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Strengthening transatlantic energy ties

Alexandra Keating

Summary

As climate change worsens and global temperatures rise, transitioning to cleaner and more sustainable energy sources has been brought to the forefront of many societies around the world. Canada has proven to be a leader in this sector and has several agreements and partnerships with Europe, but there is still a long way to go in terms of seeing results and impact.

Key points

- Canada is a leader in emerging renewable energy sources, but geography makes the international implementation of those methods challenging.
- Politics—domestic, international, and geographic—all play extremely important roles in the development and implementation of alternative and renewable energy sources.
- The similar outlooks and shared goals of the EU and Canada provide a solid framework and plan for future collaboration in various fields, which can also be applied to renewable energy.

Introduction

As the climate crisis worsens, and geopolitical tensions rise around the globe, energy security and the transition to cleaner and more effective energy sources have quickly become priorities for governments. Canada, “a key, and like-minded, energy partner of the EU” (European Commission, n.d.), is one of the leaders in this movement, especially considering its extensive resources. Several countries within Europe, and the EU as a whole, have expressed similar concerns and created various initiatives to achieve similar outcomes. Joint efforts regarding clean, efficient energy between the EU and Canada show immense promise, but do not come without significant challenges.

Energy security concerns

Energy security is a crucial component of this movement and the strengthening of these transatlantic ties. It is especially relevant right now for Europe, considering Russia’s ongoing war against Ukraine. Since its onset, European countries have scrambled to find alternative energy sources considering that Russian oil had long been the leading energy provider of Europe. New partnerships and energy sources have emerged within Europe, but Canada’s richness in natural and technological resources has proven to be an asset domestically and could prove to do so abroad as well. “Canada is a net exporter of most energy commodities and is an especially significant producer of conventional and unconventional oil, natural gas, hydroelectricity and renewable energy” (European Commission, n.d.), and, along with the EU, values constant diversification, advancement and efficiency of energy resources. A prominent example of this is last year’s signing of a bilateral agreement between Canada and Germany, focused on the acceleration of “work towards the commercial-scale trade of clean hydrogen fuel” and the establishment of “a transatlantic supply corridor while coordinating policies to attract investments in hydrogen projects” (Reuters, 2024), and emphasized the importance of “working with European allies to displace imports of Russian oil and gas and fight climate change with clean Canadian hydrogen” (Reuters, 2024).

That being said, a key challenge in creating a more concrete energy relationship is simply due to geography. Many of their resources, such as natural gas, come from the Canada’s west coast, adding to the existing challenge of the lack of infrastructure for getting these materials across the Atlantic; for example, “Canada does not export electricity to Europe due to the cost and technical difficulty of laying submarine power cables across the Atlantic” (Transatlantic Policy Quarterly, 2024). In addition to that, “today, the only route for Western Canadian oil to reach the Atlantic is via American pipelines to the U.S. Gulf Co[a]st... Canada also does not export natural gas to Europe, since it lacks the infrastructure to transport Western Canadian natural gas to the Atlantic, liquefy it, and ship it across the ocean” (Transatlantic Policy Quarterly, 2024).

