Acadiensis

ACADIENSIS

Privileges and Entanglements:
Lessons from History for Nova Scotia's Politics of Energy

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Volume 42, Number 2, Summer/Autumn 2013

URI: https://id.erudit.org/iderudit/acad42_2pres02

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Publisher(s)

The Department of History at the University of New Brunswick

ISSN

0044-5851 (print)
1712-7432 (digital)

Explore this journal

Cite this article

Campbell, C. (2013). Privileges and Entanglements:: Lessons from History for Nova Scotia's Politics of Energy. *Acadiensis*, *42*(2), 114–137.

Privileges and Entanglements: Lessons from History for Nova Scotia's Politics of Energy

IN JULY 2009, THE GOVERNMENT OF NOVA SCOTIA made a striking announcement: by 2015, 25 per cent of the province's electricity would be supplied by renewable sources (at that point only 11 per cent of its electricity came from renewables and the rest from generating plants fired by imported coal). Nova Scotia then became the first province in Canada to place hard caps on greenhouse gas emissions in the electricity sector.[1] Six months later the province sent a delegation to the United Nations Climate Change Conference (COP 15) in Copenhagen to promote its sustainable energy projects, in particular a new tidal turbine in the Bay of Fundy (site of the world's highest tides). That same month, a report commissioned by the Nova Scotia Department of Energy as to how to reach the 2015 target stated confidently that by 2020 "energy poverty would be eliminated. There is no financial, economic, environmental, social or technological reason why this should not happen."[2] Evidently encouraged, in the spring of 2010 the province released its Renewable Electricity Plan, reaffirming the 2015 target and adding a further goal of 40 per cent from renewable sources by 2020.[3] By 2012, the 2020

1 The key announcement of 25 per cent by 2015 was made by a New Democratic Party government that had been in office for a month in a province that never before had elected the historically left-of-centre party. That said, there had been groundwork laid by the Environmental Goals and Sustainable Prosperity Act (http://nslegislature.ca/legc/bills/60th_1st/3rd_read/b146.htm), which dealt frankly with greenhouse gas emissions and provided for programs in renewable energy, energy efficiency, and climate change adaptation with the aim of "demonstrate[ing] international leadership by having one of the cleanest and most sustainable environments in the world by the year 2020." See Canadian Broadcasting Corporation (CBC), "Nova Scotia Speeds Up Green Energy Target," 28 July 2009, http://www.cbc.ca/news/canada/nova-scotia/story/2009/07/28/ns-green-energy-target.html; Nova Scotia Department of Energy media release, "Province Ups Renewable Target; Wheeler to Consult with Public," 28 July 2009, http://www.gov.ns.ca/news/details.asp?id=20090728002; and "Premier's Remarks About Upcoming Trip to Copenhagen," 8 December 2009, http://premier.gov.ns.ca/speeches/premiers-remarks-about-upcoming-trip-to-copenhagen/. I am grateful to Deborah Buszard (UBC Okanagan) who prompted me to write this and who contributed to an earlier draft of this article; to Martin Melosi and Helmuth Trier, who invited me to participate in a workshop on "Energy Resources: Europe and its Former Colonies" sponsored by the Deutsches Museum and the Rachel Carson Center in October 2012 – and to the participants of that workshop for their feedback. I would also like to thank Jerry Bannister (Dalhousie), who read a draft of this essay, but more importantly has inspired me to think of the possibilities for political engagement by historians.

2 Michelle Adams and David Wheeler, *A New Renewable Energy Strategy for Nova Scotia, Final Report to the Government of Nova Scotia* (Halifax, 28 December 2009), 30-1.

3 This was an increase from 25 per cent from renewables, proposed in 2009, within an additional five years. See Nova Scotia Department of Energy, *Toward a Greener Future: Nova Scotia's 2009 Energy Strategy* (January 2009), http://www.gov.ns.ca/energy/resources/spps/energy-strategy/Energy-Strategy-2009.pdf, and Nova Scotia Department of Energy *Renewable Electricity Plan* (April 2010), p. 7, http://www.gov.ns.ca/energy/resources/EM/renewable/renewable-electricity-plan.pdf.

Claire Campbell, "Privileges and Entanglements: Lessons from History for Nova Scotia's Politics of Energy," *Acadiensis* XLII, no. 2 (Summer/Autumn 2013): 114-137.

target was cemented as law, in large part on the basis of an unprecedented agreement with the province of Newfoundland and Labrador to develop jointly a hydro-electricity project on the Lower Churchill River.

That is an awful lot for a very small jurisdiction to promise in three years, let alone one that has struggled with economic torpor for much of the 20th century. But in all the discussion about energy realities and energy futures there has been no reference to Nova Scotia's energy history, or the role this history has played in creating the province's political culture and identity. While energy has always been one of the most contentious aspects of federal/provincial relations in Canada, there has been little public discussion about how energy resources profoundly shaped Nova Scotia's place within first the British Empire and then the Canadian federation in ways that continue to resonate today. As is often the case with environmental issues and environmental decision-making, Nova Scotia's energy profile is presented through a compression of time that features only the present and future, emphasizing a sense of crisis, the importance of innovation, and predictions for future outcomes.

But the environmental historian sees the story differently.[4] During the mid-19th century wind and tides gave rise to the twin industries of shipping and shipbuilding, which in turn nurtured a confidence and commitment to a global trading system among the colony's merchant and political elites. Much of their opposition to Confederation in the 1860s stemmed from a sense of environmental investment: resistance to a framework oriented toward a continental interior and away from a maritime economy and a coastal way of life. Indeed, Canada's industrial heartland soon demonstrated that it considered Nova Scotia most valuable to the federation for its coal resources – literally fuel for nation-building projects concentrated west of the Gulf of the St. Lawrence. This external demand for coal and steel bound the province into a web of corporate and political dependencies that lasted for a century – a web that entangled industrial development with great costs in environmental sustainability, public health, and energy security. And yet, for decades, Nova Scotia, like many other Canadian provinces, has promoted particularly fossil fuel

