
10-24-2022

Lost in Transmission: A Constitutional Approach to Achieving a Nationwide Net Zero Electricity System

Kristen van de Biezenbos

Faculty of Law & Haskayne School of Business, University of Calgary

Follow this and additional works at: <https://digitalcommons.osgoode.yorku.ca/ohlj>

 Part of the [Law Commons](#)

Article

Citation Information

van de Biezenbos, Kristen. "Lost in Transmission: A Constitutional Approach to Achieving a Nationwide Net Zero Electricity System." *Osgoode Hall Law Journal* 59.3 (2022) : 629-666.

<https://digitalcommons.osgoode.yorku.ca/ohlj/vol59/iss3/3>

This Article is brought to you for free and open access by the Journals at Osgoode Digital Commons. It has been accepted for inclusion in Osgoode Hall Law Journal by an authorized editor of Osgoode Digital Commons.

Lost in Transmission: A Constitutional Approach to Achieving a Nationwide Net Zero Electricity System

Abstract

Canada has announced plans to meet its Paris Agreement commitments on reducing greenhouse gas emissions and achieving net-zero by 2035; but standing in the way of these ambitions is an electricity crisis. The crisis is provincially balkanized electricity systems with a dearth of interprovincial transmission lines, and the impacts are three-fold. First, the country is divided into renewable have- and have-not provinces, with some jurisdictions generating more hydropower than they need while others struggle to wean themselves off coal and natural gas. Second, the lack of interprovincial transmission is a deterrent to private investment in renewable energy projects, which is holding Canada back from meeting its climate commitments in a way that could provide major economic gains. Third, much of the country is off-grid, relying on expensive, unreliable, and dangerous diesel fuel for power. An initial step towards addressing these issues would be to create a new market for interprovincial zero-emission power sales by exercising federal jurisdiction over the permitting of interprovincial transmission lines in order to encourage private companies to enter the market and remove some of the financial burden from provinces. Given the national and provincial goals of reducing power from coal-fired power plants and the urgency of energy access issues in many parts of the country, it is time for the federal government to assume at least some of its infrastructure transmission jurisdiction to ensure just transition to safe, renewable power sources, and to promote investment in renewable projects across the country. To that end, this article will lay out the constitutional basis for federal jurisdiction over interprovincial power lines, as well as the constitutional limits on that jurisdiction that will keep provincial grids under provincial control.

Lost in Transmission: A Constitutional Approach to Achieving a Nationwide Net Zero Electricity System

KRISTEN VAN DE BIEZENBOS*

Canada has announced plans to meet its Paris Agreement commitments on reducing greenhouse gas emissions and achieving net-zero by 2035; but standing in the way of these ambitions is an electricity crisis. The crisis is provincially balkanized electricity systems with a dearth of interprovincial transmission lines, and the impacts are three-fold. First, the country is divided into renewable have- and have-not provinces, with some jurisdictions generating more hydropower than they need while others struggle to wean themselves off coal and natural gas. Second, the lack of interprovincial transmission is a deterrent to private investment in renewable energy projects, which is holding Canada back from meeting its climate commitments in a way that could provide major economic gains. Third, much of the country is off-grid, relying on expensive, unreliable, and dangerous diesel fuel for power.

An initial step towards addressing these issues would be to create a new market for interprovincial zero-emission power sales by exercising federal jurisdiction over the permitting of interprovincial transmission lines in order to encourage private companies to enter the market and remove some of the financial burden from provinces. Given the national and provincial goals of reducing power from coal-fired power plants and the urgency of energy access issues in many parts of the country, it is time for the federal government to assume at least some of its infrastructure transmission jurisdiction to ensure just transition to safe, renewable power sources, and to promote investment in renewable projects across the country. To that end, this article will lay out the constitutional basis for federal jurisdiction over interprovincial power lines, as well as the constitutional limits on that jurisdiction that will keep provincial grids under provincial control.

* Associate Professor, University of Calgary Faculty of Law & Haskayne School of Business. Special thanks to Nigel Bankes, Alistair Lucas, Bryce Tingle, Blake Shaffer, the participants of the Sabin Colloquium on Innovative Environmental Law Scholarship at Columbia University School of Law, the Purdy Crawford Workshop at Schulich School of Law, and the University of Colorado, Boulder Junior Energy Scholars workshop.

I.	THE HISTORY OF CANADA'S LACK OF INTERPROVINCIAL TRANSMISSION LINES	632
	A. Electricity in Canada: A Story of Provincial Ownership and Protectionism	633
	B. The Legacy of Churchill Falls: Federal Abdication in the Electricity Sector	639
II.	CANADA'S ENERGY INJUSTICE: THE ENERGY TRANSITION CASE FOR A POLICY CHANGE	644
III.	THE ECONOMIC CASE FOR ADDING SIGNIFICANT INTERPROVINCIAL TRANSMISSION INFRASTRUCTURE	646
IV.	CANADA'S ENERGY PERSISTENT POVERTY: THE JUSTICE CASE FOR A POLICY CHANGE	649
V.	USING FEDERAL TRANSMISSION LINE JURISDICTION TO CREATE A NEW INTERPROVINCIAL ELECTRICITY PLAN	657
	A. The Constitutional Basis for Federal Jurisdiction Over Interprovincial Transmission Lines	659
	B. Federal Jurisdiction and the Growing Need for National Action on Climate Change	663
VI.	CONCLUSION	665

WHILE “[I]T’S KIND OF A UNIVERSAL CONCLUSION that larger grids are better,”¹ Canada does not have a national electric grid, and there are currently no plans to change this.² Instead, the country has a provincial patchwork of transmission lines that run south to north—though often, not very far north—and stop sharply at east-west provincial borders, leaving several provinces dependent on fossil fuels while their neighbours sell excess hydropower to the United States, and leaving large swaths of the country without access to safe and reliable electricity while preventing robust sales of power between provinces. Adding more national transmission infrastructure would provide a much-needed boost to the country’s economy, allow provinces that are currently dependent on hydrocarbons to integrate more renewable resources, and promote growth and self-sufficiency for rural and Indigenous communities. Indeed, the addition of significant interprovincial transmission capacity could allow Canada to be the first country in the world to have 100 per cent renewable electricity generation within a matter of decades. This is an urgent need, as the country has pledged to decarbonize its electricity sector and achieve net-zero by 2035 while certain provinces are still

-
1. Daniel Oberhaus, “The Real Challenge for a Green New Deal Isn’t Politics,” *Wired* (9 July 2019), online: <www.wired.com/story/real-challenge-green-new-deal-isnt-politics> [perma.cc/646N-WVR7].
 2. See Ian Blue, “Off the Grid: Federal Jurisdiction and the Canadian Electricity Sector” (2009) 32 Dal LJ 339 at 340-42.

dependent on coal and natural gas for the bulk of their electricity generation.³ So, unless the electricity status quo changes—and soon—none of these things are likely to happen.⁴

Transmission lines carry electricity generated at large power plants to communities, where the voltage of the power is lowered in step-down transformers and then sent into distribution lines that connect to homes, businesses, and industrial facilities.⁵ Collectively, transmission lines in a particular geographic area are known as “the grid.” When a new power plant is built, it must be connected to the grid by a dedicated transmission line that allows power to be sent into existing infrastructure.⁶ Additionally, if there are no nearby transmission lines, new infrastructure will need to be built in order to connect the power plant to the grid. This is often the case with wind and solar facilities because they are built in rural areas where the resources are plentiful and there is room to accommodate their space requirements.⁷ Similarly, remote communities are often not connected to the grid because the transmission lines are expensive to build, and some utility companies do not want to incur such an expense to connect a small number of ratepayers.

This article describes a major governance gap—specifically, the refusal of the federal government to exercise its jurisdiction over interprovincial electricity transmission—and suggests a novel solution: federal and provincial cooperation, with the federal government permitting interprovincial lines while provinces continue to oversee their existing grids. It argues that, as a normative proposition,

-
3. See Government of Canada, “A Clean Electricity Standard in Support of a Net-Zero Electricity Sector: Discussion Paper” (last modified 16 March 2022), online: <www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/achieving-net-zero-emissions-electricity-generation-discussion-paper.html> [perma.cc/589V-DF2N].
 4. There are additional reasons to increase the number of interprovincial electricity connections, including grid modernization, strengthening grid reliability and load balancing, and increased export opportunities to the United States, but this article focuses on the energy justice and climate change aspects in particular. See *ibid.*
 5. See PJM, “Transmission & Distribution” (n.d.), online: [PJM Learning Center <learn.pjm.com/electricity-basics/transmission-distribution>](http://learn.pjm.com/electricity-basics/transmission-distribution) [perma.cc/3VUR-GUU9].
 6. *Ibid.* In competitive wholesale power markets, these lines are sometimes called “merchant lines.” See Alberta Electric Systems Operator, “Glossary of Terms: Merchant Transmission” (2016), online: <www.aeso.ca/aeso/glossary-of-terms> [perma.cc/H9DM-SFVZ].
 7. See American Wind Energy Association, “Economic Development” (n.d.), online: <www.awea.org/wind-101/benefits-of-wind/economic-development> [perma.cc/5B6V-MU2R?type=image]; Wind Energy Technologies Office, “Wind Resource Assessment and Characterization” (n.d.), online: [US Department of Energy <www.energy.gov/eere/wind/wind-resource-assessment-and-characterization>](http://www.energy.gov/eere/wind/wind-resource-assessment-and-characterization) [perma.cc/QU2B-MPHV].

the federal government can and should assume jurisdiction over interprovincial transmission lines. This article thus examines the legal framework of electricity infrastructure in Canada and, particularly, the potential reasons for the lack of involvement in interprovincial projects by the federal government. It then argues that the lack of interprovincial transmission is a national problem since it strangles the economic prospects of off-grid communities, creates regulatory hurdles that discourage private investment that makes the country a laggard in new renewable energy technologies (particularly wind and solar), and frustrates further decarbonization. Finally, the article lays out the constitutional basis for federal jurisdiction over interprovincial transmission lines and posits that the decision not to exercise this jurisdiction is a policy choice, not a legal one, and must be revisited.

Part I gives an overview of the current state of provincial grids and proposes possible reasons for federal abdication in the area. Part II makes the climate change case for adding more interprovincial electricity infrastructure. Part III addresses the potential economic advantages to investing in interprovincial power now, including possible implications of more renewable power build-out to meet new interprovincial demand. Part IV addresses the impacts of energy poverty on off-grid communities, particularly on reserve and claimed land, and explores the economic impacts of having virtually no east-to-west electric grid, particularly for fossil-fuel-dependent provinces and territories and rural areas close to provincial borders. Lastly, Part V makes the constitutional case for parallel federal and provincial jurisdiction for interprovincial and interprovincial transmission, respectively.

I. THE HISTORY OF CANADA'S LACK OF INTERPROVINCIAL TRANSMISSION LINES

There are two things to understand about jurisdiction over interprovincial transmission lines: First, as discussed more fully below, the federal government almost certainly has exclusive jurisdiction over them. Second, the federal government has never exercised that jurisdiction, which leads to the question of why this is so. The federal government's decision not to exercise this jurisdiction is perplexing, since similar projects—oil and pipelines being the prime example—are unquestionably and exclusively overseen by federal regulators.⁸ To understand

8. For a finding that federal jurisdiction over an interprovincial pipeline was exclusive, see *Reference re Environmental Management Act*, 2019 BCCA 181 [*RREMA*, BCCA], aff'd 2020 SCC 1 [*RREMA*, SCC].

why interprovincial transmission lines are apparently considered off-limits by the federal government, and to put this position into context by considering past reasons for federal abstention in this area, it is useful to look at the history of electricity utility development in Canada, as well as to consider the political forces that have thus far kept provinces in total control of their electricity resources, infrastructure, and commerce.

