

# Climate Neutrality and Regional Development

# **Canada and Germany's Common Challenges**

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# **TABLE OF CONTENTS**

About the Authors	3
Abstract	4
Introduction: Historical path dependencies	5
Section 1: Dimensions of transformation	6
Section 2: On regional preference differences in Germany: change	7
aversion	,
Section 3: Canada: carbon neutrality and political theater	15
Section 4: Policy implications: Managing dilemmas	22

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## **ABSTRACT**

The pressing need for aggressive and innovative policies, aimed at the mitigation of climate related crisis, on the one hand, and at bringing about a new social and economic model, on the other, places climate policy at the top of the political agenda. However, an important and often forgotten aspect of the transformation to climate neutrality is regional impact and the policies aiming at social and economic development and differentiation. Germany and Canada provide a good example where regional dynamics add another layer of complexity towards achieving the net zero transition. In appearance at least, governments in both countries are aware that the regional angle is a condition of successful policy development. It follows that regional climate policy urgently needs to be understood more comprehensively.

# **RÉSUMÉ**

Le besoin urgent de politiques innovatrices et audacieuses pour faire face à la crise climatique, d'un côté, et pour faciliter l'établissement d'un nouveau modèle socio-économique, de l'autre, place les politiques climatiques au sommet de l'agenda politique. Toutefois, un élément essentiel et pourtant souvent oublié de ce passage à la neutralité climatique est l'impact de cette approche sur les réalités régionales et sur les politiques qui visent à permettre le développement différentiel de l'économie. L'Allemagne et le Canada sont de bons exemples. Au moins en apparence, les gouvernements des deux pays sont bien conscients que l'angle régional est indispensable au succès de leurs initiatives politiques. Il en résulte qu'il est urgent de mieux comprendre cette dimension régionale de la politique climatique.

#### **Introduction: Historical path dependencies**

The Canadian pollster Michael Adams used to say that "the environment is voters' first priority ... on their *B* list." When the economy is good, when the social climate is dynamic yet peaceful, when global politics are predictable, voters are willing to turn their attention to another set of issues, including the environment. When economic prospects are poor, when public safety and policing issues cause concern, when the state of the world becomes alarming, voters tend to be less daring and to fall back on more immediate interests and worries.

This is exactly what we can currently observe in Germany, where, unlike in 2021, climate protection played nearly no role in the last federal election campaign. Instead, the country's economic weakness — very understandable after three years of stagnation — and the overwhelming migration were the most prominent topics in the election. Migration has brought globalization into concrete (local, regional) living conditions and led to doubt about the effectiveness of the state. In addition, geopolitical conditions have fundamentally changed. The Russian war of aggression against Ukraine, the second Trump presidency, and the fragmentation of the world into spheres of interest have made heightened awareness of the need for defense capability to ensure territorial integrity a central concern.

Nevertheless, the impact of our changing climate – from wildfires, drought and other extreme weather conditions – are not diminishing. Climate change requires a political response. With climate change, the threats to the economy and to the overall wellbeing of the population are such that few people continue to paint environmental issues as just a "B list" issue. In fact, the pressing need for aggressive and innovative policies aimed at the mitigation of climate related crisis, on the one hand, and at bringing about a new social and economic model, on the other, inevitably places climate policy at the top of the political agenda. Carbon policies and climate neutrality are still essential features of many political platforms, with their very own stream of promises and initiatives. Change of that magnitude is expensive and difficult, social progress and prosperity may not be as forthcoming as one wishes, but a broad coalition of different political persuasions supports this transformation, with tangible impacts on the electoral success of those who embrace it.

However, an important and often forgotten aspect of this transformation to climate neutrality is regional impact and the policies aiming at social and economic development and differentiation. Germany and Canada are a good example. In appearance at least, governments in the two countries are aware that the regional angle is a condition of successful policy development. In Germany, the Federal Ministry for Economic Affairs is pursuing a discourse and course of action under the heading, "Shaping the transformation regionally". Canada's department of natural resources similarly stated that, "Regional growth opportunities will come from creating new products and processes or decarbonizing existing ones to thrive in a net-zero future and ensure Canada delivers on its ambitious climate and nature goals." Yet, as we will see in this paper, failure to consider *in practice* the regional dimensions of climate policy have been a major stumbling block.

Regional divergence is proving to be a particular challenge, as existing trends are influenced by adaptation to climate change and the avoidance of emissions of climate-damaging gases. Any intensification of divergent trends strengthens political resistance, especially since citizens are developing an increasing aversion to unreasonable demands or change in these uncertain times.

While the two countries are both federally structured, they have different characteristics of regional differentiation:

Germany's economic spatial structure results from industrialization in the 19<sup>th</sup> century under the political conditions of extreme decentralization: 36 states in the German Confederation tried to promote regional economic development from 1820/30. This is still reflected today in the cluster structure of the metal and electrical industries and the chemical industry.

