in social science to describe deep structural changes in economies, societies and political regimes. This article focuses on transformation of a “policy regime”, that is “the governing arrangements for addressing policy problems” (May and Ashley 2013, 428). These arrangements include a comprehensive set of ideas and goals, regulative and (re)distributive programs, policy instruments, and institutions determined to design and implement these programs or instruments. Usually, governments modify policies without revising a whole regime, and decisions affect specific parts of programs or instruments. In contrast, a transformative policy aims at a comprehensive and significant change of ideas, instruments, institutions, processes, actor constellations, and power structures in the policy field concerned. Envisaging a long-term development, it starts by significant policy change followed by a continuous evolution and adaptation of the new policy.

In a temporal view, transformative policy can be characterized by two different sequences: the redirection of a path-dependent development, and the continuation of the changed path of policy development. In the first sequence, a government decides on a substantial change of policy. Historical institutionalism suggests that it will only succeed when there is a critical juncture that reduces the constraining effects of institutions (Soifer 2012). However, critical junctures are also characterized by institutional instability, and such situations do not generally favor significant policy change. An alternative explanation points to the rise of new ideas which crystalize in a new policy paradigm (Hall 1993). Paradigms are more than just programmatic policy ideas; they encompass broad and general principles that transcend individual policy sectors (Skogstad and Schmidt 2011, 7). They usually originate outside the established policy regime, often in the transnational realm, and manifest themselves in new ideas and instruments that promote long-term transformative change. They penetrate existing paradigms with which they may collide. Ideational change is filtered and mediated through institutions. Governments that aspire to advance transformative policy change need to strategically use the opportunities provided by existing institutions. Differentiated institutions, in particular, allow actors to benefit from various venues or redundant channels of interaction, not only to change an agenda (Baumgartner and Jones 1993, 25-28) but also to establish a new policy paradigm.

The second sequence starts when a new path of policy change has been established. Once this occurs, governments must implement and stabilize the new policy regime as well as adjust policies to varying circumstances arising during the transformation process. It is likely that an evolutionary process incrementally strengthens the new policy regime and downgrades the old one. Yet depending on “policy feedbacks” that can enforce or undermine a policy (Jacobs and Weaver 2015), a restoration of old policies and policy regimes cannot be ruled out. As Patashnik (2006) has argued, it is often easier to enact a new policy than to sustain it over time. Such effects are particularly relevant in federal systems (Karch and Rose 2019). Here, a larger number of actors may have a vested interest in the established policy regime and these actors can use institutions to hamper or even reverse transformative policy.

In terms of structures, a transformative policy is likely to start by “layering” (Mahoney and Thelen 2010, 16) a new program and institutions over the old policy regime. If implemented successfully, the ensuing process of stabilization of the new path of development incrementally expands the scope of the new regime, which finally “drifts” (2010, 17) towards a transformed policy. This long-term process of policy evolution needs to be supported by guiding ideas amplifying the new policy direction (Skogstad and Schmidt 2011, 12), as well as appropriate governance structures. Such supporting institutional mechanisms facilitate necessary adjustments to changing conditions, therefore stabilizing the new policy against retarding or obstructing ‘counter-action’.

The transformation of a policy regime can be justified by the public interest. Still, it changes the distribution of resources to private actors, the fiscal capacities of governments, and the allocation of power in politics. If those who end up as ‘losers’ cannot prevent a transformation, they will try to shape the process and affect the implementation of the new policy. Managing redistributive conflicts during the whole process constitutes the most challenging task for governments. This is particularly true in federal systems, where many veto points exist (Immergut 1990), and where transformation affects the territorial structures of a policy regime.

### **Territorial Structures of Energy Policy Regimes in Canada and Germany**

As mentioned, policy regimes are characterized by an agenda (shared perceptions of problems, aims, and guiding ideas), political conflicts, institutions, and patterns of coordination (governance) to manage conflicts. Energy policy is shaped by three determining factors: technological developments, the interests of providers and consumers of energy, and the distribution of power both between the public and private actors and within government. By focusing on federal systems, the territorial dimension – that is the geographical distribution of energy sources and consumption and the organization of federalism and democracy – is particularly relevant. Canada and Germany display variation in the territorial structures of their energy systems and their types of federal democracy. It is hypothesized that these differences account for the variation seen in the patterns of transformation.

In Canada, the extraction and export of natural resources has always fulfilled an existential function for economic development, as expressed in the notion of the ‘staples economy’. The sequential development of different staples – from fur and fish to wheat and lumber to oil and gas – has determined the emergence of settlements, infrastructural policy, and even political institutions (Innis 2017). Canada’s political economy has become much more diversified over the course of the twentieth century (Wellstead 2007). Yet the regional concentration of carbon-based energy resources (most notably oil and gas in British Columbia, Alberta, Saskatchewan, and Newfoundland and Labrador) and renewables (in particular hydropower in British Columbia,

Quebec, Manitoba, and Newfoundland and Labrador) continues to contribute significantly to Canada's economic prosperity. This pattern of regional concentration also shapes interregional conflicts in energy policy development. During the 1990s, the province of Alberta was responsible for about 60 percent of Canada's energy production, and the tar sands in the Northern part of the province contain the third largest oil reservoir of the world (Macdonald and VanNijnatten 2003, 76). Saskatchewan, the second largest oil producing province of the country, also exports uranium, coal, and gas. Partly due to the carbon intensity of oil production, both provinces are also big energy consumers. Together with Newfoundland and Labrador, these "petro-provinces" (Carter 2020) have largely contributed to steadily increasing carbon emissions (Carter 2020; Macdonald 2020). In contrast, Manitoba and Quebec, for example, generate more than 95 percent of their energy consumption through hydroelectric power (The Carbon Brief 2019) and Quebec exports hydroelectric power to the northeastern United States. Quebec has become an important proponent of climate mitigation policy, while Alberta and Saskatchewan have consistently opposed instruments that would impose stricter regulations on their energy sector.