A. ELECTRICITY IN CANADA: A STORY OF PROVINCIAL OWNERSHIP AND PROTECTIONISM

The electricity sector can be divided into four segments: generation, transmission, distribution, and retail sales.⁹ Generation is the creation of electricity, generally by generating sufficient heat to boil water and create steam, which then spins turbines to generate power, a process that can be propelled by many different resources, from solar energy to coal.¹⁰ Transmission lines send the generated electricity at high voltages over long distances to substations, where voltage can be lowered to accommodate distribution lines—the lines we see in neighbourhoods all over the world. Finally, retail is the sale of electricity to consumers, usually through rate formulas set by regulators. Electric utilities (which often are also gas utilities) can be investor-owned, municipally-owned, or provincially or state-owned. They can also be vertically integrated—*i.e.*, the same entity owns or controls all four stages of electricity delivery—or they can be unbundled. —*i.e.*, a legal requirement in some jurisdictions breaks up the monopolies of vertically integrated utilities by forcing them to sell their generation, transmission, and sometimes distribution and retail assets.¹¹ Unbundling refers to the economic separation of the four

9. US Energy Information Administration, “Electricity Explained: How Electricity is Delivered to Customers” (3 November 2021), online: <www.eia.gov/energyexplained/electricity/delivery-to-consumers.php> [perma.cc/UU6V-ZRVV].

10. An exception to this is solar photovoltaic panels—the same kinds of panels commonly installed on residential roofs, which use a superconducting material to create an electrical charge. See Andrew Blakers, “Explainer: What is Photovoltaic Solar Energy?,” *The Conversation* (25 March 2013), online: <theconversation.com/explainer-what-is-photovoltaic-solar-energy-12924> [perma.cc/24T4-J4GR].

11. See David Roberts, “Power Utilities are Built for the 20th Century. That’s Why they’re Flailing in the 21st,” *Vox* (9 September 2015), online: <www.vox.com/2015/9/9/9287719/utilities-monopoly> [perma.cc/D8X2-9LEM].

sectors into economically distinct markets, despite their physical connection.¹² Alberta is the only jurisdiction in Canada with a fully unbundled and deregulated electricity sector, with competitive markets for both generation and retail sales.¹³

In both Canada and the United States, each type of the above-described utilities exists, but the mix is vastly different between the two countries. In the United States, most utilities are investor-owned and unbundled, following a series of orders by the Federal Energy Regulatory Commission (FERC) in the mid-1990s and early 2000s intended to increase competition in the generation and retail sectors and, by extension, lower electricity rates.¹⁴ There are places in the United States, especially in the southeast and the mountain west, where vertically integrated investor-owned utilities remain the norm, but the rest of the country has moved to an unbundled, competitive wholesale (meaning generation side) electricity market, with access to transmission lines guaranteed under publicly available rates (these are called “open access transmission tariffs,” or OATTs).¹⁵ Because of OATTs, any company wanting to build a power plant, whether the facility is solar, wind, nuclear, coal, or any other resource, knows what it will cost to connect to the closest transmission lines, and thus to the grid.¹⁶ This also

-
12. See Hung Po Chao, Shmuel Oren & Robert Wilson, “Reevaluation of Vertical Integration and Unbundling in Restructured Electricity Markets” in Fereidoon P Sioshansi, eds, *Competitive Electricity Markets: Design, Implementation, Performance* (Elsevier, 2008) 27; Sharon B Jacobs, “The Administrative State’s Passive Virtues” (2014) 66 Admin L Rev 566 at 566-67.
 13. See Rebecca T Richards, “Regional Rural Development and Energy Reform: The Case of Electric Deregulation in Montana and Alberta” (2007) 20 Society & Natural Resources 647 at 652; Natural Resources Canada, “About Electricity” (last modified 15 June 2020), online: <www.nrcan.gc.ca/our-natural-resources/energy-sources-distribution/electricity-infrastructure/about-electricity/7359> [perma.cc/93UW-66NT].
 14. See Joel B Eisen, “FERC’s Expansive Authority to Transform the Electric Grid” (2016) 49 UC Davis L Rev 1783 at 1792-93. Also note that the transmission and distribution sectors in both the United States and Canada are generally still owned by utilities with geographic monopolies. There are several reasons for this, but the simplest explanation is that these systems are “natural” monopolies—the services they provide are at their lowest cost to consumers when there is only one provider.
 15. See *ibid* at 1815-16. Also note that Canadian utilities that sell power to the United States—which is almost all of them—must also abide by FERC’s OATT requirements, meaning that they cannot charge different rates from different companies that want to connect to their transmission lines, even within the country. See Blue, *supra* note 2 at 344-45. This also means that the federal government has a template for setting transmission tariffs for interprovincial connections since most Canadian transmission owners already comply with FERC orders on the subject.
 16. See Eisen, *supra* note 14 at 1815-16.

prevents transmission line owners from cherry-picking which generators to allow access to the grid by engaging in price discrimination.¹⁷

FERC was able to issue the relevant orders to achieve both unbundling of the electricity sector nationwide and the establishment of publicly available OATTs because the United States federal government has jurisdiction over all transmission lines, even if they are located solely within one state.¹⁸ This was established by the United States Supreme Court in *Federal Power Commission v. Florida Power & Light*, in which the US Court held that a transmission line in Florida that connected to transmission lines in Georgia for reliability purposes was sufficient to establish federal jurisdiction under the Commerce Clause of the US Constitution.¹⁹ The fact that the line in question did not actually facilitate the sale of power between the states was irrelevant because there was no way to tell whether the electricity in the line at any given time was generated in Florida or Georgia.²⁰

The result is that US states do not have regulatory oversight over transmission lines, even ones solely within their borders, and cannot technically stop their permitting. However, they do retain the authority to approve the siting of the line within their borders.²¹ There have been some attempts to give FERC more siting authority since state resistance can (and does) derail projects, but these efforts have so far failed.²² Still, the United States is connected by a truly national network

17. See Gert Brunkreeft, "Network Unbundling and Flawed Coordination: Experience from the Electricity Sector" (2015) 34 *Utilities Policy* 11 at 13. Note also that because many provinces connect to US-based utilities, they must abide by FERC's OATT requirement as well. See e.g. Manitoba Hydro, "Tariffs" (n.d.), online: <www.hydro.mb.ca/accounts_and_services/generating_your_own_electricity/tariffs> [perma.cc/M2TR-8NKE].

18. See Ari Peskoe, "Easing Jurisdictional Tensions by Integrating Public Policy in Wholesale Electricity Markets" (2017) 38 *Energy LJ* 1 at 3.

19. *Federal Power Commission v Florida Power & Light Co*, 404 US 453 at 457, 460-62, 469-75 (1972).

20. See *ibid* at 461 (explaining that all power entering a "bus" is commingled).

21. See Peskoe, *supra* note 18.

22. Under the *Environmental Protection Act, 1990*, Congress gave FERC backstop siting jurisdiction when state utility commissions withheld permission for proposals and the proposed line fell within a federally designated national energy corridor. See Debbie Swanstrom & Meredith M Joliver, "DOE Transmission Corridor Designations & FERC Backstop Siting Authority: Has the Energy Policy Act of 2005 Succeeded in Stimulating the Development of New Transmission Facilities?" (2009) 30 *Energy LJ* 415 at 418-421. However, states quickly learned that if they did not rule on a line one way or another, this did not count as a refusal and thus did not trigger FERC's jurisdiction. See Brian R Gish, "Is FERC Backstop Siting Authority Still Alive?," *Power Magazine* (1 May 2011), online: <www.powermag.com/is-ferc-backstop-siting-authority-still-alive> [perma.cc/4V8G-NEUW].

of transmission lines, and although more lines would be needed to completely decarbonize the American grid, the fact that (as an example) a transmission line connects a solar facility in Arizona to customers in California is not considered noteworthy or politically troublesome in and of itself.²³ The only exception to this sweeping federal jurisdiction over the US transmission system is Texas, which refuses to connect its main grid to any out-of-state systems specifically to avoid FERC's authority.²⁴

In Canada, most provinces receive the bulk of their electricity from vertically integrated Crown Corporations, owned by provinces as sole shareholders and controlled by provincial legislatures.²⁵ These utilities include BC Hydro, Manitoba Hydro, Hydro-Québec, SaskPower, Hydro One,²⁶ and others. This model is so prevalent in the country that only two provinces do not have a Crown Corporation providing most of their electricity services: Alberta and Nova Scotia (and, to an extent, Ontario). And, of those two provinces, Alberta comes closest to the prevailing US model, with a competitive generation market dominated by investor-owned, unbundled companies that compete through a bidding process managed by the Alberta Utilities Commission and the Alberta Electric System Operator.²⁷ It also has a competitive retail market regulated by the Alberta Utilities Commission.²⁸ Even in provinces that have provincial utilities, there are

23. This is not to say transmission projects are not controversial, but occasionally they are controversial because they do not confer any benefits on residents of the states where they are located. See James Coleman, "Pipelines and Powerlines: Building the Energy Transport Future" (2019) 80 Ohio St LJ 263 at 283 (noting resistance by some Arkansas landowners to federal permitting of a transmission line intended to deliver renewable power to another state, but also noting that the legal challenge to the federal permit was later abandoned).

24. See Kate Galbraith, "Why Does Texas Have Its Own Power Grid?" (16 February 2021), online: *Houston Public Media* <www.houstonpublicmedia.org/articles/news/energy-environment/2021/02/15/391519/why-does-texas-have-its-own-power-grid> [perma.cc/A5N6-VGY2].

25. See Blue, *supra* note 2 at 340-41.

26. Ontario has sold its majority stake in Hydro One, although it does still retain some ownership. See Mike Crawley, "How Privatized Power Haunts Ontario Politics," *CBC News* (9 December 2017), online: <www.cbc.ca/news/canada/toronto/ontario-hydro-bills-privatization-1.4439500> [perma.cc/D4DU-K472].

27. See Alberta Electric System Operator, "Guide to Understanding Alberta's Electricity Market" (2016), online: <www.aeso.ca/aeso/training/guide-to-understanding-albertas-electricity-market> [perma.cc/B9M2-S4ER].

28. Alberta Utilities Commission, "Who We Regulate" (n.d.), online: <www.auc.ab.ca/pages/who-we-regulate.aspx> [perma.cc/FC62-8S4A].

still private and municipal utilities, primarily on the generation side.²⁹ However, the provincial utilities own most of the transmission lines within their respective provinces and use retail rates as the primary source of financing for their current operations and future projects.³⁰

This economic reality gets to the heart of why there are so few interprovincial transmission lines: In order to pay for the lines, which can cost hundreds of millions of dollars, a provincially-owned utility would have to pass on the costs to its existing customers while not being able to reach new customers (which it cannot do in another province), although this could be somewhat allayed by selling the power to another province under contract.³¹ Selling under power contract is, in fact, the model currently used to pay for the few interprovincial lines that are currently in place for commercial reasons, with one example being Hydro-Québec selling power to Ontario for negotiated prices.³² Absent such an agreement, one can imagine that customers in, say, Manitoba would be less than thrilled about paying higher electricity bills to finance a project that sends clean power to a Saskatchewan transmission line at the border, as it would be

29. In British Columbia, for example, BC Hydro buys additional generation from BC- and US-based private companies via its wholly-owned subsidiary Powerex. See Sarah Cox, “Clean B.C. is Quietly Using Coal and Gas Power from Out of Province. Here’s Why,” *The Narwhal* (3 December 2019), online: <thenarwhal.ca/clean-b-c-is-quietly-using-coal-and-gas-power-from-out-of-province-heres-why/> [perma.cc/7LYN-YGYV] [Cox, “Clean BC”].