The strikingly strong industry in Germany in international comparison (measured by the share of manufacturing in gross domestic product) and the associated pronounced joined production of industry and services can be explained largely by this aforementioned spatial structure. Because industrial clusters are anchored in rural areas, regional income differences in Germany are relatively small. Divergences are not as dramatic as in the USA, France and the United Kingdom. The relatively robust adaptation of German industry to low-cost imports from China and other emerging markets was also a defining factor.

Canada's resource sector played a defining role in the country's economy since the early days of the colonial era, pre-Confederation. Resource extraction, taking place for the most part in the country's remote areas,

was, and still is, exceptionally productive and profitable. The oil and gas industry, for example, is responsible for more than 3% of total GDP.

In the 20<sup>th</sup> century, the resource sector attracted highly skilled labor to a series of isolated communities, where a unique *fly in, fly out* culture of workers discouraged the development of substantive local or regional roots. Agriculture, on the contrary, might have prompted settlers to develop a strong connection to the land, but it also came with a constant need for government support to stabilize incomes and to access national and international markets.

#### **Section 1: Dimensions of transformation**

The transformation to net zero has an effective impact on the above mentioned economic spatial structure. The haphazard and sometimes poor development of infrastructure in rural areas (e.g. broadband internet, public services) contributes to this situation, which often comes with a sense of frustration and neglect for local populations who are directly impacted. The working hypothesis is that it is generally easier to implement climate policy requirements in urban centers because economies of scale, as well as economies of scope, can be mobilized here (agglomeration advantage).

The following policy aspects are especially important and should receive special attention in political implementation (politics):

- The *mobility transition* towards low-emission vehicles and more collective mobility (local public transport) places a greater burden on people in rural areas than in urban centers, where there are well-developed local public transport systems. Many rural areas especially in Germany are suffering from the dismantling of rail transport, which was operated in the 1970s to 1990s and is not compensated for by bus routes. Individual mobility therefore remains very important there, although alternative drives are associated with higher acquisition costs. It is not clear if subsidies and tax exemptions can mitigate negative impacts for rural or remote intensive users of fossil fuels (industrial farming; resource extraction, transformation, and transport).
- The transition towards low-emission heating systems places a greater burden on people in rural areas because there is less opportunity to rely on district heating systems and multi-story apartment buildings are less prevalent. Individualized, house-specific heating system, investments are

therefore required, meaning that economies of scale cannot be achieved and alternatives to oil, gas and coal heating systems - such as heat pumps - can be technically challenging (optimal at flow temperatures of 30° Celsius, up to a maximum of 50° Celsius), which leads to considerable additional costs for insulation.

- The energy transition affects rural areas as a reserve of land for the expansion of renewable energies but places a burden on them through the design of network charges. In short: the regions will benefit little from the higher capacity of renewable energies as long as this regulation is not reformed. In any case, this does not encourage a positive attitude towards the transformation in the regions.
- Resource extraction is threatened in certain sectors such as oil and gas, but in domains like mining, the sector is experiencing a new era of prosperity and investment, with direct consequences, negative and positive, for affected communities.

All this means that the life prospects of people in rural areas are changing more than those in urban centers. On the one hand, future value creation will increasingly take place in urban centers due to decisive agglomeration advantages (the so-called "Super Star" cities with "Super Star" companies). On the other hand, the requirements for agricultural production and resource extraction are rapidly and dramatically shifting (sustainability, deliberate CO2 removal, restrictions to intensive agriculture, limited capacity for extensive agriculture, workforce and capital issues, climate regulations and policies at regional level).

It follows that regional policy urgently needs to be understood more comprehensively. The requirements for the transition to net zero outlined above place a disproportionate burden on those regions in particular that are already at the beginning of a negative demographic spiral because of in-country emigration and population movements and where expected public services are no longer guaranteed.

Nevertheless, rural areas are highly important for the energy transition, if only because of their "natural" contribution to carbon retention. It is therefore necessary to think carefully about how rural areas and urban centers can be linked. It must also be examined how, on the one hand, the unity of the economic area and, on the other, the comparability of living conditions (in Germany, Article

72 paragraph 2 of the Basic Law (*Grundgesetz*); in Canada, subsection 36.2 of the Constitution Act, 1982) can be adequately defined and politically operationalized.

Given the institutionalized significance of regional differences in both countries, it is logical to look at the empirical findings for the economic convergence of the regions – measured by gross domestic product per capita. Due to the high degree of interdependence of economic development in Canada with the USA on the one hand and Germany with its European neighbors on the other, it is logical to include both reference areas in the analysis.