Germany's industrialization was driven by the availability of coal. After WWII, the country became dependent on the import of crude oil. Hard coal mining became too expensive compared to imported coal. The expansion of nuclear power compensated for the lack of fossil energy sources, but was contested by the German public (Eberlein and Doern 2009, 39-46). Coal extraction was, and still is, concentrated in certain regions. Germany's nuclear power was mainly produced in the western regions of Germany and particularly in Baden-Württemberg and Bavaria. The shutdown of nuclear power by 2022 and coal power by 2038, and the transition to renewables, has significantly changed the regional structure of the energy system. Wind turbines are more efficient in the north and in the low mountain ranges in Hesse, Rhineland-Palatinate, and Thuringia, while solar energy is more developed in the south.

In Canada and in Germany, energy supply is considered an essential part of public infrastructure. Energy markets were liberalized and de-regulated as a result of Free Trade Agreements in North America, and economic integration in Europe. The impact of these changes differs among regions. In Canada, British Columbia, Manitoba, Newfoundland and Labrador, and Quebec resisted the privatization trend and retained vertically integrated utilities, which are responsible for the generation, transmission, and distribution of electricity. In Germany, corporatist governance arrangements including associations of industry and unions were dissolved, although they still exist in the coal sector at the Länder level. In both federations, state actors – the Länder/provinces and the federal government – still play an important role in attracting investment and facilitating infrastructure projects, most notably pipeline and power line construction.

With regard to institutions of government and patterns of governance, federal democracies in Germany and Canada represent different models. Canadian federalism features a dual allocation of powers. Legislative competencies for energy and environmental policy are distributed between both governmental tiers. The provinces have exclusive jurisdiction over their land-locked natural resources, regional development, and property rights. In addition, provinces can levy taxes and royalties. The federal government has nevertheless considerable power in energy and environmental policy through its competencies for international and interprovincial trade, and interprovincial transportation. In addition, a residual clause concerning the peace, order, and good government (POGG) of the Canadian Constitution affords the federal government the right to bypass the institutional constraints of decentralized powers. On both levels, Westminster democracy leads to a concentration of power in the executive. Accordingly, elected governments

are not required to negotiate coalition agreements, and they have considerable discretion in drafting legislation based on the principle of parliamentary sovereignty.

Canada's institutional configuration encourages policy innovation, but also swift reversals. Intergovernmental cooperation is highly contingent on governments' willingness to work together, which often makes it difficult to consolidate coherent and encompassing policy solutions over time. In the area of energy and climate mitigation policy, the Canadian Council of Ministers of the Environment (CCME) offers a framework for federal, provincial, and territorial cooperation. The CCME was critical to negotiating the 1998 Canada-wide Accord on Environmental Harmonization (CCME 1998). Other important agreements were reached through peak level negotiations, either horizontally through the Council of the Federation, which was established in 2004, or vertically through First Ministers' Conferences. Yet such compromises remain fragile, as agreements are not binding and individual governments can ignore them in practice, refuse to sign, or choose to opt out (Macdonald 2020). Finally, Indigenous Peoples have emerged as increasingly important stakeholders in energy policy, especially after the Supreme Court of Canada has strengthened their rights in several landmark rulings made since the 1970s.

German federalism, by contrast, is more integrated. The federal level has broad legislative competencies over energy and environmental policy, while the Länder have administrative responsibilities to implement federal laws. In addition, the municipalities provide important services, although they lost some relevance due to liberalization, which strengthened big corporations. Unlike in Canada, this institutional framework creates an incentive for closer coordination. Whenever federal legislation affects Länder powers, e.g., regulates implementation by Länder administration, the federal government has to negotiate with Länder governments to prevent a veto by the Federal Council (*Bundesrat*). Both the federal and the Länder governments interact through intergovernmental conferences, administrative networks, and within political parties that are part of coalition governments on both levels. Unlike in Canada, this institutional configuration tends not to stimulate abrupt policy changes. Rather, it is more suitable for consolidating and sustaining a transformative pathway once it has been established. Interestingly, however, policies in the field of energy transition reveal different dynamics.

## **Politics of Energy Transition in Canada**

### *Initiating Energy Policy Transformation: From Mulroney to Martin Governments*

During the 1980s, the emergence of the policy paradigm of sustainable development in transnational discourses increasingly challenged established approaches to economic development. Climate change surfaced as an increasingly pressing issue. The need to work towards a low-carbon economy clearly resonated in Canadian politics (Macdonald 2020; May 2007; VanNijnatten and Macdonald 2003).

The Progressive Conservative government of Brian Mulroney (1984-1993) envisaged a pioneering role for Canada in advancing climate change mitigation policy. Environment became a high portfolio cabinet post. The government advanced several policy initiatives on the international and domestic levels, such as the Montreal Protocol (1987), and the 'Green Plan' (1990). They also made Canada's first commitment to freeze the nation's greenhouse gas (GHG) emissions at 1990 levels (May 2007, 387-90).