4 John McNeill's *Something New Under the Sun: An Environmental History of the Twentieth-Century World* (New York: W.W. Norton and Co., 2000) contains a useful introduction to changing global energy regimes. Energy history in Canada is, strangely, still rather undeveloped – a notable absence when one considers the heightened image, if not heightened role, of extractive fossil fuels in the national economy. *Powering Up: A History of Fuel, Power and Energy in Canada, 1800-2015*, ed. Ruth Sandwell (Montreal: McGill-Queen's University Press, in development) will be the first such collection on energy history in Canada. Most references to energy to date consider it as a site of political mobilization, whether labour (as in coal) or provincial/regional (as in oil) – with the former traditionally treated by historians and the latter by political scientists. An unusual example not focused on Alberta is Peter Clancy, *Offshore Petroleum Politics: Regulation and Risk in the Scotian Basin* (Vancouver: University of British Columbia Press, 2011). A few historians (e.g. Tina Loo, Matthew Evenden, and Philip van Huizen) have explored the environmental as well as political implications of hydroelectricity projects in Canada, but more work has been done on the (admittedly larger) American oil industries; this includes a special issue of the *Journal of American History*, although even here the impetus has come from scholars of domestic and foreign policy and law. See *Journal of American History*, 99, no. 1 (June 2012). The "history" of environmental impact can also be found as background data for environmental scientists or in environmental impact statements for individual proposals in hydro, gas, etc.

production as a means of (re)gaining both political and economic leverage within Canada and, specifically, against the federal government. The current campaign featuring (without irony) both renewable and offshore energy is a new chapter in a debate that began over two centuries ago: what is Nova Scotia's place in Canada and the world – and how might it use energy resources to answer that question?

This essay, then, attempts something rather unusual. It asks us to consider eastern Canada in energy history – a subject that has more typically drawn the attention of political scientists focused on the rise of the "new west" – and one that in Atlantic Canada has been cast more as a study of labour than of environment or politics. The essay deliberately takes a longer view: connecting patterns across a colonial and postcolonial past, pointing out broader themes relevant to the current discussion, and thus demonstrating how an historical perspective can be usefully incorporated into public debate and policy formulation about the environment. It tries to recognize the importance of cultural and political memory as well as economic and technological change. It points to the depth and variety of Nova Scotia's energy sources, throughout its history, to suggest a small jurisdiction's capacity as an historical energy producer – including but, importantly, not limited to the Cape Breton coalfields of the 20th century and the Scotian Slope parcels of the 21st. At the same time it emphasizes how energy production profoundly shapes the political experience of a small jurisdiction, especially one in a larger political framework – whether a colony of empire or a province of Canada.

Canvas on every sea: early colonial energies

Nova Scotia's energy resources first drew the attention of the French as they colonized the region they called Acadie during the early 17th century, when they discovered coal outcroppings along the Atlantic shores of Cape Breton Island. These coal deposits would prove to be the most important (bituminous) coalfields in eastern Canada.[5] The first commercial coal mine in North America was operating at Port Morien on Cape Breton (then known to the French as Île Royale) by the early 18th century. While there were shipments to other New World colonies, the French were primarily interested in coal for their major construction in the colony, the Fortress Louisbourg, which stood guard over the Atlantic fishing grounds and the critical route to the continental interior at the mouth of the St. Lawrence. After France surrendered Île Royale along with almost all its holdings in North America to Britain in 1763, the region's coal drew even greater attention in the new imperial centre and its rapidly industrializing cities. As early as 1800, coal royalties formed the most important source of revenue for the then-separate colony of Cape Breton, establishing a pattern – and problem – that would endure. An economy of resource exports would be intertwined with state-building – "at the service of, and indeed an

5 Hugh Millward, "Mine Operators and Mining Leases on Nova Scotia's Sydney Coalfield, 1720 to the Present," *Nova Scotia Historical Review* 13, no. 2 (1993): 67-86. In 2008 UNESCO recognized the Joggins Coal Fields on the Bay of Fundy as a world heritage site, as the reference for the "Coal Age" or the Pennsylvanian or Carboniferous period and a site that inspired significant 19th-century geological research. See Advisory Body Nomination, "The Joggins Fossil Cliffs, Canada" (2007), http://whc.unesco.org/archive/advisory_body_evaluation/1285.pdf.

activity of, statecraft."[6] At the same time, though, the burgeoning coal industry cultivated an early public association that resource extraction was detrimental to colonial rights and local interests. By the 1830s, reformers in the colonial legislature were campaigning for higher royalties from the London monopoly controlling mining operations on Cape Breton; these reformers would help make Nova Scotia the first colony in the British Empire to achieve responsible government a decade later.[7]

If mining rights were carefully leased by Whitehall, no one could secure exclusive rights to wind and tides. And if Nova Scotia's coal resources were useful to the empire, its ports were much more so. From 1749 until 1905 Halifax was a principal base for the Atlantic squadrons of the imperial navy – indeed, the need for a naval base in Acadia was the entire reason for founding the city – while along its 13,000 kilometres of coastline smaller communities emerged, fuelled by three intertwined industries all based on wind and biomass: shipbuilding, the shipping trade, and the fishery. Communities on the Atlantic, Fundy, and Northumberland shores – towns such as Lunenburg, Shelburne, and Maitland – became known internationally for their schooners and dories, especially as demand grew from the emerging offshore fishery sailing to the Grand Banks as well as from the growing transoceanic trade within the British Empire. Shipping tonnage owned in the colony, for example, increased from 80,000 tons in 1830 to 400,000 tons in the late 1860s.[8] This fostered a sense of confidence and international presence among Anglo-Saxon merchants, including shipbuilder William D. Lawrence of Maitland:

> I desire to see her cities grow, her commerce extend, her ports crowded with shipping and manned with the sons of our own soil, many of whom I am proud to say are, at the moment, spreading canvas on every sea, from the cold north to the sunny south and conducting our ships to the ports of the most enlightened and commercial nations of the globe.[9]

Wooden sailing vessels had been largely relegated to local use by the time of the First World War. But a romanticized memory of the age of sail has remained the defining public image of Nova Scotia, its golden age and preferred historical point

6 Daniel Samson, *The Spirit of Industry and Improvement: Liberal Government and Rural-Industrial Society, Nova Scotia, 1790-1862* (Montreal and Kingston: McGill-Queen's University Press, 2008), 80-113.