30. See Blue, *supra* note 2 at 341.

31. This is what is done with international power lines. See e.g. Hydro-Québec, Press Release, “Energy Supply Contracts Get Green Light from Massachusetts” (26 June 2019), online: <news.hydroquebec.com/en/press-releases/1516/energy-supply-contracts-get-green-light-from-massachusetts-another-important-milestone-for-hydro-quebec-and-lower-carbon-emissions-for-new-england/> [perma.cc/B94W-HEBH]. With respect to interprovincial lines, one official from Manitoba Hydro put the economic calculus plainly:

The single biggest challenge between Manitoba and Saskatchewan is funding. Manitoba’s electric sector is already 100% renewable. We already have a very large and adequate interconnected capability into the United States. For us to invest half a billion dollars or a billion dollars in more transmission lines to connect to Saskatchewan doesn’t bring the province any more value than we already have. To the extent that the federal government is able to fund the Manitoba portion of that transmission line, it would make it a much more viable project for Saskatchewan.

See Canada, House of Commons, *Strategic Energy Interties: Report of the Standing Committee on Natural Resources*, 42-1, No 7 (December 2017) at 15 (Chair: James Maloney).

32. See Hydro-Québec, “Exchanges with Ontario” (n.d.), online: <www.hydroquebec.com/clean-energy-provider/markets/ontario.html> [perma.cc/5BP5-79TV] [Hydro-Québec, “Exchanges”].

SaskPower collecting rates for the power being generated in Manitoba but sold in Saskatchewan.

The problem is not only economic. Because most Canadian utilities are provincially owned, interprovincial power projects can be politically charged.³³ In the above example, it is not much of a leap to go from saying Manitoba Hydro wants to sell power to SaskPower, to saying Manitoba wants to sell power to Saskatchewan. By contrast, if Manitoba sells power to an investor-owned utility in North Dakota, the same political dynamics are not there. This transaction can be pitched to Manitoba voters and ratepayers as profitable without running the risk that North Dakota might ask to build transmission lines in Manitoba in return and without implicating any existing tensions between Manitoba and North Dakota (because, again, the purchasing utility is only located in the state, it is not owned by the state).³⁴ As a result, provinces like Manitoba that produce more renewable energy than they need are selling it to investor-owned US utilities instead of to other provinces, which leaves provinces that are dependent

33. In its submission to the House of Commons Standing Committee on Natural Resources, the Canada West Foundation observed that the idea of more interprovincial transmission lines has been floated many times in Western Canada, but often gains little traction for

reasons...related to provincial fears of losing influence over their own electricity grids. At times it was rejected because some provinces feared cheap coal power from Alberta would flood into their markets and harm their own utilities. At other times, Alberta rejected the idea because of fears cheap hydro could put their coal power plants out of business.

See Nick Martin, "Strategic Electricity Inter-ties: Submission to the House of Commons' Standing Committee on Natural Resources," *Canada West Foundation* (2 October 2017), online: <www.cwf.ca/research/publications/submission-to-the-house-of-commons-standing-committee-on-natural-resources> [perma.cc/BH95-C4JZ].

34. North Dakota (like most US states) does not have a state-owned electric utility. See North Dakota Public Service Commission, "Information by Jurisdiction: Electric and Gas Information" (2015), online: *Official Portal for North Dakota State Government* <www.psc.nd.gov/public/consinfo/jurisdictionelectricgas.php> [perma.cc/VT8K-YR4P]. Interestingly, Alberta also does not have a provincially owned utility, but investor-owned utilities and generators in Alberta may be thought of as an extension of the Alberta government regardless, not because they are in fact, but because *not* thinking of electricity this way may be foreign in other provinces. See Alberta Electric System Operator, "Guide to Understanding Alberta's Electricity Market: Evolution of Alberta's Electricity Market" (n.d.), online: <www.aeso.ca/aeso/continuing-education/guide-to-understanding-albertas-electricity-market> [perma.cc/WR9Y-6WPT] ("Unlike most provinces in Canada, the Alberta government has never owned and operated a utility company").

on hydrocarbons—like Saskatchewan—to find their own ways to decarbonize.³⁵ Meanwhile, rural and Indigenous communities remain off-grid and must either use diesel generators or join a rural electricity cooperative, if one exists in the area.

Adding more interprovincial transmission lines would be a step towards increasing the interprovincial trade in renewable power, which could be used to connect the existing system to privately-owned wind, solar, and other non-hydro renewable power plants. Provincially-owned utilities are often reluctant to build wind and solar facilities themselves, so connecting with these facilities in neighbouring provinces would provide an alternative solution, as well as allow fossil-fuel dependent provinces to connect with their hydro-rich neighbours. These kinds of interprovincial connections could thus help to phase out coal and natural gas-burning power plants more rapidly, which in turn could push the electricity sector to 100 per cent renewables much more quickly than will happen if we rely on the provinces to do it alone. To do this, federal jurisdiction over interprovincial connections could fast-track these projects and help to avoid the conflicts between provinces that are blocking them altogether. And there is a compelling legal case that interprovincial transmission lines would be within federal jurisdiction under the *Constitution Act, 1867*.³⁶ Indeed, the Canada Energy Regulator (CER) already reviews permit applications for international transmission lines, and the possibility of regulating interprovincial lines is explicitly included in the CER's regulatory mandate.³⁷ So why has the federal government never assumed this authority?

B. THE LEGACY OF CHURCHILL FALLS: FEDERAL ABDICATION IN THE ELECTRICITY SECTOR

The Churchill Falls hydroelectric project was originally conceived as a path towards economic prosperity for the then-British colony of Newfoundland. After Newfoundland was admitted to the confederation along with Labrador, it was believed by proponents that Churchill Falls would offer a much-needed source of revenue to the new province by selling the bulk of the generated electricity to the United States, specifically the Boston area. After all, Newfoundland and

35. Alberta, for example, is on track to fail in meeting its renewable electricity target of 30% by 2030. See Nigel Bankes, "Community Generation Projects in Alberta," *Ablawg.ca* (30 June 2020) at 6, online (blog): *University of Calgary Faculty of Law* <ablawg.ca/wp-content/uploads/2020/06/Blog_NB_CommunityGenerationProjects.pdf> [perma.cc/J9YM-RELU] ("The demise of the renewable energy program (REP) put in place by the Notley government pretty much guarantees that Alberta will not reach its renewable target of 30% by 2030").

36. (UK), 30 & 31 Vict, c 3, reprinted in RSC 1985, Appendix II, No 5 [*CA, 1867*].

37. *Canadian Energy Regulator Act*, SC 2019, c 28, ss 10, 11(b) [*CER Act*].

Labrador's small population could not consume all of the power produced by Churchill Falls, so the surplus was a valuable commodity.³⁸ However, rocky relations with Québec posed a problem from the beginning.³⁹

The only way for Newfoundland to deliver electricity generated by the proposed dam to utilities in the United States was through transmission lines that would have to cross through Québec, and Québec was not amenable to this (a longer route through the Maritimes would have been so expensive to build that no profits from the sale of electricity would be realized).⁴⁰ Even after Newfoundland and Labrador joined the confederation, Québec's resistance to allowing transmission lines to cross through its territory remained, possibly fueled by continuing resentment over the loss of Labrador—which Québec had previously claimed—to the newer province.⁴¹ For the same reason, the then-premier of Newfoundland, Joey Smallwood, refused to consider nationalizing the project because he did not want Québec to have any avenue toward building facilities on formerly disputed parts of Labrador, thus illustrating the deep distrust between both provinces.⁴² Despite the fact that Churchill Falls was seen as the lynchpin to Newfoundland's economic prosperity, Québec's aggressive stance did not put the newer province in a bargaining mood.

The result of this political gamesmanship was a stalemate that lasted for decades. At times, the federal government seemed supportive of playing a role in the dispute, but there was much reluctance at other times (and during other administrations). However, Ottawa was not entirely absent from electricity issues. In 1961, the federal government negotiated the Columbia River Treaty with the United States, giving British Columbia a significant role in the cooperative management of the Columbia River, including its use as a source of hydroelectric power on the Canadian side of the border.⁴³ In 1965, the federal government agreed to help Manitoba to finance the construction of the Nelson Dam and the transmission lines needed to deliver its power.⁴⁴ The explanation for why Ottawa was willing to play a direct role in these projects and not in the dispute over

38. See Jason L. Churchill, "Pragmatic Federalism: The Politics Behind the 1969 Churchill Falls Contract" (1999) 15 *Newfoundland Stud* 215 at 216.

39. *Ibid* at 216-17.

40. See *ibid* at 217, 228.

41. See *ibid* at 217-18.

42. *Ibid* at 227.

43. See Nigel Bankes & Barbara Cosens, "The Future of the Columbia River Treaty" (Program on Water Issues submitted to the Munk School of Global Affairs at the University of Toronto, 11 June 2012).

44. See Churchill, *supra* note 38 at 230.

Churchill Falls seemed to be that the latter involved two provinces—that were not getting along—as opposed to just one.⁴⁵

In 1966, Premier Smallwood was ready to present a letter to Parliament asking for the Churchill Falls project to be declared in the national interest and thus subject to federal jurisdiction. However, it appears that he was dissuaded from doing so over fears that Québec nationalists would turn violent and sabotage any transmission lines built in that province, even if they were federally permitted.⁴⁶ This left Newfoundland in a quandary: The only way to guarantee some the building of the transmission lines through Québec was to gain federal support and oversight for the project.⁴⁷ However, there were threats coming from Québec that any attempt to order the province to allow Newfoundland to build power lines on its land would be met with armed resistance, national interest or not.⁴⁸ Thus, if the federal government intervened, there was no guarantee that Québec would comply.

But even as the rhetoric over the issue of allowing Newfoundland to build transmission lines in Québec became increasingly heated and vitriolic on both sides, Ottawa remained resolutely silent on the issue.⁴⁹ As a result, the financial situation for Churchill Falls' provincial holding company became increasingly dire, which put Québec and its provincial electric utility, Hydro-Québec, in an excellent bargaining position. In 1969, Hydro-Québec purchased a majority of shares in the holding company, becoming a majority interest holder in the project, and entered into a power contract under which the utility agreed to purchase the power generated at Churchill Falls for a set price, locked in for sixty-five years.⁵⁰ This contract originally included a Newfoundland choice of law provision, which was ultimately changed to Québec law.⁵¹ Although the terms of the contract were considered favourable for Churchill Falls and Newfoundland at the time, the contract has since become a source of great resentment and anger in Newfoundland.

Much of this anger comes from what Québec chose to do with the surplus power from Churchill Falls that it buys but does not need. From the outset,

45. *Ibid* at 230.

46. See *ibid* at 232.

47. See *ibid* at 232-33.

48. See *ibid* at 230-31.

49. See *ibid* at 233.

50. See *ibid* at 235. The initial power purchase agreement was for forty years with an optional twenty-five-year extension, and by the end of negotiations, Québec had opted to extend the life of the agreement for the full sixty-five years. The agreement will end in 2034 (*ibid*).

51. See *ibid* at 234.

Newfoundland was aware that the electricity generated by Churchill Falls was more than any one province, including itself, could possibly use (at least at the time). After its plans to sell power to US utilities foundered, Newfoundland had proposed to sell the electricity to other parts of Canada, including Québec and Ontario. Under the power contract, however, Québec opted to buy all the power generated by Churchill Falls, putting the determination of what to do with the excess electricity into its own hands. Ultimately, Québec did not sell the excess power to Ontario or the Maritimes, as Newfoundland had once considered doing. Instead, Hydro-Québec entered into lucrative power purchase agreements (PPA) with electric utilities in New England, selling the power from Newfoundland to make a substantial profit for itself.⁵² As of 2016, Newfoundland had made two billion Canadian dollars (CAD) selling Churchill Falls electricity to Québec, while Québec had made 25.7 billion CAD selling that same electricity to the United States.⁵³ Newfoundland has challenged this lopsided arrangement on several grounds over the years, but each attempt to undo or revise the contract has thus far failed.⁵⁴

Although there have been federal financial supports for electricity projects within provinces, since Churchill Falls there seems to be little interest in interprovincial transmission, both from the provinces and from the federal government. On the federal side, this ambivalence can be seen in the fact that the CER (like the National Energy Board (NEB) before it) does have an approval process for interprovincial and international transmission lines, but only for such lines that have been designated by an order in council—and, as Professor Nigel Bankes has noted, “No such order has ever been issued.”⁵⁵ Why the federal government readily gets involved in international projects and not interprovincial ones is a policy choice, since it has jurisdiction in both cases; but in the context of Churchill Falls and for many provinces, sale of power to the United States

52. See James P Feehan & Melvin Baker, “The Churchill Falls Contract and Why Newfoundlanders Can’t Get Over It,” *Policy Options* (1 September 2010), online: <policyoptions.irpp.org/magazines/making-parliament-work/the-churchill-falls-contract-and-why-newfoundlanders-cant-get-over-it> [perma.cc/CXC2-J2L2].