Since the beginning of the new millennium, there have been clear differences in the convergence position between the United States and the European Union on the one hand, and Canada and Germany on the other (Figure 1). The coefficient of variation in per capita income of the TL2 regions (for reasons of international comparability; definition of the OECD, which covers both NUTS-1 and NUTS-2 regions) was significantly higher for the EU than for the USA, Canada and Germany at that time. This is not surprising, given the longer and deeper integration of the economic areas in the USA. However, the coefficients of variation of both areas converged completely by 2008. The EU experienced sustained convergence because of the cohesion efforts in the run-up to monetary integration and the efforts of the Lisbon Strategy. In contrast, the USA experienced a continuous divergence in per capita incomes between states until the global economic crisis, which may be due to the regionally differentiated impact of cheap imports since the 1990s as well as to the progressive deindustrialization.

The time profile for Germany and Canada shows interesting peculiarities. In Germany, a continuous process of progressive convergence of the regions has been achieved over 20 years, which primarily reflects the increasing success in developing economic dynamism in the "new" states of the federation post reunification. In contrast, regional development in Canada shows considerable volatility in the short term, which, after strong divergence up to 2005, turns into a trend of convergence over the next 15 years, albeit with higher volatility in the annual data. Since 2017, there has been a robust sideways movement with convergence values only slightly above the level in Germany.

For both countries, the constitutionally anchored convergence is reflected in the level of income per capita. Compared to many other advanced economies, both countries are characterized by relatively little regional divergence and a greater

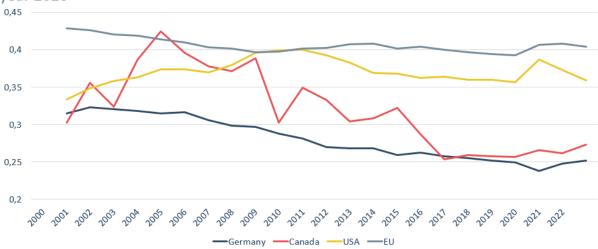
regional balance. In this respect, the starting point for the transformation, despite all its regionally differentiating effects, is not bad at all.

Of course, it should be remembered that citizens' perceptions are hardly based on international comparisons, but rather primarily on the assessment of the specific regional or local living conditions.

#### Figure 1

# Sigma convergence

Coefficient of variation, GDP per capita in purchasing power parities, TL2 regions, base year 2020



Note: EU excluding data for Romania, Croatia, Malta, Cyprus and Bulgaria; data for Belgium only available from 2003 onwards. Source: OPCD, German Economic Inditinte

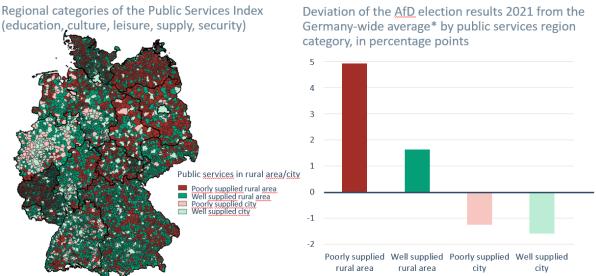
#### Section 2: On regional preference differences in Germany: change aversion

The chances of a successful transformation to net zero depend not only on the hard facts of economic structural change, but also on the soft conditions of the mood and perception in the various regions. Particularly important in this regard are the citizens' assessments of the effectiveness of basic state services (public services) and the economic situation in their own region.

The tendency to vote for a right-wing extremist political party (AfD) is much more pronounced where public services are perceived as inadequate, especially in rural areas in Eastern Germany (Figure 2 & 3). The effectiveness of regional policy is limited by the fact that the population density is much lower there. At the same time, this means that the efforts for transformation - insofar as they are network-based - require higher public expenditure, while private costs must also be higher, since individual households can hardly rely on economies of scale. This is different in urban areas and urban zones (district heating, public transport, sharing models).

#### Figure 2

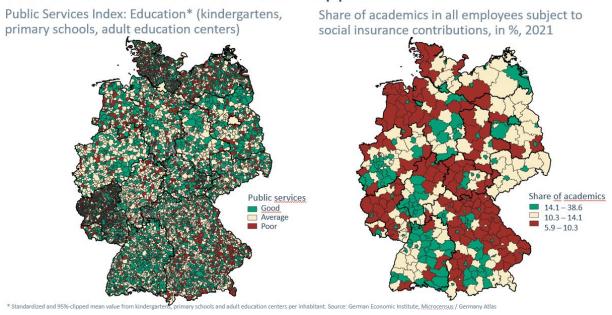
## Public Services: Responsibility of the State (Germany)