7 In 2008 Nova Scotia celebrated "Democracy 250," touting that the elected representatives who first met in the colonial House of Assembly in 1758 represented the first parliamentary democracy in North America. On the early mining monopoly, see Marilyn Gerriets, "The Impact of the General Mining Association on the Nova Scotia Coal Industry, 1826-1850," *Acadiensis* XXI, no. 1 (Autumn 1991): 54-84.

8 Keith Matthews and Gerald Panting, eds., *Ships and Shipbuilding in the North Atlantic Region* (St. John's: Memorial University of Newfoundland, 1978), Appendix l.

9 Speech on Nomination Day, 1867, in *William D. Lawrence: Nova Scotia Shipbuilder & Anti-Confederation Campaigner: The Complete Archived & Annotated Writings* (Kennetcook, NS: Heroes of Hants County Association, 2010), 229. The final withdrawal of British forces from North America came with the transfer of HMCS Dockyard in Halifax from the British navy to the Canadian government in 1906.

of reference. This is thanks in large part to one, already somewhat anachronistic, fishing schooner: the *Bluenose*. Built in Lunenburg in 1921, it famously won a series of international races and became such a symbol of the province that it appears on the Canadian ten-cent coin and inspired a reconstruction that still sails annually. Even in 2011, Irving Shipyards capitalized on the sentimental/historical association with shipbuilding to win a $25-billion share of a national shipbuilding contract. The Nova Scotian "Ships Start Here" campaign characterized Nova Scotians as natural shipbuilders by assembling a genealogy that ran from Samuel Cunard to the *Bluenose* to the late-20th-century capabilities of the Irving Shipyard to the anticipated patrol fleet. The words "Ships Start Here" were emblazoned atop an archival photograph of workers building a schooner in 1920s Lunenburg.[10]

The cost of Confederation: a new energy economy

Problems were inevitable when a colony that had prized above all its place on the Atlantic seaboard entered into a new continental framework. The seven colonies remaining in British North America in 1864 were divided by uneven populations, asymmetrical economic growth, and disparate histories; but all (with the exception of British Columbia) were reasonably clustered in some geographical proximity and still heavily oriented to maritime commerce and communications (although generally we do not conceptualize Confederation-era Canada around the Gulf of the St. Lawrence, and we might). History, though, has generally emphasized the colonies' common insecurities introduced by their Atlantic affiliates, whether the loss of imperial and continental trade agreements, an imperial government increasingly disinclined to support them economically or militarily, or an American neighbour eyeing British territory for possible annexation even as it was divided in civil war (quite an accomplishment). What began as a discussion of Maritime Union of the three smallest colonies was subsumed by the more ambitious proposal from politicians from the Province of Canada – comprising the old Lower and Upper Canada – for a federation of all British North America into a new nation-state, a veritable dominion.

One of the central debates of Atlantic Canada's historiography has been the extent to which Nova Scotians accepted or distrusted the terms of Confederation, but it is worth looking again at the strongly environmental dimension of much of the criticism. Fears of being overshadowed by the larger and more populous Canadas extended beyond scale of territory or representation in Parliament; at the core of anti-Confederate sentiment lay an anxiety that the Maritime colonies' seaboard history, identity, and livelihood would be disregarded. Confederation would subject "this people, their revenues, resources, and independence, to the virtual

10 *Nova Scotia. Built to Build*, http://shipsstarthere.ca/history/; "Building schooner," W.R. MacAskill, access. no. 1987-453, no. 426, NSARM (Nova Scotia Archives and Record Management), Halifax. Lunenburg is itself a UNESCO World Heritage Site (1995), although primarily on the basis of its intact 18th-century town plan. The *Bluenose* was wrecked off of Haiti in 1946; the *Bluenose II,* built in 1963, was funded by Nova Scotian-owned Oland Brewery, which donated the ship to the province in 1971 to serve as a tourism ambassador. It was so completely rebuilt in 2010-13 that some argue it constitutes a *Bluenose III*. See Cheryl Sullivan, "The Paradox of 'Bluenose II': Antimodernism, Capitalism, and the Legacy of the Schooner 'Bluenose' in Nova Scotia," *Nova Scotia Historical Review* 16, no. 2 (1996): 1-22, and *National Post,* "Famed Bluenose Schooner Getting a Rebuild But Some Purists Call it a Sham," 5 July 2012.

denomination [*sic*] of another colony" read one petition from southern Queen's County; Nova Scotians, said another from King's County, "do not desire to be transferred to the dominion of a sister Province with which they have no connexion: almost no trade, and which being frozen up for five months of the year, and possessing no navy or troops to spare, is incapable of forming a new nationality or protecting the seaboard of Nova Scotia."[11] Allying with non-maritime colonies interested in an undeveloped interior seemed to make little sense, whether in economic terms or suggesting any kind of common neo-national affiliation. With the ties to (and profits from) foreign ports visible daily, it seemed counterintuitive to "turn their backs upon England and fix their thoughts upon Ottawa."[12]

It also seemed a voluntary surrender of status – was it not better to be a smaller fish in a bigger (imperial) pond, than to cast their lot with other colonials? From a later perspective, it is clear that either Nova Scotians were naive in their confidence in the privileges bestowed by their British affiliation, or anti-Confederates overstated the colony's standing in the empire (or both). But it was a useful political strategy. Just as the pro-Confederates used a grandiose rhetoric of continentalist, sea-to-sea nation-building to elevate a largely pragmatic arrangement concerned with revenue jurisdictions and railways, anti-Confederates traded on the prestige of the British Empire and its overtly oceanic character (sea *and* sea) to heighten their economic vision for Nova Scotia. Nevertheless, it is worth noting that through much of the 19th century Nova Scotian politicians were equating dependency on coal royalties with colonial exploitation and maritime energies of wind and tide with cosmopolitanism and colonial empowerment.