53. See “Arguments to Renegotiate Churchill Falls Met with Stern Questions in Supreme Court,” *CBC News* (5 December 2017), online: <www.cbc.ca/news/canada/newfoundland-labrador/supreme-court-canada-churchill-falls-hydro-quebec-1.4434485> [perma.cc/VHQ5-RDTS].

54. See e.g. *Churchill Falls (Labrador) Corp v Hydro-Québec*, 2018 SCC 46; *Reference re Upper Churchill Water Rights Reversion Act*, [1984] 1 SCR 297.

55. See Nigel Bankes, “Pipelines and the Constitution: a Special Issue of the Review of Constitutional Studies” (2018) 23 *Rev Const Stud* 1 at 14; *CER Act*, *supra* note 37, ss 10, 11(b); *National Energy Board Act*, RSC 1985, c N7, s 58.16.

makes more economic sense than selling to other provinces.⁵⁶ There are some bright spots, including the buying and selling of power between Hydro-Québec and Ontario and, to a lesser extent, between Alberta and British Columbia. The latter connection, however, is in desperate need of upgrading, which involves a cost that would likely have to be borne on the Alberta side of the line given BC Hydro's massive investment in the Site C Dam project.⁵⁷ The more common arrangement, however, is still to sell power to the United States.⁵⁸

The 1982 amendments to the *Constitution Act, 1867* confirmed that provinces have jurisdiction over their own electricity projects—including transmission lines—that are only within their borders.⁵⁹ Thus, in addition to the general position taken by many provinces that they should exclusively self-supply their own electricity, there may be some concern that increased federal interest in interprovincial transmission lines could lead the CER to become more like the US electricity regulator, FERC.⁶⁰ This concern is addressed by the solution proposed in Part III, below. The more difficult problem is the political aspect of provincially-owned utilities allowing the construction of transmission lines in-province that they do not own. However, before considering what can be done to increase the number of interprovincial connections, it is important to make a case for why the federal government must urgently reconsider its abdication in the electricity sector now. There are two policy issues in particular that call for an urgent response: the country's widespread energy poverty and the need to rapidly decarbonize in order to meet the Paris Agreement targets and slow the pace of climate change.

56. See Blue, *supra* note 2 at 341.

57. See Hydro-Québec, "Exchanges," *supra* note 32; Justine Hunter, "Three Viewpoints on the Proposed B.C.-Alberta Hydro Link Project," *The Globe and Mail* (6 March 2016), online: <www.theglobeandmail.com/news/british-columbia/three-viewpoints-on-the-proposed-bc-alberta-hydro-link-project/article29043682> [perma.cc/T6VZ-K2ZD?type=image].

58. Note that the same connection between Hydro-Québec and Ontario is also touted by the former as increasing its trade capacity to the United States. See Hydro-Québec, "Exchanges," *supra* note 32. Also, when Alberta and British Columbia were sparring over the Trans Mountain expansion, Alberta threatened the possibility of ending power sales between the provinces. See Justine Hunter & Carrie Tait, "Electricity Talks Between B.C. and Alberta Broke Down Before the Pipeline Spat," *The Globe and Mail* (5 February 2018), online: <www.theglobeandmail.com/news/british-columbia/electricity-talks-between-bc-and-alberta-broke-down-before-pipeline-spat/article37869816> [perma.cc/C48M-HFEU?type=image].

59. *CA, 1867*, *supra* note 36, s 92A(1)(c).

60. This would perhaps be an ironic stance since any Canadian utility that sells power to the United States must comply with FERC orders. See *e.g.* Blue, *supra* note 25 at 343.

II. CANADA'S ENERGY INJUSTICE: THE ENERGY TRANSITION CASE FOR A POLICY CHANGE

The need for more interprovincial power lines is particularly acute at this moment, as they could connect more renewable power generation and help the country to achieve its national commitments to curb carbon emissions. Increased east-west interprovincial connections would also accelerate major shifts from fossil fuels to renewable energy sources like wind and solar in the Prairie provinces and in Atlantic Canada.⁶¹ From an emissions reduction perspective, electricity is a prime target for aggressive emissions reductions, as other sectors like transportation and oil and gas pose a greater challenge. As a large, cold country with an intensely urban population, making a dent in hydrocarbon energy use and associated emissions related to land, sea, and air transportation and heating is difficult (although the pandemic certainly curtailed the use of jet fuel).⁶² While increasing the use of renewable power sources in these sectors is achievable, it is likely to be a long road. By contrast, Canada is uniquely positioned to radically decarbonize its electricity sector.

The starting point for emissions from the electricity sector, taken on a national scale, is already relatively low because of the use of large-scale hydropower and, to a lesser extent, nuclear power facilities, both of which Canada has in abundance.⁶³ With nearly 80 per cent of its electricity generated by non-fossil fuel sources, specifically hydropower and nuclear, Canada can perhaps be forgiven for not devoting as much public debate to improving the carbon footprint of its electricity infrastructure as it has to its fossil fuel transportation infrastructure. However, the country owes most of its low greenhouse gases (GHGs) electricity

61. See Marcia Valiante, "A Greener Grid? Canadian Policies for Renewable Power and Prospects for a National Sustainable Electricity Strategy" (2013) 25 J Envtl L & Prac 41 at 42.

62. This is especially true since Canadian car buyers prefer larger vehicles. See Timothy Cain, "Canada's 5 Biggest Auto Segments—and Their Leaders—in 2020's First Half," *Driving* (10 August 2020), online: <driving.ca/column/driving-by-numbers/canadas-5-biggest-auto-segments-and-their-leaders-in-2020s-first-half> [perma.cc/YQ5C-KLFF] (noting that of the five top-selling vehicle categories, only one is not a type of truck or SUV, and that most subcompact vehicles are no longer sold in Canada). On the curtailing of the use of jet fuel, see International Energy Agency, "Global Energy Review 2021: Oil" (2021), online: <www.ica.org/reports/global-energy-review-2021/oil> [perma.cc/WNF6-JGND].

63. See Natural Resources Canada, "Energy Facts" (last modified 23 December 2021), online: *Government of Canada* <www.nrcan.gc.ca/science-and-data/data-and-analysis/energy-data-and-analysis/energy-facts/20061> [perma.cc/Z68C-ZXAG] [NRC, "Energy Facts"].

to hydropower, and thus far, has largely neglected the tremendous wind and solar resources that more interprovincial transmission lines could help to unlock.⁶⁴

Since each province has its own electricity grid with only a small number of interties (that is, interprovincial connections), the power being sent to homes and businesses in any location is most likely coming from within the province. This is, in some cases, by design—British Columbia, for example, was explicit in its policy of being self-reliant for its renewable power needs.⁶⁵ This not only means that a province dependent on hydrocarbons, like Alberta, cannot simply replace part of that generation with clean electricity from neighbouring British Columbia, but it also means that generation planning decisions—that is, deciding what power plants will be built and where—are determined by most provinces based on their own resources, expertise, and needs. As a result, provinces that have considerable experience with large-scale hydropower dams may be focused on building only these kinds of facilities instead of branching out into wind, solar, and other types of renewables (power which they instead buy from privately-owned facilities).⁶⁶

Hydropower-rich provinces are interested in buying wind and solar power; they just do not seem to be interested in buying it from other provinces (or generators located in other provinces). Wind and solar can be very effective ways for provinces to balance peak and load-following electricity demand when hydropower provides baseload (that is, the average amount of power needed daily) generation. And the interest is there: Ontario used its now-cancelled feed-in tariff program to encourage private investment in wind and solar within the province, while British Columbia has announced that it will buy solar power from California and Washington.⁶⁷ It will not, however, buy from Alberta because its neighbour

64. See Christopher Barrington-Leigh & Mark Oularis, “The Renewable Energy Landscape in Canada: A Spatial Analysis” (2017) 75 *Renewable & Sustainable Energy Rev* 809 at 809-12; Tony Seskus, “Alberta could Lead Canada in Wind and Solar Power by 2025, Expert Says,” *CBC News* (21 September 2020), online: <www.cbc.ca/news/business/alberta-wind-and-solar-future-1.5728757> [perma.cc/5PXG-FHC9].

65. See Bill 17, *Clean Energy Amendment Act, 2020*, 5th Sess, 41st Parl, British Columbia, 2020, cl 1.

66. See e.g. Randy Shore, “B.C. Government Putting Alternative Energy Sector on Ice,” *Vancouver Sun* (14 February 2019), online: <vancouversun.com/news/local-news/b-c-government-putting-alternative-energy-sector-on-ice> [perma.cc/75KK-SWYA]; Hydro-Québec, “Québec Hydropower: Clean, Renewable and Low in GHG Emissions” (n.d.), online: <www.hydroquebec.com/about/our-energy.html> [perma.cc/S3KY-NNKS].

67. Cox, “Clean BC,” *supra* note 29.

province still relies primarily on coal and natural gas for its wholesale power.⁶⁸ Although buying from Alberta wind and solar providers might encourage more wind and solar investment within Alberta, the lack of an interprovincial power trade means that there are no market forces incentivizing British Columbia to buy from another province as opposed to from the United States.

If Canada did have top-down incentivizing of a robust trade in wind, solar, and other non-hydro renewables, it would be possible to help provinces like Alberta to “green” their grids and transition to more wind and solar power while also encouraging the export of that clean power to British Columbia and Saskatchewan, both of which could use it (and politics aside, would presumably want to use it if it were cheaper than existing sources). This, in turn, would encourage more investment in privately-owned wind and solar generation facilities in provinces like Alberta, jumpstarting the renewable energy sector, adding jobs, and bringing Canada even closer to an entirely decarbonized electricity sector, which would be a truly remarkable feat. Increasing the role of the federal government without staging a federal takeover of the entire electricity transmission sector à la FERC could lay the groundwork for this kind of transformation.

III. THE ECONOMIC CASE FOR ADDING SIGNIFICANT INTERPROVINCIAL TRANSMISSION INFRASTRUCTURE

The economic case for the long-term financial gains of adding more interprovincial transmission lines is compelling. In a 2019 report, it was estimated that if the federal government invested 1.7 billion CAD (an amount that the Canadian Infrastructure Bank has indicated it would be willing to supply) in interprovincial transmission projects, that investment would attract an additional 6.6 billion CAD in private investment to finance the transmission alone.⁶⁹ This would bring in an additional 92.5 billion CAD over ten years in public and private money to build the renewable power plants that would be needed to completely decarbonize the country’s electricity sector as a whole.⁷⁰ If it were possible to,

68. *Ibid.* Both Washington and California do use coal and natural gas in their power mixes, and both states are connected to the states surrounding them by interstate transmission lines. Because electricity from all sources, renewable and non-renewable, is identical, once the electricity is in an interconnected transmission line it is often impossible to say for certain where it came from. See *ibid.*

69. See Ralph Torrie & Aline Bak, “Building Back Better with a Green Power Wave,” *Corporate Knights* (29 April 2020), online: <www.corporateknights.com/responsible-investing/building-back-better-green-power-wave> [perma.cc/TH7N-RNR9].