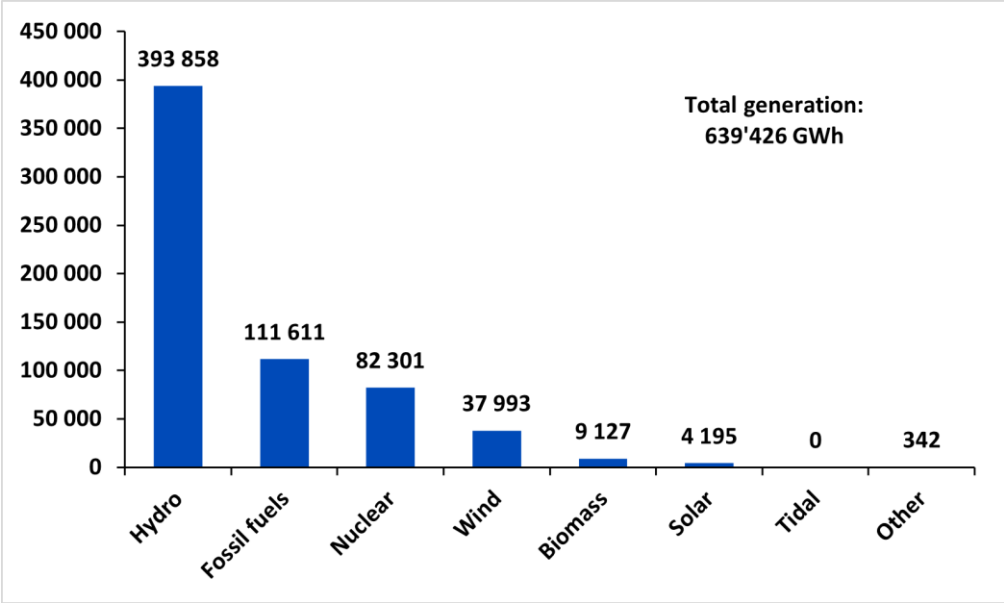
Diversification and innovation efforts

Cooperation between the EU and Canada is not just limited to energy, but existing agreements and initiatives absolutely have the potential to help their energy partnership. The EU-Canada Digital Partnership, for instance, “can foster the development of AI and digital technologies that prioritize energy efficiency, reduce carbon footprints, and support sustainability initiatives. For example, AI can optimize energy use in smart grids or enhance precision agriculture, reducing environmental impact while boosting productivity” (Anani, 2024). Furthermore, in July of 2024, Canada joined the Horizon Europe program, “which funds collaborative research projects across a wide range of domains” and “is focused on shared global challenges: climate, energy, digital economy and health” (European Commission, 2024). Developing technology and increasing funding is essential in maintaining

and advancing energy initiatives. The 2017 Comprehensive Economic and Trade Agreement also strengthened this relationship, especially regarding trade.

Furthermore, Canada has been very vocal and effective regarding its prioritization of renewable energy, which is described as “energy derived from natural processes that are replenished at a rate that is equal to or faster than the rate at which they are consumed” (Government of Canada, 2024). This process harnesses energy from natural resources and uses technology and equipment to convert it into usable energy. In 2022, it accounted for 16.9 percent of the country’s total primary energy supply, and Canada was the world’s third largest producer of hydroelectricity (Government of Canada, 2024).

Graph 1: Electricity generation in Canada, by source (2022, in gigawatt hours)



Source: Canadian government

The Canada-Germany agreement primarily centered on hydrogen because of its benefits and effectiveness of powering heavy machines, which would majorly benefit manufacturing industries. Both countries have also developed their own hydrogen initiatives; Germany’s H-2 Global project worked on the selling and price reduction of green fuel and promised to allocate about €3.5 billion to obtain and use green hydrogen, while as of last year, Canada has announced “more than 80 low-carbon hydrogen production projects” (Reuters, 2024). One such effort is the Hydrogen Strategy for Canada, which “focuses low-carbon hydrogen as a tool to achieve our goal of net-zero emissions by 2050, while creating jobs, growing our economy, expanding exports and protecting our environment” (Government of Canada, 2024). Interestingly, Canada also does not place as much emphasis on the color, or production method, of hydrogen, but more so its intensity; “any production pathway, as long as it is low carbon, is equally part of Canada’s Hydrogen Strategy” (Government of Canada, 2024).

Decarbonization is the root of many of these initiatives, with the EU has explicitly prioritized. Similar to Canada, it values a holistic approach in the transition, taking the stimulation of “growth, innovation, and jobs whilst improving quality of life, increasing choice, reinforcing consumer rights, and ultimately providing savings in household bills” (European Commission, 2024) into account as well. The EU approach stresses streamlining and coordination among member states, in order to ensure “a genuinely continental impact in the fight against climate change” (European Commission, 2024),

allowing for more effective efforts with other states and being able to reduce greenhouse gas emission and meet the standards laid out in the Paris Agreement, which all member states (and Canada) signed and ratified.