The two succeeding Liberal governments under Jean Chretien (1993-2003) and Paul Martin (2003-2006) largely followed these initial steps and consolidated the path taken. Both governments developed four major programs: The National Action Program on Climate Change (1995), the Action Plan 2000 on Climate Change (2000), the Climate Change Plan for Canada (2002), and the Project Green (2005). All four programs adopted a transformational rhetoric, emphasizing the need for encompassing and effective long-term measures to significantly reduce GHG emissions. The National Action Program on Climate Change, and the Climate Change Plan for Canada, are particularly noteworthy as they were developed as a framework agreement with the provinces, the latter for the implementation of different measures to work towards the goals set out in the Kyoto Protocol, which Canada ratified in December, 2002. Project Green, which also included elements of a cap-and-trade system for large final emitters, however, was never put in place (Macdonald 2020).

These policy innovations indicate a gradually shifting balance between positive and negative feedback effects. For stakeholders with strong vested interests in the conventional, staples-based model of economic development, the petro-provinces as well as the federal Department of Natural Resources (today: Natural Resources Canada, NRCan), climate policy generated negative feedback effects. For others, most notably provinces like Québec, environmental groups, and the federal Department of the Environment (today: Environment and Climate Change Canada, ECCC), these measures were the first positive steps redirecting energy policy towards a low-carbon economy.

Canada continuously failed, however, to meet its own GHG emissions reduction targets. This was not only a consequence of policy inconsistencies, but also of a lack in federal leadership to create procedural governance reforms to consolidate initial policy changes.

First, energy policy transformation was complicated by energy producing provinces, especially the petro-provinces: Alberta, Saskatchewan and, since about 2005, Newfoundland and Labrador (Carter 2018; Macdonald 2020). Their jurisdictional authority over natural resources and regional economic development affords them with considerable power to shape both energy and environmental policy, thereby limiting the institutional scope of the federal level. Given the regional concentration of fossil energy resources, these provinces have had a strong incentive to maximize energy production while opposing regulatory environmental constraints to meet Canada's international emission targets (Brownsey 2006; Carter 2020).

Second, the energy industry and its powerful representatives, most notably the Canadian Association of Petroleum Producers (CAPP), strongly lobbied both levels of government for a continental energy strategy based on liberalization, deregulation and close integration of the North American energy sector. In close alliance with the oil producing provinces, they anticipated considerable profits from a liberalized, integrated market that would facilitate the extraction of non-renewables, most notably oil and gas (Brownsey 2006; 2007). Although federal governments initiated transformative policy in the late 1980s and sought to consolidate these programs in the 1990s and early 2000s, they never prioritized climate mitigation policy over conventional economic development goals. And despite some modest efforts to sustain a conversation through the National Roundtable on the Environment and Economy (NRTEE), they never envisaged a

long-term strategy to orchestrate the ‘politics’ of transformative energy policy change by creating necessary governance capacities in the intergovernmental arena.<sup>3</sup>

*“The Empire Strikes Back”: The Harper Era*

The election of Stephen Harper’s Conservative federal government in 2006 resulted in a major backlash. This dynamic resembled a pattern Eric Patashnik (2006, 32) labelled “the Empire Strikes Back”: Canada witnessed the reversal of a very modest reform trajectory that had not yet been sufficiently consolidated through a major reconfiguration of the established policy regime.

Federalism enabled the Harper government to adopt an approach fully aligned with the interests of oil and gas producing provinces. From the perspective of the federal government, the contradictory policy imperative was simply resolved by abandoning any aspirational goals towards reducing Canada’s GHG emissions, as exemplified in the government’s exit from the Kyoto-Protocol in 2011. Already before he became leader of the new Conservative Party of Canada, Harper identified the international agreement as a “socialist scheme”, and mobilized his supporters to engage in “the battle of Kyoto – our campaign to block the job-killing, economy-destroying Kyoto accord” (CBC 2007). His aim was to establish Canada as a global energy superpower (Brownsey 2007). Under Harper, the federal government used its institutional resources to massively support resource extraction and export, especially by facilitating the expansion of pipeline projects like the Trans Mountain and Keystone pipelines, and by dismantling environmental regulations. Two amendments of the Navigable Waters Act in 2009 and 2012, the latter as part of an Omnibus Bill, as well as the dismantling of the Fisheries Act in 2012, were particularly controversial as they significantly curtailed the impact assessment process and reduced federal oversight for major pipeline projects in order to facilitate and fast-track energy projects (Brownsey 2013).

Resource extracting provinces, most notably Alberta, Saskatchewan, and Newfoundland and Labrador welcomed this approach, which coincided with soaring oil prices between 2005 and 2014, furthering their incentive to maximize resource extraction to realize windfall profits. Indeed, a cross-provincial comparison of the four fossil fuel extracting provinces between 2009 and 2014 by Carter, Fraser and Zalik (2017) reveals a trend towards energy policy governance convergence that mirrored the approach of the federal government. In order to accelerate energy projects, governments in all four provinces sought to streamline environmental policy in a way that made public involvement more difficult and avoided cumulative impact assessments.