The anti-Confederates' stronger argument, in hindsight, was that Confederation threatened to suffocate Nova Scotians' sense of self-determination and difference tied to both an economy and an identity based on maritime energies. The priorities of a small coastal colony invested in global trade would undoubtedly be displaced by the industrial and landward interests of the larger, wealthier Canadas once within a national (rather than imperial) economic framework. Not surprisingly, the debate over Confederation divided Nova Scotians along geo-economic lines: merchants and coastal communities dependent on international trade generally opposed the deal while places like Cape Breton, which could supply coal to the factories of the St. Lawrence valley but which would need a national railway to do so, were in favour.[13] But anti-Confederates could also appeal to the emotional or psychological

11 "The Petition of the People of the Southern District of Queen's County, in the Province of Nova Scotia" and "The Petition of the People of the County of King's," included in the *Letter to the Earl of Carnarvon by Mr. Joseph Howe, Mr. William Annand, and Mr. Hugh McDonald Stating their Objections to the Proposed Scheme of Union of the British North American provinces, Presented to both Houses of Parliament*, 8 February 1867 (London: Eyre and Spottiswoode, 1867), 27, 25. Significantly, most of these petitions mentioned the tonnage of shipping the county authoring the petition sent to sea each year, as well as their other services to the empire.

12 Joseph Howe, "Mr. Howe on Confederation," 1866, in *The Speeches and Public Letters of Joseph Howe (Based upon Mr. Annand's edition of 1858),* ed. Joseph Andrew Chisholm (Halifax: Chronicle Publishing Co. Ltd., 1909), 476.

13 Del Muise, "The Federal Election of 1867 in Nova Scotia: An Economic Interpretation," *Collections of the Royal Nova Scotia Historical Society* 36 (1968): 327-49. A good historiographical review is Philip Buckner's "The Maritimes and Confederation: A

cost of a divorce from the sea. That master of the 19th-century art of public rhetoric, Joseph Howe, knew to appeal to his public's cultural investment in a particular environmental orientation. "Take a Nova Scotian to Ottawa, away from tidewater, freeze him up for five months, where he cannot view the Atlantic, smell salt water, or see the sail of a ship," Howe warned direly, "and the man will pine and die."[14]

Like most pieces of legislation during the 19th century, in setting out the terms of Confederation the British North America Act of 1867 divided nature by resource because this explained and framed the natural world in terms of utility and thus of revenue. Critically, the provinces were given jurisdiction over public lands, timber sales, and mineral rights. In other words, energy resources – from fossil fuels to riverine hydroelectricity – were embedded in provincial statecraft from Canada's conception and would form the nucleus of nearly every major campaign for provincial rights. Within two decades of Confederation, "Empire Ontario" had used legal challenges over resource rights and development projects (notably in hydro-electricity) to enhance its standing in the federation. In Nova Scotia, coal royalties represented the greatest single source of revenue for the provincial government in the early 20th century.[15]

But in the Maritimes the potential for autonomous development was countermanded by a determined, centralist federal government still in possession of the territory and resources of the vast northwest, and itself very much in the possession of Ontario and Quebec voters. For decades Nova Scotians would complain of Ottawa's preoccupation with developing the west – not the east – and they would be divided over the benefits of a National Policy designed to favour domestic manufacturers. Certainly there was significant economic growth from the late 1870s onward, thanks to this new federal framework and new transprovincial markets.[16] The

Reassessment," *Canadian Historical Review* 71, no. 1 (March 1990): 1-30. Although British North American union was ratified by a vote in the colonial legislature (i.e. not a popular vote) in 1866, the depth of public opposition became clear when Nova Scotia held its first elections as a new Canadian province in September 1867. Joseph Howe and the anti-Confederates swept the provincial legislature, winning 36 of 38 seats, and Nova Scotia filled 18 of its 19 allocated seats in the Dominion Parliament with anti-Confederate Liberals. For the next 50 years, especially during economic downturns, provincial elections were frequently won on the promise to campaign for "better terms" (i.e. higher subsidies) or even outright secession.

14 Speech at Barrington, *Morning Chronicle,* 9 June 1866, cited in J. Murray Beck, *Joseph Howe, Volume II: The Briton Becomes Canadian* (Montreal and Kingston: McGill-Queen's University Press, 1983), 201.

15 On Ontario, see H.V. Nelles, *The Politics of Development: Forests, Mines and Hydro-Electric Power in Ontario, 1849-1941* (Toronto: Macmillan of Canada, 1974); on the emergence of one of the most powerful provincial utilities, Neil B. Freeman, *The Politics of Power: Ontario Hydro and Its Government, 1906-1995* (Toronto: University of Toronto Press, 1996); and for the legacy in the provincial nationalism of the 20th century, Mark Winfield, *Blue-Green Province: The Environment and the Political Economy of Ontario* (Vancouver: UBC Press, 2012). Eighty-nine per cent of the land in Canada resides with the Crown – an enormous percentage of potential revenue.

16 This remained the central historiographical debate through much of the 20th century, most famously articulated by T.W. Acheson in "The National Policy and the Industrialization of the Maritimes, 1880-1910," *Acadiensis* I, no. 2 (Spring 1972): 3-28. An interesting review of Canadian business history from an Atlantic Canadian perspective is Rosemary Ommer, "Capitalism in a Cold Climate," *Acadiensis* XIX, no. 2 (Spring 1990): 197-212.