Public services index consisting of 15 indicators (standardized and clipped to 95% level); Education: kindergartens, elementary schools, adult education centers; Culture: museums, theaters, libraries; Leisure: swimming pools, youth centers parks; Supply: hospitals, pharmacies, broadband, public transport stops; Security: fire department, police stations; Good/poor supply: above/Debow the mean within the urbanyirral group, city: large and medium-sized cities; rural: sma

Figure 3

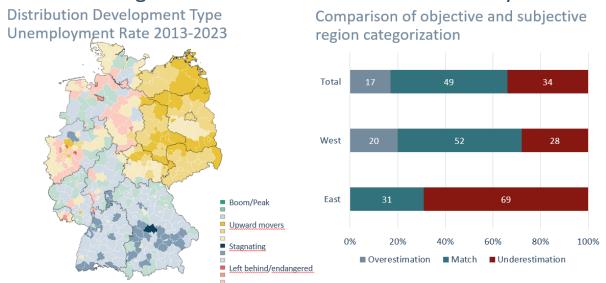
### Public services and educational opportunities



In East Germany, the situation is made more difficult by the fact that citizens are clearly subject to a negative bias in their assessment of the economic strength of their own region (Figure 4). Despite a much more positive labor market development in recent years, these states are perceived as having a much more negative economic potential. This is likely because East German families still have memories of the loss of economic value creation and employment after reunification. The fact that this economic slump after 1990 was due to the lack of competitiveness and the lack of market economy control in the former GDR is often forgotten. The current job risks from transformation and globalization therefore appear to be comparable. This dubious assessment also hinders the view of the opportunities for new things that arise again and again in the market economy, and which are generally taken advantage of.

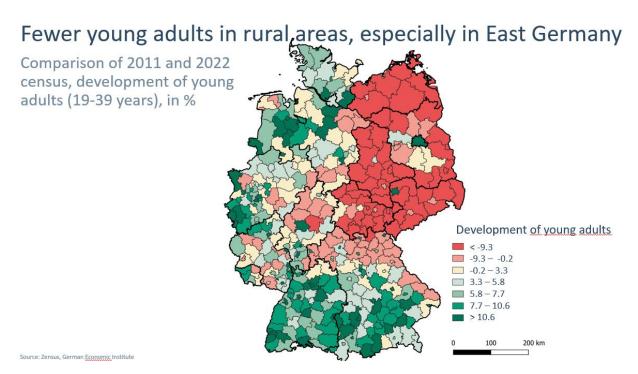
#### Figure 4

### Pessimistic regional assessment in the East Germany



Question: In which region type\* would you most likely classify your district/city? Agreement: Agreement between objective and subjective region categorization; people who objectively live in a lagging region subjectively rate their region as a stagnating region and vice versa. Overestimation: people who objectively live in a lagging or stagnating region subjectively rate their region as a stagnating region and vice versa. Overestimation: people who objectively live in a lagging or stagnating region subjectively rate their region as an up-and-coming or boom region. Underestimation: people who objectively live in an up-and-coming or boom region subjectively rate their region as a lagging or stagnating region.

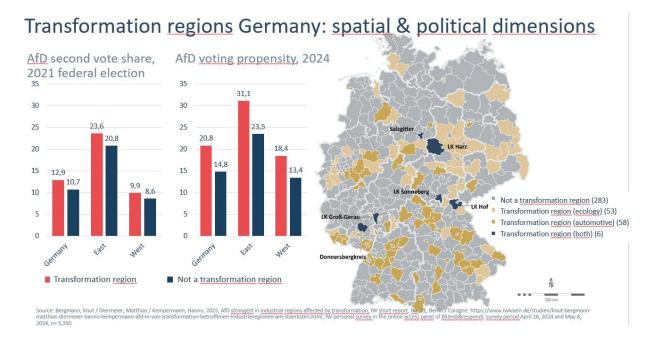
#### Figure 5



There is still a division between East and West. This brings with it important aspects. A significant difference between East Germany and West Germany is the demographic situation and its prospects. The proportion of young people is significantly lower in the East (Figure 5). On the one hand, investing under the conditions of international capital markets in a region with not only a shrinking population but above all a decline in the number of young people does not offer many prospects. On the other, it can be assumed that in regions with a higher average age and a younger population, values are more conservative and less open-minded towards change and immigration. Both are particularly acute in these regions.

If one looks at party preference together with the extent to which the region is affected by the economic and structural transformation, it is clear that a high level of impact leads to a higher share of the vote for the AfD. This difference has become even more pronounced when comparing the 2021 and 2025 federal elections (Figure 6).

#### Figure 6



This aversion to change in the sense of the transformation to climate neutrality is also reflected in the evaluation of individual aspects and policy instruments. For example, AfD voters are particularly negative about wind turbines, and more negative about the conversion of industry to CO2 neutrality as well as about solar parks and above-ground power lines (important for the energy transition) than voters of other parties.