The vacuum in energy governance left by the Harper government, however, also created an opportunity for sub-federal policy innovation that would, in the long-term, re-activate Canada’s transformative trajectory. As the transnational and domestic discourse on climate change intensified, the balance between positive feedback effects that stabilized the conventional economic trajectory, on the one hand, and negative feedback effects that reflected increasing costs of this regime, on the other hand, began to change. Climate change has become a more salient issue in Canada as elsewhere since the mid-2000s. Global warming has continued to intensify, and its consequences have become increasingly visible – and costly – even in the Global North. Major flooding (e.g., in Alberta in 2013 and in Québec and Ontario in 2017 and 2019), and wildfires (e.g.

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<sup>3</sup> In addition, Canada’s constitutional crisis of the 1980s and early 1990s, along with dramatically rising debts and deficits, further complicated energy policy transformation. These issues not only dominated Canadian politics during that time, but also generated profound intergovernmental conflict, which would have been further exacerbated through a more ambitious approach in energy policy.



in Alberta in 2016 and in British Columbia in 2017 and 2018) impacted not only the affected populations, but also the insurance industry and governments. A parliamentary report registered a significant increase in expenditures for the Disaster Financial Assistance Arrangement Program since 2009 (Commissioner of the Environment and Sustainable Development 2016). Since 2014, these trends have coincided with sharply dropping oil prices, which have created an incentive for fossil fuel divestment. In light of the ongoing increase of Canada's GHG emissions and inconsistent federal leadership, some provinces became the main arena for continuing the transition towards a low carbon economy during the Harper era (Chahal et al. 2014; Winfield and Macdonald 2012).

Ontario, for example, enacted two ambitious policy innovations, the 2007 Climate Change Action Plan and the Green Energy Act of 2009. In addition to new incentives and subsidies for energy efficiency and feed-in tariffs for renewable energy, the former entailed a commitment to phase out coal-fired electricity production by 2014. Between 2007 and 2012, the province was able to achieve a significant reduction of GHG emissions, while the trend for the rest of Canada was increasing (Government of Ontario 2014). Even the petro-provinces did not deny the climate change challenge and acknowledged their responsibility to act, as reflected in their policy and administrative reforms. Alberta had already introduced the Climate Change Emissions Management Act (CCEMA) in 2002, Saskatchewan created a Climate Change Secretariat in 2007, and Newfoundland and Labrador established an Office of Climate Change, Energy Efficiency and Emissions Trading in 2009.

These initiatives, however, never effectively mitigated externalities emanating from non-renewable resource extraction (Carter 2018). In this context, the role of carbon pricing as a more effective policy instrument to reduce GHG emissions has gained importance in Canada as elsewhere. Again, the (arguably) most important policy innovation was introduced at the sub-federal level. British Columbia became the first province to introduce a carbon tax in 2008. This reform gained country-wide attention as it effectively contributed to reducing fossil fuel consumption by more than 17 percent per capita within the first five years after it was introduced (Elgie and McClay 2013). An alternative policy choice to a carbon tax was adopted by the governments of Québec and Ontario. Within the broader framework of the Western Climate Initiative, a non-profit organization established in 2007 by several US governors with the aim to promote a shared carbon market in North America, Québec and California created a cap-and-trade system in 2013, which Ontario briefly joined in 2018 as part of the provincial government's new Climate Change Action Plan of 2017.

Provincial steps towards carbon pricing were formative in the sense that they geared the debate towards this instrument to reduce GHG emissions, rather than relying primarily on subsidies for green technologies, information, and voluntary agreements with industries to reduce their emissions. At the same time, carbon pricing remained highly controversial among provincial governments. Despite these differences, the provinces began to coordinate their activities horizontally through the Council of the Federation. Since 2007, energy policy has been one of the few persistent topics discussed among premiers during their annual meetings. Agreement was reached first on several position papers, which were eventually consolidated into a more comprehensive framework agreement in 2015: the Canadian Energy Strategy (Council of the Federation 2015). In this agreement, the provinces reinstated the need for ongoing horizontal coordination in order to minimize negative externalities resulting from resource extraction and transport, and to reduce energy consumption. Despite the resurgence of sub-federal policy innovation, Canada's approach to tackling climate change through energy policy transformation

remained scattered and diffuse, lacking effective mechanisms that would foster stabilization through coordination.

### *Restoring Transformative Energy Policy Under the Trudeau Government*

The election of the Justin Trudeau Liberal government in 2015 brought with it a promise to restore transformative policy within a pan-Canadian framework on climate change mitigation. Trudeau announced his government would provide national leadership, put a price on carbon, and reduce carbon pollution (Liberal Party of Canada 2015). During the election campaign, Trudeau promised meaningful collaboration with all major stakeholders, most notably provinces, territories, and Indigenous Peoples. However, in terms of policy design, the Liberal Party's approach revealed considerable continuity with that of the Chretien and Martin governments. Most notably, it did not entail a commitment to phase out oil and gas extraction; on the contrary, it acknowledged the need to promote fossil fuel extraction and export to secure Canada's economic prosperity, but intended to reinvest revenue from oil exports to drastically reduce GHG emissions domestically (Dagg et al. 2018).

Within less than six months after he had gained office, Trudeau hosted two First Ministers' Conferences which resulted in the so-called Vancouver Declaration in March 2016. In this joint communiqué, which partly built on the Canadian Energy Strategy of 2015, the federal government and its provincial and territorial counterparts agreed that a "fair transition to a sustainable, low-carbon economy is necessary for our collective prosperity, competitiveness, health, and security". The declaration served as a first step towards a more general framework agreement which was signed in December 2016 by all governments except for Saskatchewan and Manitoba: The Pan-Canadian Framework on Clean Growth and Climate Change (PCF).