Intercolonial Railway linking Nova Scotia to Quebec was completed by 1879, and communities in the coalfields, such as New Glasgow, became major centres manufacturing consumer and industrial products from glassware to railway stock. But as continental economic integration steered Nova Scotia from international markets to internal ones, and from trade and shipbuilding to manufacturing, it also concentrated on one kind of energy the province had to offer, the one most suited for steam-powered manufacturing: coal. An 1869 cartoon by J.W. Bengough (Figure 1) captures this perfectly: "The Dominion Counting-House. The New Partner Produces a Sample of His Stock-in-trade" shows Joseph Howe accepting his seat in cabinet with a laden coal scuttle, while Minister of Finance John Rose and Prime Minister John A. Macdonald look on approvingly. Such a warm reception to the province's coal dowry contrasts with the federal cabinet's tepid response to simultaneous campaigning to make Halifax the "wharf of the Dominion," a role based on the city's environmental advantages as a year-round port and one still alive today as "the so-called 'gateway concept' . . . a 150-year dream, which has never been fully realized."[17]

The triumph of fossil fuels over wind and sea during this period is still visible in the physical and demographic geography of Nova Scotia. Consider again William Lawrence and his adopted town of Maitland. In the latter 19th century Maitland was, like other towns on the Bay of Fundy, busy with shipyards and confident in its role as a gateway to international prosperity. Lawrence was a shipbuilder with diverse mercantile interests and, not surprisingly, also a representative in the House of Assembly from 1863 to 1871, where he campaigned against Confederation. In 1874 he launched the *William D. Lawrence,* at 2,459 tons the largest full-rigged vessel ever built in Canada. The message was unsubtle, to put it mildly: the "Great Ship" was designed to symbolize the strength and capacity of Nova Scotia as a maritime power, profiting "by its own enterprise and by its own vigorous exertions."[18] Today, however, Maitland is a designated heritage conservation district with a population of about 1,700, a line of lovely if somewhat decrepit Victorian houses far removed from any highway traffic. The provincial museum system operates the Lawrence House Museum, complete with a model of the Great Ship, and the town hosts the annual "Launch Days," a summer weekend festival commemorating, as expected, the ship and the age of sail.[19] Maitland, in other words, is in many ways a museum

17 John Wilson Bengough, *A Caricature History of Canadian Politics: Events from the Union of 1841, as Illustrated by Cartoons from "Grip," and Various Other Sources* (Toronto: Grip Printing and Publishing Co, 1886), 86-7; James D. Frost, "Halifax: The Wharf of the Dominion, 1867-1914," *Journal of the Royal Nova Scotia Historical Society* 8 (2005): 35; InterVistas Consulting, *2010-2015 Strategic Plan: Building the Halifax Gateway* (2010), http://www.halifaxgateway.com/site-ghp2/media/HalifaxGateway/Final_HGC_Strategic_Plan_Report_Feb_16_06%281%29.pdf.

18 Speech on Nomination Day, 1878, in *William D. Lawrence*, 282; Archibald MacMechan, *The Great Ship* (1928, reprinted by Nova Scotia Museum, 1976); Judy Burns, Jim Clifford, and Thomas Peace, "Maitland's Moment: Turning Forests into Ships for the Global Commodity Trade," in *Environments of Mobility in Canadian History*, ed. Colin Coates, Jay Young, and Ben Bradley (Calgary: University of Calgary Press, forthcoming).

19 Despite this tourist-oriented incarnation, the village of Maitland is now so small that it does not appear on provincial online maps. See http://www.novascotia.com/en/home/planyourtrip/mapsanddirectories/default.aspx.

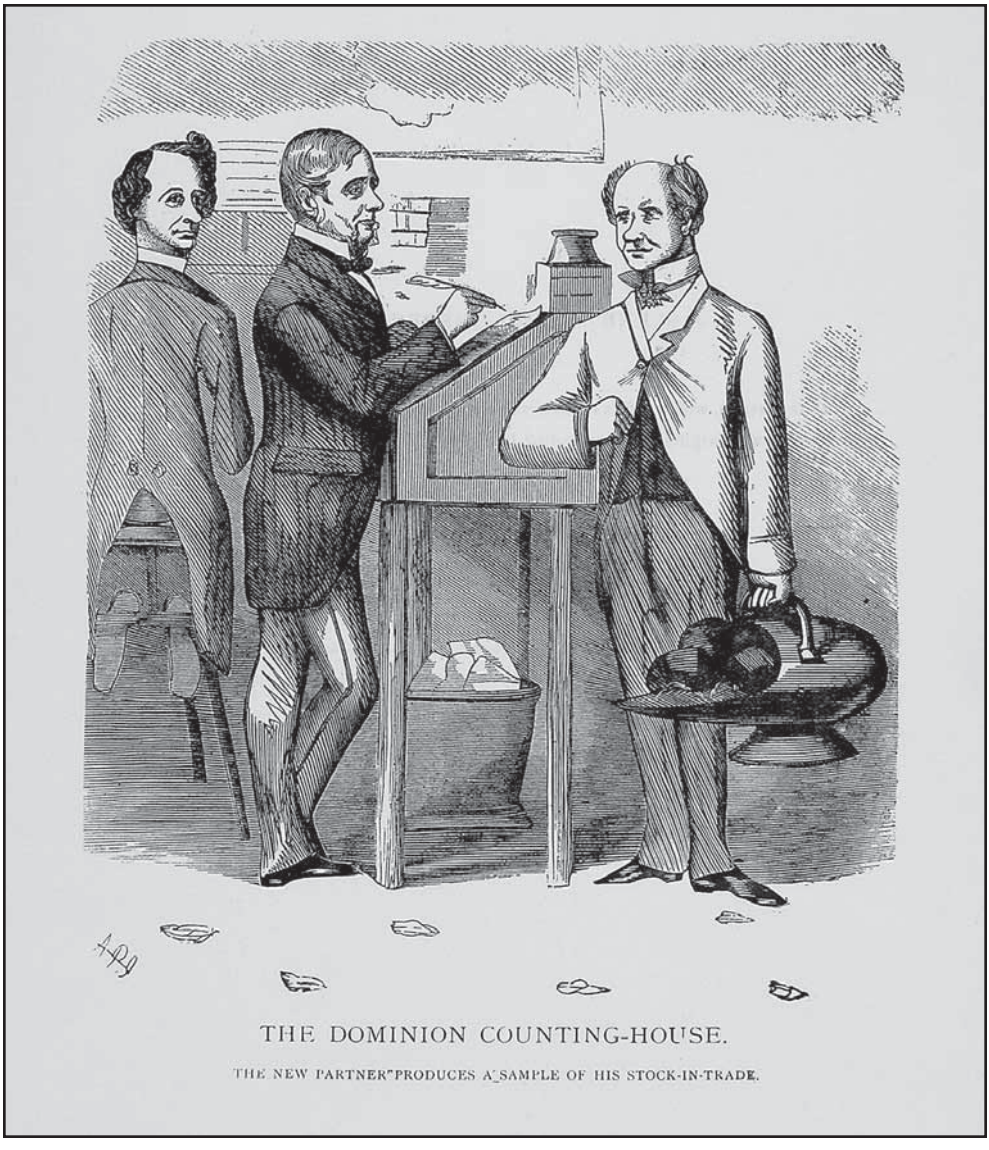

Figure 1: Joseph Howe (and Nova Scotian coal) joins the federal cabinet – J.W. Bengough (1869), *The Dominion Counting-House: The New Partner Produces a Sample of His Stock-in-trade*.
Source: McCord Museum, M994X.5.273.35.