In addition, AfD voters react more negatively to higher inflation, just like non-voters and the voters of the BSW (Sarah Wagenknecht Alliance). In the future with rising CO2 prices, a tendency towards higher consumer price inflation is to be expected in the transition phase until adaptation investments in industry and the energy sector mature, to which the European Central Bank (ECB) should not react in the first round, this trigger for an AfD voting preference is likely to become stronger. This is all the more striking when the Emissions Trading Scheme (ETS 2) for mobility and domestic heating comes into effect from 2027, thereby directly increasing the cost of living for private households.

#### Section 3: Canada: carbon neutrality and political theater

Regional tensions are so tightly interwoven with Canadian politics that it is tempting to dismiss them as unavoidable, much like snowstorms in January or droughts in the summertime. The history of the country since confederation in 1867 is punctuated by strident crises during which balance among regional interests is challenged, followed by periods of fragile equilibrium. The original federal "compromise" was essentially an attempt to settle regional differences between the remaining British North American colonies. The Riel Rebellions of the late 19<sup>th</sup> century, the conscription crises during the two World Wars, the Quebec referendums, followed in 1982 by the "patriation" of the Canadian constitution without the francophone province's support, or even the so-called National Energy Program of the 1980s are only the most famous examples of a long series of confrontations resulting in painstaking negotiations and shaky compromises.

As mentioned earlier, "equalization" is enshrined in the constitution. Federal payments to "have-not" provinces, as defined by a complex and often contested formula, are supposed to compensate for inherent fiscal inequalities among provinces. Perhaps unsurprisingly, this system is praised in the regions with a frail economy and, on the contrary, highly resented in wealthier parts of the country, where taxpayers are regularly told by certain politicians that they subsidize laziness and socialist endeavors (such as day care) with their hard-earned money. Provinces also receive federal transfers for social programs and other joint purposes, but the funds are mostly allocated on a per capita basis and do not contribute much to interregional competition.

Figure 7

MAJOR TRANSFERS [CAN\$]	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
CANADA HEALTH TRANSFER	36,068	37,150	38,584	40,373	41,870	43,126	45,208	49,421	52,081	54,685
CANADA SOCIAL TRANSFER	13,348	13,748	14,161	14,586	15,023	15,474	15,938	16,416	16,909	17,416
EQUALIZATION	17,880	18,254	18,958	19,837	20,573	20,911	21,920	23,963	25,253	26,170
OFFSHORE OFFSETS	44	36	-72	2	86	44	48	-	-	-
TERRITORIAL FORMULA FINANCING	3,603	3,682	3,785	3,948	4,180	4,380	4,553	4,834	5,159	5,489
TOTA FEDERAL SUPPORT	70,943	72,870	75,416	78,746	81,732	83,935	87,667	94,634	99,401	103,759
PER CAPITA ALLOCATION (DOLLARS)	1,959	1,997	2,038	2,098	2,149	2,197	2,256	2,367	2,407	2,440

The same cannot be said of the heterogeneous assortment of federal "regional development" programs, grants and initiatives, traditionally supported by an ever-changing number of regional economic development agencies or ministries. The role in each region was often assigned to a junior member of the federal cabinet. Without regard to the personal qualities of the incumbent, one would suspect this appointment was essentially a way to provide regional balance to the cabinet – programs were designed in Ottawa and funds, allocated sparsely. Yet in parts of the country in which every federal dollar counts, the "regional minister" could be quite influential. He or she finds oneself at the center of a dense network of patronage, in which beneficiaries who depend on federal subsidies for business, educational or social initiatives are expected in return to support Ottawa and to some extent, the governing federal party. A former Conservative leader who dared to criticize the "dependence" and "defeatism" generated by that system learned the hard way not to kick the hornet's nest and ended making good use of regional patronage himself once he became Prime Minister. In March 2025, however, the "trade war cabinet" formed by Mark Carney in advance of the federal election no longer includes regional ministers, whom the new Prime Minister replaced with a single "Minister for Rural Development." It is too early to know if this innovation will stand the test of time and political realities.