The PCF represents an ambitious framework for reactivating transformative policy. It is encompassing, combining regulatory measures and distributive policy incentives with substantial federal commitments. This achievement was "historic" not only in terms of the degree of policy change the PCF entailed after years of federal inactivism, but also because the Trudeau government initially acknowledged that unilateral federal policy innovation is not sufficient; instead, it sought to facilitate close intergovernmental coordination to effectively generate its desired outcomes (Chahal et al. 2017, 175).

While this abrupt procedural and policy change demonstrated again the innovative capacity of Canadian federalism, structural conflicts soon reemerged and threatened to jeopardize Trudeau's new pan-Canadian approach. Saskatchewan's and Manitoba's refusal to sign the agreement already indicated that the compromise was highly fragile. It did not take long until a major rift between provinces re-emerged. The bone of contention was, and still is, carbon pricing, a core element of the PCF. When the Trudeau government announced the introduction of a federal carbon tax applicable only in those provinces that do not have in place a carbon pricing system by the end of 2018, it became obvious that the new collaborative spirit between the provinces and the federal government was hardly sustainable. This conflict further intensified when Parliament passed the government's Greenhouse Gas Pollution Pricing Act in June 2018, which became an important issue in the Canadian federal election of 2019. Conservative premiers and politicians heavily opposed this policy instrument, partly for ideological reasons and partly because they considered it as an unconstitutional, unilateral federal interference in provincial jurisdiction. Saskatchewan launched a constitutional reference case already before the Act was passed in April 2018, and the newly elected conservative governments in Ontario (2018) and Alberta (2019) followed suit, supported by Manitoba and New Brunswick. In addition, Ontario and Alberta immediately

repealed legislation that had put in place a provincial carbon pricing system by their predecessors, thus reversing earlier policy innovations.

As of this writing, the federal government appears to be winning this battle over carbon pricing with the provinces. While the Trudeau Liberals were reduced to minority status as a result of the 2019 federal election, the Conservative Party's anti carbon tax campaign did not resonate with Canadian voters (Pammett and Clarke 2021, in this issue). What is more, although the final decision of the Supreme Court of Canada on the constitutionality of the federal carbon tax is still pending, two of three provincial courts of appeal followed largely the federal government's justification of the reform. While the Alberta Court of Appeal ruled the federal carbon tax unconstitutional, Saskatchewan's and Ontario's courts of appeal confirmed that fighting climate change is a matter of "national concern", which allows the federal level to evoke one branch of the peace, order, and good government clause of the constitution to unilaterally introduce such an instrument. Public opinion and all political parties, except for the Conservatives, support a more determined approach to tackling climate change. However, the governance structure of the policy regime has not been successfully reconfigured to re-align the interests of core stakeholders and constituencies.

The COVID-19 pandemic appears to have reinforced this pattern. While provincial governments are preoccupied with developing emergency responses to the public health crisis, the federal government announced it would seize this unexpected opportunity to launch a 'green' and 'more equitable' recovery strategy. In its fall economic update, the Liberal government announced measures like the Home Energy Retrofit program, which includes CAD 2.6 billion over seven years to improve energy efficiency of homes or support for zero emission vehicles (Department of Finance 2020). It also tabled a new accountability framework, which promises to exceed the original GHG emission reduction target for 2030, and commits to achieve net zero emissions by 2050 (House of Commons 2020). However, the government does not intend to phase out fossil fuel development and extraction (Wells 2020). Hence, there is neither a significant departure from previous policy approaches to the energy-climate change mitigation trade-off on the horizon, nor did the federal government announce any plan on how it intends to revive its earlier efforts to establish a more robust governance structure necessary to consolidate transformative energy policy through intergovernmental relations.

## **Politics of Energy Transition in Germany**

### *Initiation of Energy Policy Transformation Under the 'Red-Green Coalition' Government*

Like in Canada, energy has been a highly contested issue in German politics. Traditionally, the federal government's energy policy was aimed at the provision of stable and low-cost energy (Eberlein and Doern 2009; Illing 2016, 65-125). During the first two decades after World War II, coal, crude oil, and nuclear power were the main energy sources used to fuel the economy. Debates about a transformation of this energy system started in the 1970s when citizen protests against nuclear power intensified and when the Organization of the Oil Exporting Countries (OPEC) increased crude oil prices in 1973 and again in 1979. Early on, experts began to discuss the potentials associated with a decentralized energy system based on renewable sources. The 1986 disaster in Chernobyl turned public opinion against nuclear power and, with the rise of the Green Party during the 1980s, safety concerns with nuclear power plants found expression in federal and Länder parliaments. At about the same time, the end of the Cold War in the late 1980s and the

discovery of off-shore oil and gas resources in the North Sea nourished the hope that fossil fuel supplies would be guaranteed for the foreseeable future. The liberalization of energy services in the European Common Market stabilized the carbon-based energy system but challenged the established policy regime which was based on a close cooperation between energy providers and governments. Thus, the last two decades of the 20<sup>th</sup> century saw increasing conflict in energy policy, and this was expressed in public opinion and in debates among experts.