to the 1870s. In contrast, Cape Breton Regional Municipality, which emerged in the same period as the pre-eminent coal district in eastern Canada even as Maitland declined, became and remains the second biggest urban entity in the province; Truro, located on the Intercolonial Railway near to the Cumberland coalfields and still billed as "the hub of Nova Scotia," is the third.

Nova Scotian coal, however, never really became a major international export due to its difficult location largely under the ocean floor, the superiority of coal in Pennsylvania and the Appalachia fields nearer to major American cities, and, by the start of the 20th century, the development of western Canadian reserves. Integration into a national economy did bring more investment capital into the province, and expanded the scale and output of Nova Scotia heavy industry. But as regional activists observed at the time and historians would argue decades later, it also triggered an erosion of entrepreneurial autonomy as Montreal-based corporations absorbed the corporate interests of most major Nova Scotia manufacturers. Empowered by American and British capital, outside investors also propelled the amalgamation of collieries in Cape Breton. It became the largest coal and steel operation in the country, accounting for half of Canada's coal and steel production. But the area's role in the national project was increasingly, if predictably, as a resource hinterland. As one observer wrote for the Canada Mines Branch in 1917:

> The coal mined in Nova Scotia, has for generations, gone to provide the driving power for the industries of Quebec and Ontario and has, in large part, been followed by the youth and energy of the Province. . . . It is at least a legitimate subject for thought whether it would not have been possible to export manufactured articles, and to have utilized the raw material within the Province, to some extent at least, where safe and roomy harbours, and inexpensive water transportation give facilities for the assemblage of raw materials, and for the distribution of manufactured goods, in no way inferior to other ports that border the North Atlantic coast. . . .
>
> Nova Scotia has achieved the status of a mining camp, whereas its full stature should be that of a metropolis of industry.[20]

Such an analysis – recognizing the advantages of Nova Scotia's coastal location on the one hand, and the balance of power in Confederation draining its resources and rate of growth on the other – will sound eerily familiar to anyone reading the business and op/ed sections of any Nova Scotia newspaper through much of the late 20th century and even in the early 21st. In particular, the analogy with a mining camp was apt for a number of reasons by this point: the famously poor quality of life in company towns, the rapid influx of migrant labour, and the struggle to meet new industrial demands for power and water supply.[21] The trend of three decades culminated in the postwar era with creation of the British Empire Steel Corporation (BESCO) in 1920: one of Canada's largest corporations and a true empire of coal mines, steel mills, foundries, railways, and ports across Nova Scotia. BESCO also

20 Francis W. Gray, *The Coal-Fields and Coal Industry of Eastern Canada: A General Survey and Description* (Ottawa: Canada Mines Branch, 1917), 13-14. Nova Scotian coal sales increased eightfold between 1867 and 1902 (from 471,185 to 3,398,626 gross tons), and then doubled again by 1913 (to 6,478,709). See "Nova Scotia Coal Sales," *Department of Mines Annual Report* (Halifax, 1913), Table IX (n.p.).

21 Del A. Muise, "'The Great Transformation': Changing the Urban Face of Nova Scotia, 1871-1921," *Nova Scotia Historical Review* 11, no. 2 (1991): 6.

engendered some of the worst labour conflict in North American history, where the politics of energy were as much local as national: municipal efforts to expand electricity production were often blocked by existing monopolies, and in 1924-1925 BESCO cut off coal, electricity, and water to miners' houses.[22]

The uneven and unequal relationship between centre and east was both mirrored in and accelerated by the Maritimes' relatively little and ever-decreasing political influence in the federation. With the population booming in the new western provinces, Nova Scotia's representation in the House of Commons shrank from 19 seats of 181 in 1867 to 14 of 245 in 1924.[23] Marginalized politically, and unable to effect significant changes to the intranational framework beyond temporary economic concessions, Nova Scotia and the other Maritime provinces simmered in frustration – the roots of what Ontario-born and Alberta-based Prime Minister Stephen Harper would famously deride 80 years later as a "culture of defeat."[24] Harper's phrase was both overstated and unfair, but even by the 1920s very few believed Nova Scotia's commerce would again extend "from the cold north to the sunny south."

Provincial energies, provincial power

In the confident economic climate following the Second World War, the political experiment of Canada seemed to have succeeded. But energy remained one of the key sources of federal/provincial tension, especially when Ottawa attempted to impose national energy plans – whether for pipelines, production, or pricing. For Nova Scotia, however, the relationship was less contentious than co-dependent, as both levels of government tried to shore up a failing mining industry. The same is true today, of course, with the federal and provincial governments across the country each offering subsidies for oil and gas development in the form of tax breaks and royalty reductions.[25] By the early 1960s, BESCO's successor, the Dominion Steel and Coal Company (DOSCO) was shutting down poorly performing mines in the Pictou and Sydney coal fields, and in 1965 announced its remaining mines had only 15 years of production left. A royal commission concluded it was "ethically wrong and economically unsound" to sustain the industry, plans were made for a mining museum to commemorate "a way of

22 This period and location has attracted much attention from historians of the Canadian labour movement, notably David Frank. See, for example, Frank, "The Cape Breton Coal Industry and the Rise and Fall of the British Empire Steel Corporation," *Acadiensis* VII, no. 1 (Autumn1977): 3-34, and "Company Town/Labour Town: Local Government in the Cape Breton Coal Towns, 1917-1926," *Histoire sociale/Social History* 14, no. 27 (May 1981): 177-96.