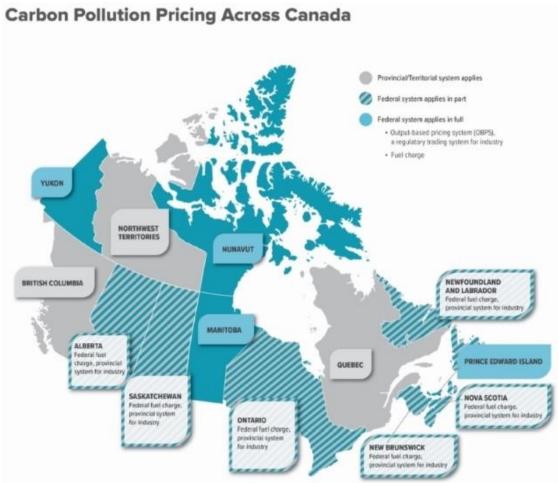
In several ways, the climate crisis is just another episode in this story. For the two provinces in central Canada, carbon neutrality could be seen as an economic opportunity, whether because of the perspective of massive investments to support the conversion of the industrial and technological base (Ontario) or

because of the large-scale availability of "green" energy at highly competitive prices (Quebec). Extracting as many subsidies as possible from Ottawa quickly became a priority for provincial premiers and their industry ministers, as illustrated for example by repeated announcements in 2023 for new battery plants—CAN\$ 20 B for Volkswagen in St-Thomas (ON), followed by CAN\$ 5 B for LG/Stellantis in Windsor (ON), or \$CAN 7B for Northvolt in St-Basile (QC) and \$CAN 600 M for GM in Bécancour (QC), a project which comprised an undisclosed agreement with BASF.

Meanwhile, resource producing provinces are in a totally different situation. In Alberta or Saskatchewan, each climate initiative from Ottawa is perceived as an existential threat. If one's prosperity, and in some ways one's identity, are directly dependent on carbon intensive activities, it is unlikely that person will welcome interventions aimed at restricting or even at phasing out these activities. Only naïve or very optimistic people will buy into the fantasy of thousands of workers moving from the oil rigs or potash mining to "green" jobs, after just a few months of retraining. Only naïve or very optimistic people will expect a complex and sophisticated economic system to pivot without regret or resistance, while at the same time continue to provide Canada with all the financial and fiscal benefits that the country derives from resource extraction and export.

In Alberta, the provincial government, with the support of some industry players from the oil and gas or the ag-food sectors, initially attempted to tame and handle federal climate initiatives, by adopting carbon policies of its own. British Colombia and Quebec, after all, were able to avoid completely federal carbon "pricing", the former by imposing its own tax and the latter by establishing a "carbon market" with ... the American state of California. Alberta was not so lucky, and its successive leaders fought every step, including in the courts, to defeat or at least, to hinder the implementation of federal fiscal or regulatory measures. The nail in the coffin was probably the decision, announced by the Prime Minister in October 2023, to provide a carbon tax exemption for home heating oil users, a measure mostly and openly intended for "Atlantic Canadians." Protests were heard all over Canada – why is the measure limited to heating oil? — and the voices that had previously expressed support for federal carbon policies, and notably among economists, started to question the efficiency and the viability of the scheme.

Figure 8



Source: <a href="https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work.html?utm\_source=pocket\_shared">https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work.html?utm\_source=pocket\_shared</a>

The carbon tax is not the first (and probably not the last) unpopular tax in Canada. The federal Goods & Services Tax (GST), introduced in 1990 by Brian Mulroney, was on all counts even more detested. Yet the latter tax survived, despite hostile gesticulations on both sides of the House in Ottawa, while the former is now expected to be "axed", if the Conservatives were to win the next federal election, or "rescinded", if the Liberals stay in government. For an outside observer, it must be puzzling to see members of the current government, including a Minister for the Environment, admired for his past as an activist, distancing themselves from a core federal policy of the last eight years in the field of climate policy.

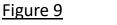
Nobody wants to be associated with an unpopular policy, of course, but to explain this reversal, it is too easy to say that it happens because the government failed to communicate well about the carbon pricing system and its benefits –

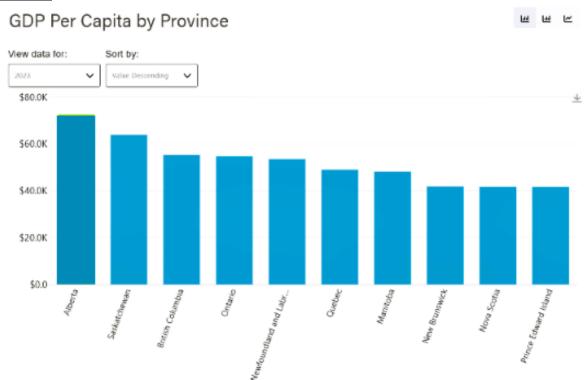
the lazy columnist's "one size fits all" argument. In most provinces, four times a year, people get a tax-free payment from the Government of Canada to "offset the cost of the federal pollution pricing." Residents of remote and rural areas even get a supplement on top of the base payment, to compensate for the impact of the tax on their more carbon-intensive lifestyles. One cannot pay his or her rent with the amount that is paid quarterly, but it is a political signal as strong as ever designed to reach and influence citizens. Multiple polls have shown indeed that people who get the rebate also get the message that comes with it, in their vast majority.