In 1998, the federal government finally set off significant change in German energy policy, against formidable odds linked to the strong influence of major industries, ensuing path dependencies of the policy regime and associated institutional constraints of cooperative federalism. The new Social Democratic (SPD) – Green Party coalition reached an agreement to phase out nuclear power and to promote renewable energy. The coalition initiated legislation to significantly renovate the previous government's regulation on renewable energy: the 1990 Electricity Feed-in Act. This Act compelled grid operators to distribute power from renewables generated by small power companies and to pay them a guaranteed rate. Although the German parliament had passed this law without significant debate (Deutscher Bundestag 1990, 18162-63), big power companies increasingly opposed this policy over time when they realized the impact the rising share of renewables was having on their industries. Yet the legal action they pursued against the law failed. Both the Federal Constitutional Court in 1996 and the European Court of Justice in 2001 dismissed constitutional claims against guaranteed feed-in tariffs.

Within Germany's newly liberalized energy regime, the 1990 Act aimed to prevent a closed shop situation in an energy market controlled by the country's four grid-operators, but its effects were limited (Stefes 2014: 60-63). The SPD – Green Party government substantially revised and extended this policy while at the same time reinforcing its fundamental instrument, the feed-in tariff. The 2000 Renewable Energy Sources Act increased the level of remuneration for renewables fed into the grid. The added costs were financed by a surcharge on the regular market price for electricity.

Unlike the case of the 1990 legislation, this Act required the assent of the *Bundesrat*, the legislative body representing Germany's 16 *Länder*. At that time, opposition parties participated in the majority in the *Länder* governments, meaning the *Bundesrat* could be expected to veto federal legislation. However, the *Länder* governments did not obstruct the transformative policy. The legislation on renewable energies was combined in a policy package with a plan to phase out nuclear power. These two separate parts of the legislative program were prepared in different arenas. The legislation on nuclear power transposed an agreement which had been negotiated with the affected private power companies. Chancellor Gerhard Schröder used this public-private agreement to discipline opponents to the legislation on renewable energy within the SPD – Green Party coalition and within his own party, and to weaken potential opposition from within the *Bundesrat* coming mainly from the affected *Länder* (Hirschl 2008, 155-158). In a quasi-corporatist arrangement, Chancellor Schröder fixed the legislative agenda and tied his cabinet's hands to the negotiated policy. Since public opinion favored a phase out of nuclear power, the *Länder* governments refrained from vetoing the bill. Consequently, they accepted the Renewable Energy Sources Act as a necessary corollary; it fostered the development and application of renewable energy technologies (solar, wind, biofuel, and geothermal power) that could replace nuclear power. Certainly, public opinion supported energy transition, but significant policy change was made possible by the shift in power that occurred among the three arenas of negotiations that usually structure the federal legislative process: negotiations within the governing coalition, between federal-*Länder* governments, and between the federal government and private stakeholders. In this

case, coalition bargaining and negotiations with private actors dominated joint decision-making in the federal system. The strategic interplay between these arenas also helped to sideline other potential veto players like the Social Democratic Minister of Economics, Werner Müller and the affected firms that had threatened to or did take legal action against the federal legislation. In the end, informal negotiations in overlapping arenas helped to trigger policy transformation.

#### *Path Dependent Transformation and Policy Feedback*

The new policy instigated a process that transformed electricity supply. Guaranteed feed-in tariffs made renewable energy technologies competitive in the electricity market. They enabled small firms, farmers, and house owners to participate in a market that in the past had been dominated by big industries (Mautz 2012). Incremental adjustments in feed-in tariffs prevented windfall effects that could have undermined the market mechanism. By using tariffs to cover the costs, the financial burden of transformation was allocated to consumers. This had another positive effect for the environment as it incentivized households to save electricity. Moreover, by relying on the market mechanism, transformative policy stabilized the path of change. The annual share of renewables in gross electricity consumption has continuously increased, rising from 3.4 per cent in 1990 to 42.1 per cent in 2019 (BMWI 2020, 5).

This is not to say that energy transition has not been without obstacles. For example, after the general federal election of 2009, a new coalition government formed by the Christian Democratic Union (CDU) and the Free Democratic Party (FDP) came to power. This coalition continued to promote renewable energy sources, but they revised federal nuclear energy policy. The decision to extend the period of time nuclear power facilities would be permitted to operate would delay the nuclear phase out by almost a decade. While the FDP in particular supported this partial change to federal energy policy, the nuclear energy extension plan was more contested within the CDU. The 2011 nuclear disaster in Fukushima provided an opportunity for the intraparty opponents of this revised policy to once again change the country's energy policy. What the media labeled a 'turnaround' in effect meant a reversion back to the policy of the previous government. Hence, the coalition did not face any substantial opposition to its policy change in the federal parliament. Only the governments of those Länder that were directly affected by the immediate shut-down of seven nuclear power plants initially opposed the new policy. But the *Bundesrat* had no veto power over this legislation, and the federal government addressed the concerns of the affected Länder in informal and bilateral negotiations. As most of these Länder were led by Christian Democratic governments, they avoided openly opposing the federal government.

During the following years, the Länder engaged in negotiations on revisions of the "Law on Renewable Energy Sources", which adjusted the framework supporting renewables by reducing feed-in tariffs. When the federal government drafted its plan for climate protection (BMU 2016) which was designed to implement Germany's commitments resulting from the Paris Agreement on Climate Change, the Länder governments and civil society had the opportunity to issue opinions and suggestions in an organized 'dialogue' (Bohn et al. 2017). The Länder governments also participated in working groups that had been set up by the Federal Ministry of Economics to consult on energy policy in which they were on equal footing with representatives from the private sector and civil society. The Ministry for the Environment established similar groups for climate policy. As intergovernmental coordination of energy policy occurred in voluntary negotiations, it did not run the risk of ending up in a joint decision trap (Scharpf 1988). Nevertheless, these efforts to find a consensus on an energy transition path failed and no consensus on the new policy direction was achieved.