23 Ironically, many of those settlers were Maritimers following a long pattern of outmigration. See Paul Brown, "'Come East, Young Man!' The Politics of Rural Depopulation in Nova Scotia, 1900-1925," *Royal Nova Scotia Historical Society Journal* 1 (1998): 47-78.

24 A version of the phrase was repeated several times but appeared first in the *New Brunswick Telegraph Journal:* "I think in Atlantic Canada, because of what happened in the decades following Confederation, there is a culture of defeat that we have to overcome" (29 May 2002).

25 The most dramatic subsidies from both levels of government are directed towards Alberta. See Dave Sawyer and Seton Stiebert, EnviroEconomics Inc., "Fossil Fuels – At What Cost? Government Support for Upstream Oil Activities in Three Canadian Provinces: Alberta, Saskatchewan, and Newfoundland and Labrador," (2010), for the Global Subsidies Initiative (GSI) of the International Institute for Sustainable Development (IISD), Geneva, http://www.iisd.org/gsi/ sites/default/files/ffs_awc_3canprovinces.pdf.

life that is fast disappearing," and Ottawa and the province nationalized DOSCO's coal and steel operations with plans to phase both out entirely.[26] The opening of new operations in northern Alberta drew a new flow of Maritime outmigrants, newly unemployed miners self-described as "economic refugees."[27]

Ironically, this inspired a rich new body of cultural production in and about Nova Scotia, its industrial landscapes, and its tendentious relationship with the nation's east-west axis. In the iconic film *Goin' Down the Road* (1970), the camera moves

> through a shabby old mining town in Nova Scotia: unhappy streets of broken-fenced, weed-infested yards and unpainted wooden shacks. Silent sober faces watch us pass. . . . We pass an old deserted mine. The buildings rundown and crumbling . . . SEVERAL SHOTS of the gloom and depression . . . .[28]

In the more comical *New Waterford Girl* (1999), the former mining town of New Waterford is on the fringes of the known world – literally where the road ends. The teenage heroine sardonically rhymes off the "grand tour" of the town's dead-end geography to an unwisely enthusiastic newcomer: "My house, your house. There's the shore. The mine. The main drag. Hospital, tavern, church, tavern, church, church, rink, school, train station, road to Sydney."[29] The sense of economic fragility also enlivened a new generation of academic critique directed toward the "hidden injuries of dependence" and the power imbalance in Confederation – just as anti-Confederates and secessionists had argued decades before.[30] In 1966 Premier Robert

26 J.R. Donald, *The Cape Breton Coal Problem* (Ottawa, 1966), 12, 34; Meaghan Beaton, "'I Sold It as an Industry as Much as Anything Else': Nina Cohen, the Cape Breton Miners' Museum and Canada's 1967 Centennial Celebrations," *Journal of the Royal Nova Scotia Historical Society* 13 (2010): 41-62. The Crown corporation that had assumed DOSCO's assets in 1967, the Cape Breton Development Corporation (DEVCO), had sold the last of its mining-related properties by 2001.

27 *Globe and Mail,* "Hundreds of Jobs Waiting for Takers in Mining Industry" (6 January 1971); Gary Burrill, *Away: Maritimers in Massachusetts, Ontario and Alberta, An Oral History of Leaving Home* (Montreal and Kingston: McGill-Queen's University Press, 1992), 202. In 2006, Alberta's Environment Minister Guy Boutilier, himself from Donkin, Nova Scotia, told the CBC, "I wish I could take the oilsands and plant it right back home in Cape Breton." See CBC, "Alberta Oil Boom Pumps $3M a Week into Cape Breton," 7 March 2006, http://www.cbc.ca/news/canada/story/2006/03/07/oil-boom060307.html.

28 William Fruet and Donald Shebib, "Goin' Down the Road," in *Best Canadian Screenplays*, ed. Douglas Bowie and Tom Shoebridge (Kingston, ON: Quarry Press, 1992), 18 (emphasis in the original). See also Greg Marquis, "Confederation's Casualties: The 'Maritimer' as a Problem in 1960s Toronto," *Acadiensis* XXXIX, no. 1 (Winter/Spring 2010): 83-107.

29 Tricia Fish, *New Waterford Girl*, DVD, dir. Allan Moyle (Odeon Films, 1999). The most famous literary depiction of the outmigration of Nova Scotia coal miners is found in the work of Alistair MacLeod, especially *No Great Mischief* (Toronto: McClelland and Stewart, 1999).

30 The quotation comes from Gary Burrill and Ian McKay, eds., *People, Resources, and Power: Critical Perspectives on Underdevelopment and Primary Industries in the Atlantic Region* (Halifax and Fredericton: Gorsebrook Research Institute and Acadiensis Press, 1987), 127. Sometimes referred to as the "Acadiensis School," this generation of literature shared a particular interest in the political economy of Confederation and its (causal) relationship to the economic state of the region at the end of the 20th century. In some ways this work has contributed to a distinctive "environmental history" of Atlantic Canada given its interest in the resource industries, albeit more as workplaces than as sites of environmental change and influence.

Stanfield told the Empire Club of Canada, one of the most symbolic seats of Ontario's power, "If Nova Scotians had allowed themselves to be governed by economic considerations . . . Canada would not have been created in 1867."[31]

The expanded activist state of postwar Canada responded to the decline of the coal industry and the economic stagnation of Atlantic Canada in two main ways. The federal government created a bureaucratic soup of agencies and funding programs targeting underdevelopment, in particular in rural areas.[32] Both Ottawa and the provinces tried to promote economic diversification, especially through tourism (a not entirely effective approach given the notoriously low-wage, seasonal jobs tourism generates). This reached its greatest expression in the most coal-dependent and thus most depressed region with the reconstruction of the 18th-century fortress at Louisbourg, designed as much to provide jobs in the coal- and employment-exhausted communities of eastern Cape Breton as to commemorate the heights of la Nouvelle France.[33]