70. See *ibid.*

for example, build a wind farm in Alberta that could provide electricity to BC Hydro under a PPA, such a project would create jobs in one province and provide low-cost renewable generation to another.⁷¹

However, it will not be easy to persuade provinces, many of which have already invested in exporting power to the United States, that investing money in buying and selling power from other provinces makes financial sense, especially when power has historically been an area of high provincial protectionism.⁷² Again, that protectionism is likely the product of so many provincially owned utilities, which tie the economics of the electricity sector tightly to provincial budgets and add a political dimension to electricity projects.⁷³ Thus, when a provincial utility builds more transmission lines, it is not with the anticipation of buying power from another province, which would involve additional expense in the form of PPAs and more jobs in another jurisdiction (and, potentially, reciprocity—if a province allows you to build a line in their jurisdiction, you must allow them to do the same).

On the other hand, the power generation sector is competitive in Alberta, with most facilities owned by private companies that are profit-driven. The mismatch between provincially-owned power on one side of the border and privately-owned power on the other could raise concerns about prices on both sides, though it should be noted again that many provinces with provincial utilities have also been buying power and connecting to investor-owned utilities for decades, both within their own borders and in the United States.⁷⁴ So, while provinces would need to take a cooperative stance with each other on interprovincial power, there is precedent for such cooperation with US-based utilities. Furthermore, this is why federal investment and participation are so important: The provinces tend to be protective of their own utilities and there is little appetite for funding expensive transmission lines to reach ratepayers in

71. Shawn McCarthy, “Roundtable: Greening Canada’s Electricity Could Help Kickstart Economy,” *Corporate Knights* (29 April 2020), online: <www.corporateknights.com/built-environment/green-recovery-roundtable-greening-canadas-electricity-sector-central-kickstarting-economy> [perma.cc/KMX7-2CX8].

72. See Jim Burpee, “Investment in Electricity Sector Could be Just What We Need to Jump-Start Economic Activity,” *The Globe and Mail* (15 July 2020), online: <www.theglobeandmail.com/business/commentary/article-investment-in-electricity-sector-could-be-just-what-we-need-to-jump> [perma.cc/SVZ5-BLDA].

73. See Blue, *supra* note 2 at 340-41.

74. See *ibid* at 343.

other provinces. Federal permitting of interprovincial transmission would defray the costs to provinces while encouraging private investment.⁷⁵

Additionally, if successful, the rush to promote electric vehicles will require provinces to add more electricity capacity in the next few decades. Instead of staying with the currently prevailing approach, which would be to build more controversial hydropower projects or to import power from the United States, adding more interprovincial power lines and buying and selling renewable electricity within the country could connect populous areas to the places where generating wind and solar power are cheapest.⁷⁶ Even in the United States, where building interstate transmission is more straightforward from a regulatory standpoint, the risk that projects will not cover their costs means that any added uncertainty makes these projects even more costly.⁷⁷ Without some movement towards building a national electricity market in Canada, there is little reason for investors to believe that the country's provincial protectionism still justifies putting money into projects here. This makes provinces more and more dependent on the United States as an electricity trading partner while neglecting the economic possibilities of a national power grid.

At present, interprovincial transmission lines are dependent on cooperation between provinces, which has thus far resulted in only a small number of east-west connections. Trying to add more interprovincial transmission that would spur investment in renewables and community-owned projects requires thinking outside of what any one province has traditionally done to supply electricity to its residents, which is where the exercise of the federal government's jurisdiction over these lines could make a real difference. Spurring private investment in Canadian transmission and renewable power projects is needed because, as has been discussed throughout this article, provincial utilities are unlikely to approve of passing the cost of such lines to existing ratepayers, as the ratepayers will not receive direct benefits. That does not mean there are not benefits to be had, but

75. The need for federal funding in this space has been generally acknowledged, even when potential benefits of federal regulation in the area have not. See Burpee, *supra* note 72; Jan Carr, "Power Sharing: Developing Inter-Provincial Electricity Trade" (July 2010) CD Howe Institute Commentary No 306 at 13; Brian Topp, "A National Energy Grid Would Be a Clean Win for Canada," *Policy Options* (18 January 2019), online: <policyoptions.irpp.org/magazines/january-2019/a-national-energy-grid-would-be-a-clean-win-for-canada> [perma.cc/6HW3-82EU] ("Progress could be made by introducing a new player—a national player—with a public interest mandate sensitive to the economic and fiscal pressures at play, and prepared to partner with incumbents to give them an opportunity to evolve into useful components of a more integrated national system.").

76. See Coleman, *supra* note 23 at 265.

77. See *ibid* at 293.

the primary mandate of many utilities is to keep power bills low. It could also be that many decades of provincially-segmented grids have resulted in a lack of imagination when it comes to the benefits of interprovincial electricity trade. As such, the number of interprovincial projects thus far is too small to realize real economic gains from interprovincial power trade.⁷⁸

IV. CANADA'S ENERGY PERSISTENT POVERTY: THE JUSTICE CASE FOR A POLICY CHANGE

More interprovincial transmission lines could also help off-grid communities, either by connecting them to the grid or, perhaps more significantly, by providing more investment opportunities for community-owned projects.⁷⁹ Although the issues discussed in this Part would not be directly addressed by more interprovincial transmission lines—at least, not in a comprehensive way—the creation of a national electricity grid and, by extension, a national electricity market, could encourage the entry of First Nations, other Indigenous, and rural communities to enter this market.

When communities are referred to as being “off the grid” or “off-grid,” it means that the community is in an area that is not serviced by transmission lines. When this is the case, the community does not have access to electricity from power plants and must instead use small-scale generation. For most remote Canadian communities—many of which are Indigenous—this means diesel-powered generators.⁸⁰ However, this is not always the solution. In Yukon and Northwest Territories, micro-hydro projects (in which turbines are placed in running water to generate electricity) provide much of the power to residents in Whitehorse and Yellowknife; but in the majority of remote communities, renewables are either too expensive for the community to implement, or conditions in the area make

78. See Jan Carr, “Power to the (Other) Provinces,” *The Globe and Mail* (30 July 2010), online: <www.theglobeandmail.com/opinion/power-to-the-other-provinces/article4324201> [perma.cc/597G-JJBY].

79. The federal government has recognized the potential value of interprovincial and international connections to the Territories (specifically, transmission lines from Manitoba and Alaska), although none yet exist. See Senate, Standing Committee on Energy, the Environment and Natural Resources, *Powering Canada's Territories*, 41-2 (June 2015) at 27, 39 (Hon Paul J Massicotte & Hon Richard Neufeld).

80. See Canada Energy Regulator, “Market Snapshot: Overcoming the Challenges of Powering Canada's Off-Grid Communities” (3 October 2018), online: <www.cer-rec.gc.ca/en/data-analysis/energy-markets/market-snapshots/2018/market-snapshot-overcoming-challenges-powering-canadas-off-grid-communities.html> [perma.cc/8K68-MD6P].

them inefficient.⁸¹ There is also a certain amount of distrust among remote and rural communities about moving off of diesel since, for all its flaws, they have relied on it for years.⁸²

The problem is not only in the territories—rural communities in all provinces are underserved. Some areas are served by rural electricity co-operatives that were primarily established in the 1970s, but slow growth of these programs since then means that many communities cannot connect to co-operatives as there are none close by, so they must be self-sufficient.⁸³ As with interprovincial connections more generally, the fact that most provinces that have their own electric utilities are answerable to taxpayers for expensive transmission projects means that there is little incentive to connect a small number of new ratepayers. Even investor-owned utilities, like the ones in Alberta, may have shareholders who are similarly uninterested in spending large amounts of capital for infrastructure that would reach few paying customers.⁸⁴

The current economic picture of building new transmission infrastructure has thus left many, if not most, rural communities without access to non-diesel power unless they are able to self-finance an energy infrastructure (which, all too often, they cannot). Additionally, if we want to see communities that are dependent on fossil fuels for electricity production move to integrate more renewable power, in some cases this would require new transmission lines to connect these sources to communities, at least where the existing transmission system is relatively close. Additionally, communities like this could also use these connections to sell excess renewable power back to the utilities, providing an economic boost. A path forward for a national electricity market, driven by

81. See Jimmy Thomson, “How can Canada’s North Get Off Diesel?,” *The Narwhal* (11 February 2019), online: <thenarwhal.ca/how-canadas-north-get-off-diesel> [perma.cc/9R9T-A7BN].

82. See *ibid.*

83. See Alastair Lucas, “The Challenge of Rural Electrification in Canada” in Iñigo del Guayo et al, eds, *Energy Justice and Energy Law* (Oxford University Press, 2020) 239.

84. Indeed, in Alberta, the Alberta Utilities Commission does an economic analysis of all options before approving the connection of remote communities to the grid. See e.g. *Decision on Preliminary Question: Application for Review of Decision 22125-D01-2018: Jasper Interconnection Project* (13 November 2018), Decision 23715-D01-2018, online: Alberta Utilities Commission <www.auc.ab.ca/regulatory_documents/Lists/eFiling%20Documents/DispForm.aspx?ID=6451> (in which the AUC ultimately approved a transmission line connection to the remote community of Jasper, after considering several alternatives and determining them to be less cost-effective). Alberta does have more transmission in rural parts of the province than its neighbours, likely because of the need to connect oil sands projects. See Dave Lovelock & Dylan Heerema, “Diesel, Renewables, and the Future of Canada’s Remote Communities” (15 January 2019), online (blog): *Pembina Institute* <www.pembina.org/blog/remote-microgrids-intro> [perma.cc/78UW-H97X].

both public and private investment in interprovincial transmission lines, could help provide an economic benefit to communities that are interested in both supplying their own power and selling the surplus.

This leads to a bleak truth: Canada has a problem with persistent energy injustice, specifically in the form of diesel dependency.⁸⁵ Though normally thought of as applying to the developing world, energy poverty refers to the lack of universal access to electricity and the developmental implications of that lack.⁸⁶ When a community does not have access to safe, reliable electricity, it impacts the substantive freedoms of its members, restricting their access to the educational and economic opportunities that the wider population takes for granted.⁸⁷ Hospitals, schools, and other large buildings and facilities require more power than diesel generators alone can handle, especially when those same generators are also the source of power for the rest of the community. Where there are schools, they may not have access to power when diesel needs to be rationed. Access to electricity does not mean that these issues will be resolved for communities, but curing this deficiency is one step towards bringing areas out of poverty.⁸⁸ It is also crucial to keep in mind that even though communities should have access to reliable, safe, and consistent electricity, energy projects that are aimed at addressing this problem must also be evaluated in terms of benefits and burdens, community buy-in, the duty to consult, and environmental impact.⁸⁹

In Canada, Indigenous Peoples are often isolated in remote or rural areas where transmission lines do not reach, preventing access to electricity from large power plants or dams.⁹⁰ It is estimated that around 70 per cent of the

85. See Dayna Nadine Scott, "Environmental Justice" in David Coghlan & Mary Brydon-Miller, eds, *The SAGE Encyclopedia of Action Research* (SAGE, 2014) 299 at 299.

86. See Antoine Halff, Benjamin K Sovacool, Jon Rozhon, "Introduction: The End of Energy Poverty: Pathways to Development" in Antoine Halff, Benjamin K Sovacool, Jon Rozhon, eds, *Energy Poverty: Global Challenges and Local Solutions* (Oxford University Press, 2014) 1 at 1-4. Note that there are differing definitions of energy poverty, primarily stemming from the traditional economic lens through which poverty is measured. See Benjamin K Sovacool, "The Political Economy of Energy Poverty: A Review of Key Challenges" (2012) 16 *Energy for Sustainable Development* 272 at 273.