*From Joint Decision-Making to Top-Down Governance*

The limited powers of the Länder governments are surprising given Germany's 'cooperative federalism', that energy policy affects all levels of government, and that the federal government has labeled energy transition a 'joint task'. In German federalism, joint decision-making in legislation and coordination in the performance of joint tasks would usually be the default mode of multilevel governance. Energy policy is a matter of federal legislative power, and the assent of the *Bundesrat* is required if Länder governments are affected, for instance if they have to implement a law or bear costs. According to the prevailing interpretation of the constitution, these conditions rarely apply in the regulation of energy sources.

This does not mean that Länder and local governments were excluded from policy-making. They have regularly participated in planning and implementation of federal energy policy. For the most part, coordination between levels of governments remained informal. The Länder governments have veto power only in a few matters of federal legislation, one example being with the law defining the need for expansion of the transmission grid. In other instances, Länder governments have a voice in the *Bundesrat* and in pre-legislative negotiations, and they occasionally achieve substantial concessions when the federal government is eager to prevent Länder governments from delaying legislation. In decisions on new power lines spanning across Länder borders, the affected Länder governments, like local governments and private actors, can also submit their opinion to the responsible Federal Network Agency (*Bundesnetzagentur*). Moreover, the system of intergovernmental relations allows federal and Länder governments to consult regularly in conferences and in joint administrative committees. This dense network of communication has provided the federal and Länder governments opportunities to mutually influence policies.

The Länder governments also contributed to the energy transition through complementary measures reducing the use of fossil fuel for heating and in public transport, and by their approval of renewable energy power facilities (in particular wind turbines). They have developed their own energy transition concepts, and defined goals and measures in climate protection programs. These policies have not been coordinated among the Länder governments or with the federal government. Länder energy and climate goals and measures have thus diverged significantly (Ohlhorst 2015; Chemnitz 2018). To a certain extent, this diversity has led to informal competition among Länder, with each Land seeking to develop its own best practices knowing that private organizations monitor the implementation of Länder policies. Whether these comparative evaluations have had any impact on policy-making is difficult to estimate.

Although this loosely coupled pattern of interaction may have contributed to policy learning, coordination processes are dominated by the federal government. The responsible Ministry of Economic Affairs and Ministry for the Environment set up advisory committees and consultative bodies related to all relevant aspects of the energy transition; the bodies include representatives from business, civil society, Länder, and municipalities. In addition, the government sponsors private organizations promoting energy transition (Krick 2018). These processes aim at gaining acceptance and amount to "consensus management" from above, but they have so far failed to effectively manage social and territorial conflicts (Quitow et al. 2016). Social conflicts are expressed by business and consumer organizations that oppose the high costs of the energy transition. Territorial conflicts prompted by affected Länder or local governments have caused delays in grid expansion and in the phasing out of coal-based power generation. Disputes have had to be settled by compromises that externalize costs by further increasing energy prices and burdening tax payers.

Despite undeniable success in Germany's energy transition, including in comparison to Canada, in many areas progress remains sketchy. While a growing share of electricity is being produced from renewable sources, GHG emissions barely declined between 2009 and 2018 (GEA 2020, 135), and according to preliminary data, the reduction goal for 2020 could only be reached under the unusual conditions of the COVID-19 pandemic. The growth of renewables has been slowed down due to delays in the implementation of new transmission lines, the development of technologies to store electricity, and investments in reducing energy consumption. Support for renewables via feed-in tariffs have become more and more contested, and regular adjustments to the Renewable Energy Sources Act have been focused on reducing feed-in tariffs and avoiding an over-supply of renewables instead of advancing sector-coupling. Despite general public support for clean energy, redistributive effects of transformative policy have led to growing resistance to the expansion of renewable energy sources. For different reasons, growing skepticism is nourished by political parties, in particular the FDP and the right-wing populist Alternative for Germany (*Alternative für Deutschland*), energy consuming industries, and citizens opposing the siting of wind farms in their communities.

Remarkably, it was not joint decision-making, the typical mode of intergovernmental coordination requiring that federal and Länder governments act in agreement which usually ended with incremental change, that slowed down the transformative process. The federal government deliberately evaded the constraining effects of the joint decision-system in federal legislating by strategically shifting the power balance toward the center, where political conflicts had to be settled. Federal-Länder coordination was subordinated to federal politics, despite the significant territorial effects of the energy transition. Over time, federal and Länder governments increasingly used informal negotiations to coordinate their policies, which has made the pattern of multilevel governance in energy policy, to some degree, more similar to that practiced in Canada. Länder have been able to exert some influence in ways somewhat similar to those of private actors. This change of the policy regime came at a price, as informal negotiations excluded political conflicts, which became a matter of party competition and bargaining in coalition governments. Redistributive social effects of high electricity prices instigated populist reactions against renewable energy, and territorial conflicts of grid expansion, wind power, and the phasing out of coal power caused delays and high compensation payments.