Geopolitical challenges and repercussions

Domestically, there has been difficulty with the implementation of some of these policies. For example, the Énergie Saguenay project was a proposed facility to liquify and export natural gas, but after years of political support, the Québec government pulled funding and was later rejecting, citing not meeting certain criteria. Lack of cohesion among provincial and national responses and initiatives has made the physical part of energy transition slightly more challenging. Another development to consider is the shifting politics occurring within Canada, and by extension, the United States. The resignation of Prime Minister Justin Trudeau, under whom many of these energy advancements occurred, marks an end of relative consistency in Canadian leadership and does not necessarily guarantee a continuing course of action. Furthermore, American president-elect Donald Trump has been vocal and steadfast in his views against clean energy development and for the usage of oil. While this does align with the usage of U.S. oil pipelines, Trump's recent comments about pursuing Canadian statehood has escalated tensions between the two nations, especially as both are in transitions of power. It has been made clear that Canada has no interest in renouncing its independence, but there are almost sure to be political and economic changes with a Trump presidency regardless. Canadian Ambassador to the United States Kirsten Hillman said that Canada is "prepared for any scenario" economically and also noted that "one-third of what we sell to the United States are energy products. And those products keep the price of energy low in the U.S." This uncertainty does have the potential to impact energy security, for both Canada and the United States, as well as Europe.

Globally, coordination has also proven to be a challenge; "clean energy is entering the energy system at an unprecedented rate, but deployment is far from uniform across technologies and markets" (International Energy Agency, 2024). The transition to clean energy is essential for our climate, but it cannot occur without the proper infrastructure and planning required for it to actually work effectively; "Today, for every dollar spent on renewable power, 60 cents are spent on grids and storage" (International Energy Agency, 2024). Without a streamlined, planned approach, renewable energy dependence will not be possible for an individual country, let alone via partnerships and agreements. This is further emphasized by the fact that "Decisions by governments, investors and consumers too often entrench the flaws in today's energy system, rather than pushing it towards a cleaner and safer path, the report finds" (International Energy Agency, 2024). It is also important to consider, as is the case with many global happenings, China's role and course of action. They are one of the leading suppliers of electricity, and as worldwide demand grows, China has been able to respond with the development and expansion of solar power generation. Countries such as Japan and the United States are some of the leading users of electricity, and too much reliance on China could prove to be detrimental to their own energy production and world standing, thereby creating a ripple effect felt around the world.

Conclusion

Shifting reliance on renewable energy sources is essential in light of the climate crisis, but it needs to be done carefully and strategically. Canada specifically has so much to offer and has been realistic and innovative with their goals but changing the global energy landscape cannot be done unilaterally. The key to the continuing development and maintenance of a Canadian European energy alliance, specifically, is going to be consistent evaluations of what each party has to offer, and how they can

work together to effectively and efficiently put their resources—financial, energy, and otherwise—to use to best achieve their mutual goals. It will involve consistent analysis of what can be capitalized upon, with cost-benefit analyses dictating short- and long-term courses of action. Simply put: “A new energy system needs to be built to last, the WEO-2024 [World Energy Outlook] emphasizes, one that prioritizes security, resilience and flexibility, and ensures that benefits of the new energy economy are shared and inclusive” (International Energy Agency, 2024).

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Author



ALEXANDRA KEATING

Alexandra Keating is a third-year undergraduate student at the University of Delaware. She is studying Communication with a concentration in Media, and International Relations with a concentration in U.S. Foreign Policy & National Security and a European regional specialization. She has minors in Journalism and European Studies. Alexandra studied abroad in Prague in the fall of 2024 and was a Policy Analyst Intern with the Institute for Politics and Society. Her interests include cross-cultural communication, journalism, foreign policy, diplomacy and security.

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Martinská 2, 110 00 Prague 1



+420 602 502 674



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