87. See Halff, Sovacool & Rozhon, *supra* note 86 at 3.

88. See *ibid* at 4-5.

89. As Dayna Scott and Adrian Smith have noted, deep distrust of government, past environmental and health damage, and concern over land use issues (among other factors) have led to resistance against renewable energy projects in some Indigenous communities in Ontario. See Dayna Scott & Adrian A Smith, "Sacrifice Zones' in the Green Energy Economy: Toward an Environmental Justice Framework" (2017) 62 *McGill LJ* 861 at 871-72 [Scott & Smith, "Sacrifice Zones"].

90. See *ibid*.

country's rural communities, many of which are Indigenous, are off-grid.⁹¹ This problem is not unique to Canada; in the United States, many Native American reservations also do not have access to the grid. Further, as in Canada, the US federal government has not shown much interest in remedying that situation.⁹² Full participation in modern life in Canada requires twenty-four-hour access to electricity,⁹³ and yet many Indigenous and rural communities do not have this luxury, which most Canadians take for granted.⁹⁴ The ability to be economically self-sufficient is also dependent on access to reliable electricity, as community growth is constrained by limitations on how many buildings can be powered.⁹⁵

Most off-grid communities use diesel-powered generators as their primary source of electricity.⁹⁶ Diesel is not reliable—shipments can be spilled or delayed, only certain quantities may be stored, prices are not stable—and if generators cannot run because there is not enough fuel or because repairs are needed, then schools and other services must close, and other essential services may not be available.⁹⁷ Then there is the cost. The average on-grid electricity rate in British Columbia is 0.126 CAD/kWh.⁹⁸ The average price for diesel-generated electricity is significantly higher—in British Columbia, for example, the average rate for diesel power is 0.37 CAD/kWh, roughly three times more expensive, even with

-
91. Natural Resources Canada, “The Atlas of Canada - Remote Communities Database” (last modified 3 August 2018), online: *Government of Canada* <atlas.gc.ca/rced-bdece/en/index.html> [perma.cc/BPN2-S2L4]. Also note that many diesel-dependent Indigenous communities in British Columbia are not far from the United States border or Vancouver, but they are still not connected to BC Hydro’s transmission lines. See *ibid.*
92. See Catherine JK Sandoval, “Energy Access is Energy Justice: The Yurok Tribe’s Trailblazing Work to Close the Native American Reservation Electricity Gap” in Raya Salter, Carmen G Gonzalez & Elizabeth Ann Kronk Warner, eds, *Energy Justice: US and International Perspectives* (Edward Elgar, 2018) 166 at 169-70. Note that the Canadian government has taken steps to provide funding programs for transitioning off of diesel, but there has not been any federal or provincial work done to provide access to the grid for these communities.
93. *Ibid.*
94. See James Knowles, *Power Shift: Electricity for Canada’s Remote Communities* (The Conference Board of Canada, 27 September 2016) at ii (“It is probably fair to say that most Canadians take electricity for granted. For the 99 per cent of the population that is connected to North America’s electricity grid, access to electricity is guaranteed and reliable, and electricity costs make up only a small portion of the total cost of living.”).
95. See Sandoval, *supra* note 92 at 2.
96. See Lovekin & Heerema, *supra* note 84.
97. See *ibid.*
98. See Rylan Urban, “Electricity Prices in Canada 2021” (last modified 11 March 2021), online: <energyhub.org/electricity-prices> [perma.cc/3DMV-BJZH].

subsidies.⁹⁹ With so much of a community's costs eaten up by maintaining diesel supply, it is difficult to set aside money to transition to another electricity source or even to consider doing so.¹⁰⁰

The dollar cost of diesel does not include its health costs. It is true that remote communities are small in population and thus in carbon footprint, but burning diesel emits dangerous compounds like black carbon.¹⁰¹ Black carbon is an intense GHG containing particulate matter which, when inhaled by humans, can be absorbed by the lungs and enter the bloodstream, causing cardiovascular disease and premature death.¹⁰² Diesel thus not only limits opportunity and growth for communities but it can also, ultimately, cost community members years from their lives. This is particularly chilling considering the environmental and health damage that some remote communities have already suffered as the result of energy projects, diesel spills, chemical plants, and other factors or events.¹⁰³

Exacerbating the health effects of burning diesel is the damage that can be caused to both human bodies and the environment by exposure to diesel spills. There is no exact count of how many diesel spills have occurred in remote communities because of bureaucratic tangles over which federal and provincial agencies keep track of such events, but it may easily number in the hundreds across the country in a given year.¹⁰⁴ While some of the spills are likely small, any spill has the potential to contaminate the soil. Contamination can also be caused by leakages in diesel storage tanks. This contamination can have a serious negative impact on wildlife and local flora, which can undermine commercial activities

99. This rate is from 2005, the most recent rate I was able to find for off-grid communities in British Columbia. See Canada, Natural Resources Canada, *Status of Remote/Off-Grid Communities in Canada: August 2011*, by Jimmy Royer (Natural Resources Canada, 2011) at 10/44, online (pdf): <www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/canmetenergy/files/pubs/2013-118_en.pdf> [perma.cc/LXS5-SRVU].

100. See *ibid.*

101. See Sandoval, *supra* note 92 at 172-73.

102. See World Health Organization, *Preventing Disease Through Healthy Environments, A Global Assessment of the Burden of Disease from Environmental Risks* (WHO, May 2014) at 61.

The WHO report refers to "particulate matter," which includes black carbon. See also US Environmental Protection Agency, "Black Carbon Research" (last modified 23 September 2016), online: <19january2017snapshot.epa.gov/air-research/black-carbon-research_.html> [perma.cc/BC96-2CC3].

103. These areas are called "sacrifice zones," because they have been made to bear the burden of projects that benefit other, often more populous areas and wealthy companies. See Scott & Smith, "Sacrifice Zones," *supra* note 89 at 866.

104. See Christopher Pollon, "Why Nobody Seems to know Canada's Total Number of Diesel Spills," *The Discourse* (2 December 2017), online: <thediscourse.ca/energy/how-many-diesel-spills-happen-canada-every-year-nobody-knows> [perma.cc/6VAR-E699].

and foodways for rural and remote communities, and the cost of cleanup can be immense.¹⁰⁵ In Ontario, at least two First Nations have declared diesel spill emergencies in the past decade.¹⁰⁶

This kind of racially- and economically-based disproportionate treatment of remote and Indigenous Peoples is also contrary to efforts at reconciliation and extends the country's track record of neglecting Indigenous communities and its obligations to them. The fact that there is an economic rationale is no answer to this imbalance, although it is the reason it is likely to continue without policy changes.¹⁰⁷ The unequal treatment of Indigenous and rural communities is especially glaring when considering major provincial power projects like Site C in British Columbia and Muskrat Falls in Newfoundland, both of which will generate massive amounts of electricity and neither of which will send any of that electricity to currently off-grid communities.¹⁰⁸ But again, provinces are not interested in bearing the costs of connecting off-grid communities, at least not alone, nor are they incentivized to help off-grid communities transition away from diesel. And, while some First Nations do want to transition to renewable energy and even become electricity exporters, provinces do not generally consider this when planning new infrastructure projects.¹⁰⁹

The federal government is aware of the problems associated with diesel fuel use, but its focus is on funding solutions, not implementing them. As part of the Pan Canadian Framework on Clean Growth and Climate Change, Natural

105. See *e.g.* Stephanie E Chang et al, "Consequences of Oil Spills: A Review and Framework for Informing Planning" (2014) 19 *Ecology & Society* 26 at 34.

106. See Sunny Freeman, "Industry and Indigenous Communities Let the Sun in on the Shared Problem of Diesel," *Financial Post* (6 January 2017), online: <financialpost.com/commodities/energy/industry-and-indigenous-communities-let-the-sun-in-on-the-shared-problem-of-diesel> [perma.cc/4KTK-LFH6].

107. See Lucas, *supra* note 83.

108. See Kyle Greenham, "Off the Grid: Southern Labrador Communities Struggle with Diesel Generators," *Saltwire* (12 October 2017), online: <www.saltwire.com/news/local/off-the-grid-southern-labrador-communities-struggle-with-diesel-generators-155168> [perma.cc/MK8K-YHFU].

109. See *e.g.* James Wilt, "Canada's Commitment of \$220 Million to Transition Remote Communities Off Diesel a Mere 'Drop in the Bucket,'" *The Narwhal* (6 March 2018), online: <thenarwhal.ca/canada-s-commitment-220-million-transition-remote-communities-diesel-mere-drop-bucket> [perma.cc/AFL7-QT8R] (regarding British Columbia and BC Hydro's decision to go ahead with the Site C dam project, which made the possibility of supplying the needed power from Indigenous-owned renewable projects moot). See also Sarah Cox, "B.C. First Nations Forced to Shelve Clean Energy Projects as Site C Dam Overloads Grid," *The Narwhal* (25 June 2018), online: <thenarwhal.ca/b-c-first-nations-forced-shelve-clean-energy-projects-site-c-dam-overloads-grid> [perma.cc/579J-V642].

Resources Canada was allocated 220 million CAD in funding over six years to help off-grid communities transition away from diesel.¹¹⁰ There are also other funding initiatives being administered both federal and through federal-provincial partnerships,¹¹¹ but all of these programs suffer from the same flaw: They do nothing to change the underlying structural problems that have created the country's energy poverty in the first place—the provinces remain the only actors in the regulation and approval of electricity transmission line projects. Money is all well and good, but the federal government currently cannot guarantee that projects will in fact be permitted.

The plight of off-grid communities is not the only problem to which the provincial domination in transmission has contributed. As long as the decisions about transmission planning are left only to provinces, the status of remote and off-grid communities is unlikely to change. However, as noted in Part III, above, at least one study indicates that increased interprovincial electricity trade could bring significant investment in renewable projects more broadly, which could result in more money for smaller-scale projects that use renewable or cleaner energy sources, even if they are not connected to the grid.¹¹² For Indigenous communities in particular, a rethinking of the provincial dominance over electricity connections could present the opportunity to take an equity or full ownership stake in such projects, which in turn could provide a much-needed economic boost. While some communities could be connected to new interprovincial transmission lines directly, the possibility of a national market for electricity also provides an opportunity for Indigenous communities to be both self-sufficient power producers and sellers of the surplus electricity they generate.¹¹³

110. See Government of Canada, "Clean Energy for Rural and Remote Communities: BioHeat, Demonstration & Deployment Program Streams" (last modified 28 October 2020), online: <www.nrcan.gc.ca/reducingdiesel> [perma.cc/Q3LL-PUVJ].

111. See Natural Resources Canada, "Funding, Grants, and Incentives" (last modified 04 May 2021), online: *Government of Canada* <www.nrcan.gc.ca/science-and-data/funding-partnerships/funding-opportunities/funding-grants-incentives/4943> [perma.cc/WM9U-AVSX].

112. See McCarthy, *supra* note 71.

113. For many off-grid communities in British Columbia, for example, there is a strong resistance among Indigenous communities to being connected by BC Hydro, as this would make the communities dependent on BC Hydro's decisions, which often include diesel generation instead of renewables or transmission connection. See Maryam Rezaei & Hadi Dowlatabadi, "Off-Grid: Community Energy and the Pursuit of Self-Sufficiency in British Columbia's Remote and First Nations Communities" (2016) 21 *Local Environment* 789 at 796-97.

These potential economic gains, in turn, could play an important role in increasing Indigenous sovereignty and self-determination.¹¹⁴ Having safe, reliable, on-demand electricity is needed for communities to grow economically and provide opportunities for members. Additionally, many First Nations and other Indigenous communities are interested in wind and solar ownership and investment, which can be used on a microgrid to power only the surrounding homes and businesses.¹¹⁵ If there were potential to sell the power, either via provincial- or privately-owned transmission lines, communities could invest in larger scale wind and solar projects to generate an electricity surplus. This would allow communities to sell that power to other communities or to utilities (potentially even utilities in other provinces, if such lines were easier and more economic to build). But in order to send wind or solar-generated power over even moderate distances, transmission lines would be necessary.