While the federal government did not engage in restoring and adjusting intergovernmental coordination to the challenges of energy transition, policy-making became segmented into separate sectors. To address this problem, the federal government established a 'platform' consisting of different working groups under the banner 'joint task energy transition'. The coordinative effect of the platform's regular meetings has, however, remained limited; the joint task never materialized into a coherent policy. Differences in the energy policy perspectives of the Ministry for Economic Affairs and the Ministry for Environment contributed to this failure at coordination. As the energy transition became increasingly highly politicized, the federal government's top-down approach and informal coordination attempts through executive networks proved insufficient to deal with territorial conflicts. When in response to public pressure to advance the energy transition, the federal and Länder governments moved on the issue of phasing out coal, they met with strong resistance from the governments of the affected Länder as well as heavy industry. To break the impasse, the federal government agreed to compensate the affected regions with 40 billion Euros. In the end, they managed to negotiate an agreement on shutting down the last coal-fired power plant in 2038. In July 2020, this compromise was transposed into federal law. For the same reasons, significant steps to transform the transport sector have been pushed less by the German government than by the EU. As the automobile industry is concentrated in a few

Länder, the governments of these Länder have defended the industry against regulative policies, even though overall they tend to be supportive of green energy.

### **Comparison and Conclusion**

Transformative energy policy seeks to reduce carbon emissions and to change the complex technical systems underpinning energy provision. Transforming an energy path is a highly challenging task, given that energy systems are technical systems embedded in social structures and defined by power relations among actors. Nonetheless, energy policy can be changed significantly, under particular conditions. Achieving new energy legislation is, however, just one aspect of a complex process of change. Consolidating a new energy path is a further major challenge.

In Canada and Germany, transformative energy change was initiated through a transnational paradigmatic policy shift that has resonated in domestic political discourses on renewable energy and climate change since the late 1980s. Political actors in both countries have acknowledged the need for far reaching change in order to reduce GHG emissions, but they have also encountered significant problems tied to the redistributive consequences of energy policy transformations for affected industries and regions. These conflicts have been mediated through the institutions of federalism and democracy. This study has examined how these institutional conditions have shaped the energy trajectories in both countries.

In principle, Canadian federalism provides more favorable conditions for initiating transformative policies than does German federalism. Federal and provincial governments can unilaterally change policies. However, if coordinated action results from mutual adjustment, unilateral change can lead to a stop-and-go policy. Transformation becomes self-reinforcing only if one side, be it provincial governments or the federal government, takes the lead and other governments emulate policy changes. In reality, negative externalities of provincial policies have obstructed this process (Harrison 2013). In Germany, joint decision-making constrains policy change, yet the federal government circumvented these hurdles when it launched a transformative energy policy. It bypassed the intergovernmental arena by activating quasi-corporatist negotiations with industry, and it centralized power to manage intragovernmental conflicts. While coalition governments at the federal level prevented a stop-and-go policy, and climate policy of the EU contributed to stabilize the transition path (Lederer, 2021, in this issue),

party politics at the center weakened the potential of cooperative federalism to flexibly adjust policies in case of shortcomings.

This study also suggests that variation in the institutional incentives of federal systems alone is not sufficient for understanding similarities and differences in long-term patterns of transformative policy. In contrast to a pure institutionalist approach, the concept of transformative policy suggests that it is necessary to take into account how initial steps taken towards a new policy regime alter the affiliations and vested interests of major stakeholders and how positive and negative feedback effects support or undermines regime change over time. Transformation requires not only policy reform, but also efforts to adjust the underlying governance structure in a way that encourages important stakeholders to support transformation over time. This crucial step has not been accomplished in either Canada or Germany. In both countries, institutional legacies have retarded policy dynamics. When the Trudeau government tried to turn to policy coordination by



cooperation and negotiated agreements with the provinces, confrontative behavior soon re-emerged, threatening the fragile intergovernmental compromise reached on the Pan-Canadian Framework on Clean Growth and Climate Change. In Germany, the federal government used its powers in energy policy to turn joint decision-making into a more top-down governance approach. Yet, it was impossible to sideline Länder governments. Their necessary participation in implementation and their influence on decisions about phasing out coal or fossil fuels in the transportation sector caused feedback effects that weakened the power of those seeking to transform the system into a low-carbon energy direction and slowed down progress.

Avoiding these feedback effects in a federal system requires adjusting the patterns of governance for transformative policy right from the start. This has not happened in either Canada or Germany. Intergovernmental relations did evolve during the transformative process, but this was due more to the efforts of the federal government to gain power, and the reaction of provincial and Länder governments to maintain influence, than to any deliberate policy to consolidate the energy transition through more effective coordination.

Governance structures are particularly relevant for stabilizing transformative policy and facilitating adjustments to changing conditions and challenges. Neither routinized joint decision-making nor politicized and ad hoc intergovernmental negotiations seem appropriate to create a robust policy path. While both modes of multilevel governance can commit governments to a coordinated energy policy, a kind of steering committee with delegates from all levels of government, including municipalities and, in the Canadian case, Indigenous Peoples, could facilitate the consolidation of transformative policy. Such a body could develop and review the general strategy, while administrative committees could coordinate the implementation of individual reform measures to assure greater coherence. Monitoring of implementation processes by experts from the federal and provincial/Länder governments, as well as by other independent experts, constitutes a helpful means to identify problems and propose policy adjustments. Establishing different layers of multilevel governance can be achieved without reforming the federal system or reallocating powers. Rather, it involves altering the patterns of interaction within a policy regime so that it can deal more effectively with the complexity of a policy issue so grand as a low-carbon transformation of an energy system previously dominated by fossil fuels.

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