A sizeable minority of Canadians – plus or minus 40%, depending on the precise wording of the question used by polling organizations – believes climate change is the result of natural causes or is just a "theory" not yet proven: it would be surprising if a modest quarterly payment is enough to change their minds. More often than not, these people also tend to support right of center parties, at provincial and federal levels. From an electoral perspective, this is not immaterial. In Ottawa, the last party leader who formed a government with more than 40% of the popular vote was the Liberal Party's Jean Chrétien in 2000. In that context, the support of a steady group of skeptical and disillusioned voters brings an advantage to the Conservatives, if only because it forces the other parties to factor this group in their own strategy. Shunning this block of voters – as the Trudeau Liberals did – means you could end running a minority government. Welcoming them with open arms, like the current Liberal leadership under Mark Carney seems prepared to do, will require that you "walk on the paint," as Chrétien liked to say, and renege on your past commitments.

How is this related to regional dynamics? "Climate indifferent" voters are not distributed evenly across Canada. Not only environmental issues tend to follow the dominant left-right political divide between small c conservatives and small I liberals, but they overlap with longstanding geographical and cultural differences and contribute to aggravate tensions. When Premier Legault from Quebec infamously spoke of Western Canada "dirty oil" in 2018 to justify his opposition to the development of new pipelines in his province, the entire edifice of pan-Canadian solidarity was shaken. When Alberta voted in 2021 to get rid of equalization, after a campaign marked by harsh criticism of Quebec and Eastern Canada "profiteering," targeting the hypocrisy of people who benefit from the wealth created by oil and gas exports but cloak themselves in the language of social acceptability and ecological purity. With this in mind, it is much easier to understand the reactions to the 2018 federal government decision to purchase the Trans-Mountain pipeline (connecting Edmonton in

Alberta to Burnaby in British Columbia) and to invest close to CAN \$34 B in its development. In a nutshell? A sell-out or even a "betrayal" from the viewpoint of central or eastern Canada; a sound investment, which is "worth every penny," and for which there is no reason to express gratitude for Albertans.



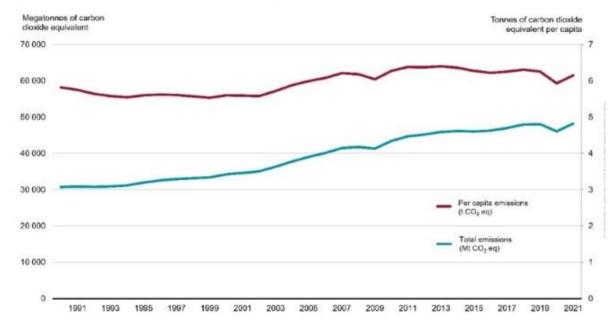


Source: https://economicdashboard.alberta.ca/dashboard/gdp-per-capita/

If only as a thought experiment, what if the climate policy of the federal government had been more successful? Would have public opinion finally come round to the idea of carbon reduction, including the carbon "tax"? Impacts on economic activities would have been more substantial, especially in the resource sector. What would be the current mindset of regions where opposition to carbon neutrality was already important, on the sole basis of distant threats? Fatalism? Acceptance? Revolt? Those among us who tend to underestimate the symbolic dimension of politics need to step back and look at the Canadian carbon policy debate of the last decade. If not for the pandemic, it is probable that emissions would have steadily increased over this period. Oil sands development and bitumen exports have been growing. Quebec drivers have bought more SUVs and consumed more gas, enough to make their Albertan compatriots green with envy ...

Figure 10

Global total greenhouse gas emissions and per capita greenhouse gas emissions, 1990 to 2021



Source: <a href="https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/global-greenhouse-gas-emissions.html">https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/global-greenhouse-gas-emissions.html</a>

Until the last presidential election in the United States, in November 2024, and the more recent political and economic situation that has arisen following Donald Trump's implementation of the first elements of his program in trade and international affairs, the results of the next federal election in Canada – April 28, 2025 – seemed almost inevitable. The Conservative Party of Canada could expect to form the government. Rhetoric aside, however, and taking into account the cuts that the federal bureaucracy would surely incur, it would not have been surprising to see environmental policy remain the same, as happened in previous government transitions. Our changing climate will pursue its destructive course, requiring central authorities to provide money, resources and political leadership to local governments and impacted populations. Canada's international partners would still be expecting the country to live up to its international commitments, especially in the developing world. And of course, the regional fabric would be the same, with the West asking for understanding and patience and the East expecting strong gestures, in a near perfect Newtonian system of action-reaction.