Indeed, it is generally true that adding more wind and solar to any jurisdiction's power mix requires new transmission infrastructure, and opposition to that infrastructure can stall transition away from hydrocarbon power sources.¹¹⁶ Despite the challenges, the number of Indigenous-owned renewable projects is growing. In Alberta, some First Nations have even taken an ownership stake in

-
114. See *ibid.* Adrian A Smith and Dayna Nadine Scott have done field work with Indigenous communities undertaking renewable projects as either part or full owners, and conclude that sovereignty is a major reason why communities rally around these kinds of projects. See “Energy without Injustice? Indigenous Participation in Renewable Energy Generation” in Sumudu A Atapattu, Carmen G Gonzalez, Sara L Seck, eds, *The Cambridge Handbook of Environmental Justice and Sustainable Development* (Cambridge University Press, 2021) 383.
115. See Canadian Institute for Climate Choices, “Waves of Change: Indigenous Clean Energy Leadership for Canada’s Clean, Electric Future” (February 2022) at 5-8, online (pdf): <climatechoices.ca/wp-content/uploads/2022/02/ICE-report-ENGLISH-FINAL.pdf> [perma.cc/J7ZK-F6HZ].
116. See Alexandra B Klass & Elizabeth J Wilson, “Interstate Transmission Challenges for Renewable Energy: A Federalism Mismatch” (2012) 65 Vand L Rev 1801 at 1811 (a Texas Energy Stakeholder stated that “[t]he list of top three [challenges] for wind industry I would say: transmission, transmission and transmission” at 1802).

transmission lines that cross their reserves.¹¹⁷ But similar opportunities for rural and remote Indigenous communities in other provinces to own transmission lines or export electricity are more limited, as the other provinces generally have a near-total monopoly on transmission and may not factor in how their capacity planning negatively impacts these types of projects.¹¹⁸ Without a national market for electricity, remote and Indigenous communities are at the mercy of provincial politics and priorities when it comes to electricity.

V. USING FEDERAL TRANSMISSION LINE JURISDICTION TO CREATE A NEW INTERPROVINCIAL ELECTRICITY PLAN

As noted, the federal government already contemplates its authority over interprovincial transmission lines under the enabling regulation of both the NEB and its successor, the CER.¹¹⁹ As with other interprovincial undertakings, the federal government has the power to regulate interprovincial transmission lines as they are “Works and Undertakings connecting the Province with any other

117. In Alberta, for example, AltaLink (a private transmission line company owned by Berkshire Hathaway) and the Piikani First Nation came to an agreement giving the Piikani an ownership stake in transmission lines that crossed their reserve by forming a joint venture, PiikaniLink. See AltaLink, News Release, “Limited Partnership Provides Valuable New Revenue for Piikani Nation” (4 June 2019), online: <www.altalink.ca/news/news-releases.cfm?releasePage=06042019135315> [perma.cc/SVD3-L68Z]. See also Jeffrey Jones, “Indigenous Groups Continue Move Into Energy Industry, Acquiring 40% of Major Alberta Transmission Line,” *The Globe and Mail* (23 September 2019), online: <www.theglobeandmail.com/business/article-tk-atco> [perma.cc/74WH-JSDT?type=image] (detailing a 40 per cent stake in a major transmission line from Fort MacMurray to just west of Edmonton by the Athabasca Chipewyan First Nation, Bigstone Cree Nation, Gunn Métis Local 55, Mikisew Cree First Nation, Paul First Nation, Sawridge First Nation, and Sucker Creek First Nation). There are also a number of Alberta Utilities Commission decisions on Indigenous ownership of transmission facilities. See e.g. *Canadian Utilities Limited and Genesee Lake Holding Corp: Application for the Sale of Alberta PowerLine Limited Partnership* (29 November 2019), Decision No 24792-D01-2019, online: Alberta Utilities Commission <www.auc.ab.ca/regulatory_documents/Lists/eFiling%20Documents/DispForm.aspx?ID=7819> (granting the sale of interest in a transmission line company to a holding company formed by a group of First Nations and recognizing that holding company as a utility).

118. See Cox, *supra* note 109.

119. See Alastair R Lucas, “The National Energy Board and Energy Infrastructure Regulation: History, Legal Authority, and Judicial Supervision” (2018) 23 Rev Const Stud 25 at 38-39. Lucas notes that, although the NEB (and its successor, the CER) has comprehensive regulatory authority over interprovincial pipelines, it does not exert the same authority over interprovincial transmission lines (*ibid* at 29-32).

or others of the Provinces, or extending beyond the Limits of the Province.”¹²⁰ Since the federal government has never attempted to regulate an interprovincial transmission line, there is no confirmation from the Supreme Court of Canada that this section provides jurisdiction, but the Court has affirmed exclusive federal jurisdiction over similar projects and over interprovincial crude oil pipelines in particular.¹²¹ Additionally, the recent decision of the Supreme Court of Canada in *Reference re Greenhouse Gas Pollution Pricing Act (GGPPA)* suggests both that federal jurisdiction over interprovincial transmission lines may be in the national interest, and that an increased role for the federal government in the electricity space would not be constitutionally unprecedented.¹²²

In fact, there are many interconnections between individual provinces and US states, such as British Columbia (which sells power to the state of Washington), Manitoba (which is part of MISO, the Mid-continent Independent System Operator, along with fifteen US states) and Québec (which has several interconnections to New England and, in 2021, won a lucrative contract to sell power to Massachusetts).¹²³ But why has there been no order in council directing the CER to review transmission lines running from, say, British Columbia to Washington state but not to Alberta? The reasons for this may have their roots in a political battle between provinces that took place decades ago and the federal government’s refusal to intervene. It may also be true that when abdication of jurisdiction goes on long enough, it becomes increasingly difficult to displace provincial dominance in the area, politically and practically.

It thus falls to the federal government to take up its jurisdiction over interprovincial transmission lines in order to make a national power market a reality. This part will make out the constitutional case for regulation of interprovincial transmission lines under the *Constitution Act, 1867*. It will

120. *CA, 1867*, *supra* note 36, s 92(10)(a).

121. See *RREMA*, SCC, *supra* note 8 (denying appeal based on the lower court’s reasons).

122. *References re Greenhouse Gas Pollution Pricing Act*, 2021 SCC 11 [*GGPPA*].

123. See House of Commons, *supra* note 31; BC Hydro, “International Power Lines” (n.d.), online: <www.bchydro.com/energy-in-bc/operations/international-power-lines.html> [perma.cc/3JFD-BBPG]; Midcontinent Independent System Operator, “About MISO” (n.d.), online: <www.misoenergy.org/about> [perma.cc/J5UV-3BNJ]; Tara Lohan, “Is New England’s Biggest Renewable Energy Project Really a Win for the Climate?,” *The Revelator* (24 September 2020), online: <therevelator.org/hydropower-necce> [perma.cc/5PYK-AYZ9]. But note that Hydro-Québec’s proposed transmission line to its hydropower to Massachusetts may have been quashed by Maine voters. See Associated Press, “Construction Halted on \$1B Hydro-Québec Transmission Line Project in Maine,” *CBC News* (19 November 2021), online: <www.cbc.ca/news/canada/montreal/maine-hydropower-transmission-corridor-1.6256557> [perma.cc/KD8H-FSBL].

also explain why such regulation would not result in a federal takeover of all transmission lines in the country, as has happened in the United States. The primary basis on which an interprovincial transmission line falls under federal jurisdiction is interprovincial works. This could also provide a basis by which federal jurisdiction could potentially be extended to any provincial transmission line to which the interprovincial line connects.¹²⁴ But, at the same time, this basis for jurisdiction also provides a roadmap to limiting federal jurisdiction to that interprovincial line only, even if it does connect to existing provincial lines for the purpose of buying and selling power.¹²⁵ It should also be noted here that if federal jurisdiction over the interprovincial transmission line itself were established, the CER would already have the authority to permit such lines, as well as a process for doing so.¹²⁶

A. THE CONSTITUTIONAL BASIS FOR FEDERAL JURISDICTION OVER INTERPROVINCIAL TRANSMISSION LINES

When the federal government has asserted its jurisdiction over interprovincial energy projects, the Supreme Court of Canada has upheld this assertion. In *Reference re Environmental Management Act*, British Columbia passed legislation intended to put limits on shipment of heavy oil from Alberta through the province on the basis of the province's power to issue environmental protections.¹²⁷ The federal government argued that this constituted attempted provincial regulation of an undertaking within sole federal jurisdiction, to which British Columbia responded that, with respect to interprovincial pipelines going through the province, it had ancillary powers that worked in tandem with the federal government over permitting and performing the environmental assessment.¹²⁸ While the British Columbia Court of Appeal agreed that the province had the power to protect its environment, it found that the purpose of the legislation at issue was not to protect the environment per se but rather to

124. Other authors have suggested the interprovincial trade power could also be used as a basis for nationalizing all transmission lines in the country, but that is not the position taken by this article. See Blue, *supra* note 2 at 361.

125. It is perhaps worth reiterating here that there are already a few interprovincial connections for the purpose of buying and selling electricity, and the federal government has not exerted jurisdiction over any of them.

126. See *CER Act*, *supra* note 37, ss 11(b) (extending the regulator's mandate to interprovincial transmission lines), 247-52 (setting out the permitting procedure).

127. See *RREMA*, BCCA, *supra* note 8 at para 1. I have chosen to discuss this case because it involves a clash between two provinces over an energy project, although not an electricity one, and because of its clear articulation of federal dominance in the space.

128. *Ibid* at paras 2-3.

block interprovincial pipelines carrying oil from Alberta's oil sands.¹²⁹ The court found that the provincial law was invalid because the power to approve or deny such a pipeline is federal.¹³⁰ The Court denied British Columbia's appeal.¹³¹

The power of the federal government to regulate similar interprovincial electricity connections seems straightforward under the same rationale, but even in a report from the House of Commons' Standing Committee on Natural Resources calling for more such connections, there is no suggestion that the federal government would regulate such connections.¹³² This is not to say there are no interprovincial transmission lines, but neither the CER nor its predecessor, the NEB, has ever reviewed a federal permit for such a line. Provisions in the enabling legislation of both regulators that refer to interprovincial transmission lines seem to have been used only to approve international connections.¹³³ However, if an applicant wishes to obtain a permit for an international transmission line, it has the option to choose either a federal review or a hybrid federal-provincial review. If it chooses the latter, any conditions set by the CER are binding on the provincial regulator.¹³⁴

Under section 92(10)(a) of the *Constitution Act, 1867*, the federal government has jurisdiction over interprovincial works.¹³⁵ There is no single test for determining whether federal jurisdiction has been established under 92(10) (a), but when the issue is whether the connection of a provincial project to an interprovincial one creates federal jurisdiction over the former, the question may be whether there has been "functional integration" of the provincial and interprovincial works.¹³⁶ In *United Transportation Union v. Central Western Railway Corp.* ("Central Western"), the issue of jurisdiction concerned a railway

129. *Ibid* at paras 93-94.

130. *Ibid* at para 101.

131. *RREMA*, SCC, *supra* note 8.

132. See House of Commons, *supra* note 31 at 2. The Committee did recommend to "engage provinces and territories to identify and address regulatory barriers between jurisdictions to facilitate developing transmission interties, increasing interprovincial and Canada-U.S. electricity trade, and modernizing electric systems and markets" (*ibid*).

133. See *CER Act*, *supra* note 37, s. 11(b).

134. See generally *Sincennes v Alberta (Energy and Utilities Board)*, 2009 ABCA 167 (in which the Court of Appeal of Alberta held that decisions made by the NEB in a hybrid federal-provincial approval process as to the location of a corridor in Alberta in which the proposed transmission line to Montana could be located were binding on the Alberta Utilities Commission).