It would be unfair not to acknowledge that carbon neutrality doesn't not impact Canadians equally. The reluctance expressed in Alberta or Saskatchewan toward some federal initiatives is not uniquely grounded in ignorance or reaction, as it is sometimes hinted by Toronto or Montreal based commentators. First, some of the measures that were introduced were truly ill-inspired or counterproductive – something that you cannot see when your understanding of the industry is merely platonic. Second, and it goes back to our initial point on people's priority "lists", it is quite a different stake if your livelihood is threatened and if you are just wondering if your second car should be an EV. For some people, and not only for activists, environment will always be on the A list. This is a challenge that parties (and democracy as a whole) ignore at their peril.

#### **Section 4: Policy implications: Managing dilemmas**

This brief survey is not exhaustive. We could have written a chapter on the ambiguous attitude of the Canadian province of Ontario towards federal climate policies, ranging from anti-tax stickers affixed to fuel pumps to warm embraces of federal investments in the transformation of the car industry. A similar mix of factors is evident in Germany's handling of the coal phase-out. The Coal Phase-Out Act regulates the end of coal-fired power generation throughout Germany; the last coal-fired power plant is to be shut down by 2038 at the latest. The federal government supports structural change in the coal-fired regions to ensure that sufficient, secure and sustainable jobs are created there. The race for subsidies determines the strategy of the federal states and regions; only the provision of a maximum of €40 billion made the compromise acceptable.

These examples show how difficult it could be to disentangle environmental policies from more traditional economic interests. We are also reminded, that federal systems such as Germany or Canada are quite susceptible to tensions and disputes between central and regional governments. The national government might be tempted to treat the provinces or the Länder as junior partners, especially if they are economically dependent, and to use its fiscal or regulatory power to impose its will. Yet even the weakest regions can derail a process if the right approaches, respectful of their rights and responsibilities, are not adopted and the right incentives are not provided.

Among these incentives, it is imperative to consider policy integration among different sectors like infrastructure, transportation, innovation, workforce training, etc. It is illusory to expect a regional government to support a major policy shift such as carbon neutrality if and when its efforts in other domains are under threat from financial or regulatory constraints or if and when the specific economic area is particularly affected by adjustment burdens. Curiously, this is something that we have come to accept at international level. We know that successful decarbonation in developing countries will only happen if their distinct socio-economic context and their need for comprehensive strategies,

beyond subsidies and technical fixes, are taken into consideration. Why would it be different for sub-national governments? In fact, as the Canadian example shows so well, regional leaders are suspicious of policies cloaked in the language of virtue and common good, when it is clear that the federal authorities have not done their homework and seem ignorant of local challenges. This applies accordingly to Germany, where the implementation of the energy transition was stalled for a long time by both federal policymakers and state governments with special requests (underground cables instead of overhead cables).

Another lesson learned relates to the politics of carbon neutrality. There is no lack of support among the initiated and the convinced for decisive actions: nomore pipelines, end of coal, gas car ban, the revival of nuclear power, etc. Some of these measures might be essential to achieve carbon neutrality and if they all involve risks and losses, they are expected to bring direct and indirect benefits in the form of new investments, well paid jobs and a better environment. Governments in Canada and Germany have been more than happy to associate themselves to a flurry of projects set to move the economy into a new era of renewable energy, EV, and sustainable urbanization. But climate policies are notably vulnerable to the effects of discounting: for most people, today's job is worth a lot more than the promise of a better and greener future in twenty or thirty years ahead.

As we have shown, regional dynamics add another layer of complexity. The benefits of environmental sustainability are unquestionable, but they tend to be concentrated in certain areas, to the advantage of relatively healthy, educated and wealthy citizens. Large segments of the population find themselves excluded and adverse effects on political cohesion are already there, from electoral results in Germany to resurgent constitutional challenges in Canada. There is no need for a crystal ball to predict this situation will only deteriorate without a change of course.

The challenge of the transformation to net zero is that the framework conditions and standards, especially with an eye on the international dimension, must be set at the central government level, while implementation must be oriented towards regional context and opportunities. The national strategy therefore requires appropriate flexibility for regional differences. This may also mean taking citizens' specific regional preferences into account. This principle is reflected in Germany in the strategy of the Federal Ministry for Economic Affairs and Climate Action "Shaping the transformation regionally", but it is not consistently reflected in the federal policy strategy for net zero. It would be

important to carry out an in-depth data analysis of regional development and living conditions to be able to design the regional support and implementation of the transformation effectively and efficiently.

#### **Atlantik-Bruecke Canada**

Atlantik-Bruecke Canada is a not-for-profit and non-partisan organization dedicated to the development of positive relations between Germany and Canada, partnered with Atlantik-Brücke.

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We fulfill our mission by:

- encouraging dialogue between senior stakeholders in Canada and Germany on the bilateral relationship
- supporting academic research and thought leadership on a broad range of topics, and
- promoting interchange among young leaders from the next generation in both countries.

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