135. *CA, 1867*, *supra* note 36, s 92(10)(a).

136. See *Westcoast Energy Inc v Canada (National Energy Board)*, [1998] 1 SCR 322 at 325 [*Westcoast Energy*].

line located entirely within Alberta that was used to transport grain to a national market in Vancouver.¹³⁷ All of the employees of the rail line were members of national unions.¹³⁸ The Court set out a two-part inquiry under which the provincial rail line might fall under federal jurisdiction: It could either be part of an existing federal work (in this case, a rail network), or it could be integral to a federal work.¹³⁹ In either case, “[s]omething more than physical connection and a mutually beneficial commercial relationship with a federal work or undertaking is required for a company to fall under federal jurisdiction.”¹⁴⁰ These two tests for federal jurisdiction have been used in subsequent decisions.

In *Westcoast Energy v. Canada (National Energy Board)* (“*Westcoast Energy*”), the issue was whether gathering pipelines located entirely within one province but connected to facilities that were part of an interprovincial (and international) natural gas pipeline network fell under federal jurisdiction.¹⁴¹ The Court considered the issue under both tests from *Central Western* and found that federal jurisdiction was established under the first test.¹⁴² The Court noted that common ownership of both the gathering pipelines and the interprovincial pipelines was not enough on its own, and neither was the physical connection between the provincial and interprovincial lines.¹⁴³ Instead, the Court made its determination on a finding that both the gathering lines and the larger pipeline network were “subject to common control, direction and management by *Westcoast*” as a single enterprise.¹⁴⁴

In *Tessier Ltée v. Québec (Commission de la santé et de la sécurité du travail)* (“*Tessier*”), the Court adopted the standard that functional integration must be to a sufficient degree that the provincial undertaking “lose[s] its distinct character.”¹⁴⁵ In *Tessier*, the company in question had several maritime business interests, including stevedoring or loading cargo onto ships for transport, and argued that its involvement in navigation made its stevedoring business a federal

137. [1990] 3 SCR 1112 at 1112-13.

138. *Ibid* at 1113.

139. *Ibid* at 1113-14.

140. *Ibid* at 1114.

141. *Supra* note 136 at 322-23.

142. *Ibid* at 325.

143. *Ibid* at 325-26. See also *Tokmakjian Inc v Achorn*, 2017 FC 1057 (common ownership and overlap of employees did not show functional integration of provincial and interprovincial components); *Canadian Pacific Railway Co v British Columbia (AG)*, [1948] SCR 373 (finding the same).

144. *Westcoast Energy*, *supra* note 136 at 327.

145. 2012 SCC 23 at para 55 [*Tessier*], citing *Westcoast Energy*, *supra* note 136 at 328.

undertaking.¹⁴⁶ The Court disagreed with Tessier's argument.¹⁴⁷ Although section 91(10)(a) does give the federal government jurisdiction over navigation and shipping (in addition to other interprovincial works), that jurisdiction is not exclusive. It specifically covers navigation activities that have a national character and "that engage national concerns which must be uniformly regulated across the country, regardless of their territorial scope."¹⁴⁸ And, most crucially for interprovincial transmission lines, the Court went on to state that "[u]nder s. 92(10), the provinces are entitled to regulate transportation within their boundaries, while the federal government has jurisdiction over transportation that transcends provincial boundaries and connects the provinces with each other or with other countries."¹⁴⁹ This language seems to support the idea that provincial grids stay provincial, even when there are separately-owned interprovincial connections.

Following the reasoning in *Westcoast Energy* and *Tessier*, the federal government could exercise its jurisdiction to issue permits for interprovincial transmission lines—again, this is specifically a transmission line that begins in one province and ends in another and is owned in its entirety by one company or utility—without disturbing the jurisdiction that provinces have over their own in-province transmission systems. It is possible that some of the interprovincial transmission lines may have the same owner as one of the existing provincial transmission infrastructures to which it is connected. But, as the abovementioned cases show, finding that an entire provincial transmission system is converted to federal jurisdiction by these interprovincial lines would require more than common ownership or physical connection; it would be necessary to show that the existing provincial grids are part of an existing federal work or are integral to a federal work. That is not the case in any province.

Moreover, not only would the existing provincial grid not be part of a federal work, but while the federal work (the interprovincial transmission line) would rely on the provincial transmission lines to be able to move electricity, the reverse would not be true. And, with respect to "common control, direction, and management,"¹⁵⁰ there would still be two independently owned, controlled, operated, and directed provincial transmission systems on either side of the interprovincial lines running between them. More importantly, federal jurisdiction over interprovincial works

146. *Ibid* at paras 1-4.

147. *Ibid* at para 51.

148. *Ibid* at para 22.

149. *Ibid* at para 25.

150. *Westcoast Energy*, *supra* note 136 at 327.

exists alongside the right of the provinces to regulate works entirely within their borders. Where there is no real difference between the provincial work and a federal system, that is one thing; but in this case, the character of the provincial grids would not be fundamentally brought under federal operation or control because of the addition of interprovincial connections.

B. FEDERAL JURISDICTION AND THE GROWING NEED FOR NATIONAL ACTION ON CLIMATE CHANGE

The Court's recent decision in *GGPPA* illustrates the need for federal action in light of provincial inaction on some climate issues and the Court's implicit recognition of the same.¹⁵¹ The law at issue was passed in 2018 as part of the Pan Canadian Framework for Clean Growth and Climate Change (the "Framework"), the country's national strategy to cut GHG emissions and comply with its obligations under the Paris Agreement.¹⁵² Prior to the Paris Agreement, Canada had a history of failing to meet its obligations under international agreements to fight climate change, including the Kyoto and Oslo Accords, so Canada needed a different approach to succeed this time—and that approach included working with the provinces to craft a coordinated plan to reduce GHG emissions.¹⁵³

Leaders from the federal, territorial, and provincial governments formed the Working Group on Carbon Pricing Mechanisms to study the possible role of a carbon pricing system in meeting Canada's emissions reductions targets, and its work was used to create the "Pan-Canadian Approach to Pricing Carbon Pollution."¹⁵⁴ This, in turn, led to the Framework, which included the federal backstop carbon pricing system ("the backstop").¹⁵⁵ Colloquially referred to as a "carbon tax," the backstop implemented a gap-filling carbon pricing system, under which provinces could enact their own carbon pricing programs so long

151. *GGPPA*, *supra* note 122. An argument could be made that federal jurisdiction could be grounded on the Peace, Order, and Good Government power's national interest test, as was the federal carbon pricing scheme at issue in this case. However, this article does not make that argument because the federal government has already recognized its power to regulate interprovincial transmission lines under the interprovincial works power; it simply chooses not to do so. As such, interprovincial works provide both a more coherent and less controversial basis for federal jurisdiction.

152. See Government of Canada, "Complete Text for Pan-Canadian Framework on Clean Growth and Climate Change Second Annual Report" (8 August 2019), online: <www.canada.ca/en/environment-climate-change/services/climate-change/pan-canadian-framework-reports/complete-text-for-second-annual-report.html> [perma.cc/92AN-Y6VD].

153. See *GGPPA*, *supra* note 122 at paras 13-15.

154. *Ibid* at para 16.

155. *Ibid* at para 17.

as they met the minimums in the federal backstop.¹⁵⁶ If they failed to do so by a certain date, the backstop would take effect.¹⁵⁷

Although the backstop was crafted in consultation with provincial leaders, and although the Framework was adopted by eight provinces upon its release, the constitutionality of the law was challenged by Saskatchewan, Ontario, and Alberta.¹⁵⁸ In its opinion, the Court began by noting the severity of the climate crisis, stating, “[g]lobal climate change is real, and it is clear that human activities are the primary cause.”¹⁵⁹ Perhaps most importantly for the issue of decarbonizing the electricity sector, the Court went on to note that the severe impacts of unchecked climate change do not respect provincial borders:

Climate change has three unique characteristics that are worth noting. First, it has no boundaries; the entire country and entire world are experiencing and will continue to experience its effects. Second, the effects of climate change do not have a direct connection to the source of GHG emissions.... Yet the effects of climate change are and will continue to be experienced across Canada, with heightened impacts in the Canadian Arctic, coastal regions and Indigenous territories. Third, no one province, territory or country can address the issue of climate change on its own. Addressing climate change requires collective national and international action. This is because the harmful effects of GHGs are, by their very nature, not confined by borders.¹⁶⁰

This third factor is one of the principal reasons why action on interprovincial transmission should be taken by the federal government now, while we still have time to stave off the worst impacts of climate change if we can achieve rapid and dramatic reductions in GHG emissions. Across the country, we have the renewable resources, including hydropower, wind, and solar, to achieve net-zero power in the next few decades, but not if we continue to operate as though each province is an island, entirely dependent on itself for resources. For decades, the federal government has chosen to abstain from reviewing permits for interprovincial transmission lines, but this is a policy choice, not a legal one. And it is time for that policy to change.

156. *Ibid.*

157. *Ibid* at para 18.

158. *Ibid* at paras 19, 39–46.

159. *Ibid* at para 7.

160. *Ibid* at para 12.

Again, this would not be a wholly new arrangement. The CER already issues permits for international transmission lines (there are 34 of them)¹⁶¹ and does so by using the same standards set out by provincial regulators to oversee “construction, operation and abandonment of international power lines.”¹⁶² If the CER were to expand its review to interprovincial lines, this would be the first essential step to quickly and effectively laying the groundwork for a robust market for interprovincial trade in renewable power. This would not be a case where the federal government is taking power away from the provinces since, on their own, the provinces do not seem inclined to invest in transmission lines to connect to their provincial neighbours. These transmission lines would also be subject to federal law, including environmental impact assessment. The lines could be owned by existing transmission utilities (including Crown Corporations like BC Hydro and SaskPower) as well as private companies entering what would be a new market: interprovincial sale of power. Furthermore, the CER already has experience with permitting international lines by using the regulations of the original province, and provincial utilities thus have experience with selling power to private companies. In other words, we already have the tools to add more interprovincial connections to facilitate the trade of renewable power—and it is time to use them.

VI. CONCLUSION

The worst impacts of climate change do not respect provincial borders, and efforts to combat those impacts by achieving rapid decarbonization in the electricity sector should likewise not be hampered by provincial politics. Furthermore, Canada has persistent problems with ensuring the equal access of all citizens to reliable, safe, and affordable electricity, and is divided into have and have-not provinces when it comes to the availability of renewable power. The policy change advocated by this article—that the federal government takes an active role in expanding the availability of renewable power across its country, in particular by permitting interprovincial transmission lines needed to spur investment

161. NRC, “Energy Facts,” *supra* note 63; Canada Energy Regulator, “International Power Lines Dashboard” (last modified 29 November 2021), online: <www.cer-rec.gc.ca/en/data-analysis/facilities-we-regulate/international-power-lines-dashboard/index.html> [perma.cc/GCW9-WNWE].

162. See Natural Resources Canada, “Canada’s Electric Reliability Framework” (15 June 2020), online: *Government of Canada* <www.nrcan.gc.ca/our-natural-resources/energy-sources-distribution/electricity-infrastructure/electricity-canada/canada-electric-reliability-framework/18792> [perma.cc/H7S2-P3WG].

in wind, solar, and other non-hydro renewables—will not fix all of our access problems. But it is an important step in the right direction. It is perhaps not a surprise that the federal government has been uninterested in taking up its role in overseeing interprovincial transmission lines, given the dominance of the provinces in the electricity space and the sometimes-contentious politics that erupt when provinces are told that they must allow projects within their borders that do not yield immediate benefits to them. However, the immediacy of the need to address carbon emissions from all sectors, including electricity, and the continuing problems with distributional justice between urban and rural populations (to say nothing of Indigenous populations) weighs in favour of ending federal abdication in the electricity sector.