But, as is often the case in history, these initiatives for change did not fundamentally dislodge a foundation of continuity. Energy megaprojects remained singularly the most lucrative means to prosperity and political advantage, a crucible for provincial nationalism that has produced some of the most famous moments of provincial ambition and provincial/federal conflict in recent Canadian history. Thanks to the current political climate and the resulting preoccupation of political scientists, we typically think of energy politics as a hallmark of western – specifically Albertan – interests. Alberta's defiance of the federal National Energy Policy in 1980, encapsulated by the bumper sticker that read "Let the eastern bastards freeze in the dark," epitomized the association between fuel revenue and political autonomy. But the eastern provinces have been as committed to local energy production as a means to greater fiscal and constitutional sovereignty. In 1963, as part of its Révolution Tranquille, Quebec nationalized the hydro-electricity sector in order to claim "that white oil that is the wealth of Quebec" and as one of the first steps in becoming "maîtres chez nous." Pointing to the offshore drilling at Hibernia to the east and the new expanded hydro development on the Lower Churchill to the west, the premier of Newfoundland and Labrador declared in 2007 that the province would realize "economic equality within the Federation . . . and becoming masters in our own house." New Brunswick began construction on the only nuclear plant in Atlantic Canada at Point Lepreau in 1975, as the oil crisis made energy security a concern for most administrations in the industrialized world.[34]

31 Stanfield's speech was directed especially at the legacy of a National Policy-style of tariff, calling for a "regional incentive policy [as] a desirable corrective to the centralizing tendencies inherent in tariff policies." See Hon. Robert L. Stanfield, "A Nova Scotian View of Confederation," The Empire Club of Canada Addresses, 24 November 1966.

32 These range from the Fund for Regional Economic Development (1966) through to the still-operating Atlantic Canada Opportunities Agency (1987). See also James Bickerton, "Window of Opportunity? The Politics of Regional Development, 1968-1975," in *Nova Scotia, Ottawa and the Politics of Regional Development* (Toronto: University of Toronto Press, 1990), 206-58.

33 C.J. Taylor, *Negotiating the Past: The Making of Canada's National Historic Parks and Sites* (Montreal and Kingston: McGill-Queen's University Press, 1990), 169-90.

34 Jacques Ferron, quoted in Raymond Labrecque, *La bataille de la Jacques-Cartier* (Stoneham-Tewksbury, QC: Société d'histoire de Stoneham-Tewksbury, 2005), 59. I thank Matthew Hatvany of Université Laval for the reference. See also Premier Danny Williams, 24 April 2007, cited in Jerry

Even Canada's smallest province attempted to use energy technologies to leverage self-sufficiency in the 1970s, albeit in a very different way. Prince Edward Island – smaller, poorer, and suffering more from outmigration than even Nova Scotia – briefly led the world in alternate energy design thanks to the government-funded Institute for Man and Resources and its experimental housing counterpart the Ark.[35]

The consistent interest in hydro-electricity notwithstanding, fossil fuels have always been viewed by the provinces as their constitutional ace-in-the-hole. Sustained by both the entrenched nature of the industrial grid and ever-new hopes for political gain, non-renewable energy has often been treated like the only viable game in town. The two alternatives occasionally proposed since the 1960s to the demonstrated instability of the fuel market – economic diversification and renewable energies – have been repeatedly shunted aside by a series of ever-larger projects involving coal, then oil, now gas. The OPEC-driven oil crisis of the mid-1970s prompted Nova Scotia to reignite its coal-fired electricity plants in hopes of reducing its reliance on foreign energy sources; but with Cape Breton largely exhausted these plants were using imported coal and petrocoke 20 years later. The province's commitment to fossil fuels remained intact even through two of Canada's biggest environmental disasters: the wreck of the *Arrow* in 1970, which contaminated 300 kilometres of Atlantic shoreline in the largest oil spill in Canadian history, and the realization that the "tar ponds" of decades-old steel and mining waste at Sydney were the most hazardous waste site in the country (making them a cause célèbre of North American environmental groups). Today hopes linger that the Imperial Oil refinery on the Halifax harbour – dating to 1918 – will experience a "renaissance" with the as-yet-unproposed pipelines from western sources, although the refinery has been for sale for over a year and such hopes are likely kept alive by the current lobbying for a pipeline from Alberta to the port of Saint John.[36] Such optimism is mirrored and reproduced in the successful media campaigns of major energy corporations across Canada, which cast energy technologies as a heroic story of innovation and "made in

Bannister, "A River Runs Through It: Churchill Falls and the End of Newfoundland History," *Acadiensis* XVI, no. 1 (Winter/Spring 2012): 214-15, as well as James L. Kenny and Andrew G. Secord, "Engineering Modernity: Hydroelectric Development in New Brunswick, 1945-1970," *Acadiensis* XXXIX, no. 1 (Winter/Spring 2010): 3-26, and Adrian Egbers, "Going Nuclear: The Origins of New Brunswick's Nuclear Industry, 1950-1983" (MA thesis, Dalhousie University, 2008).

Nova Scotia, interestingly, has uranium deposits, which, advocates suggested, could have made the province energy secure. A public inquiry struck in 1982 to investigate the viability of uranium mining, however, served to mobilize the two emergent wings of the province's environmental movement, drawing sharp opposition from both leftist political ecologists and Halifax-based scientists. The controversy resulted in a moratorium, suggesting that nuclear power was less socially acceptable here than in Ontario and Quebec (where the majority of Canada's nuclear plants are located), that there was less of a pressing need for a new energy source given the smaller population, or most troublingly, that the population and provincial government were essentially inert about moving away from coal-fired plants. See Mark Leeming, "In Defence of Home Place: Environmentalism in Nova Scotia, 1970-1985" (PhD diss., Dalhousie University, 2013), chap. 5.

35 See Alan MacEachern, *The Institute of Man and Resources: An Environmental Fable* (Charlottetown: Island Studies Press, 2003).

36 A bigger spill occurred in 1988 with the *Odyssey* at 43 million gallons, but this happened 700 nautical miles off of Nova Scotia's coast. The *Arrow* spill prompted extensive work by federal scientists, particularly with the Department of Fisheries and Oceans; see Donald C. Gordon and Paula A. Michalik, "Concentration of Bunker C Fuel Oil in the Waters of Chedabucto Bay, April

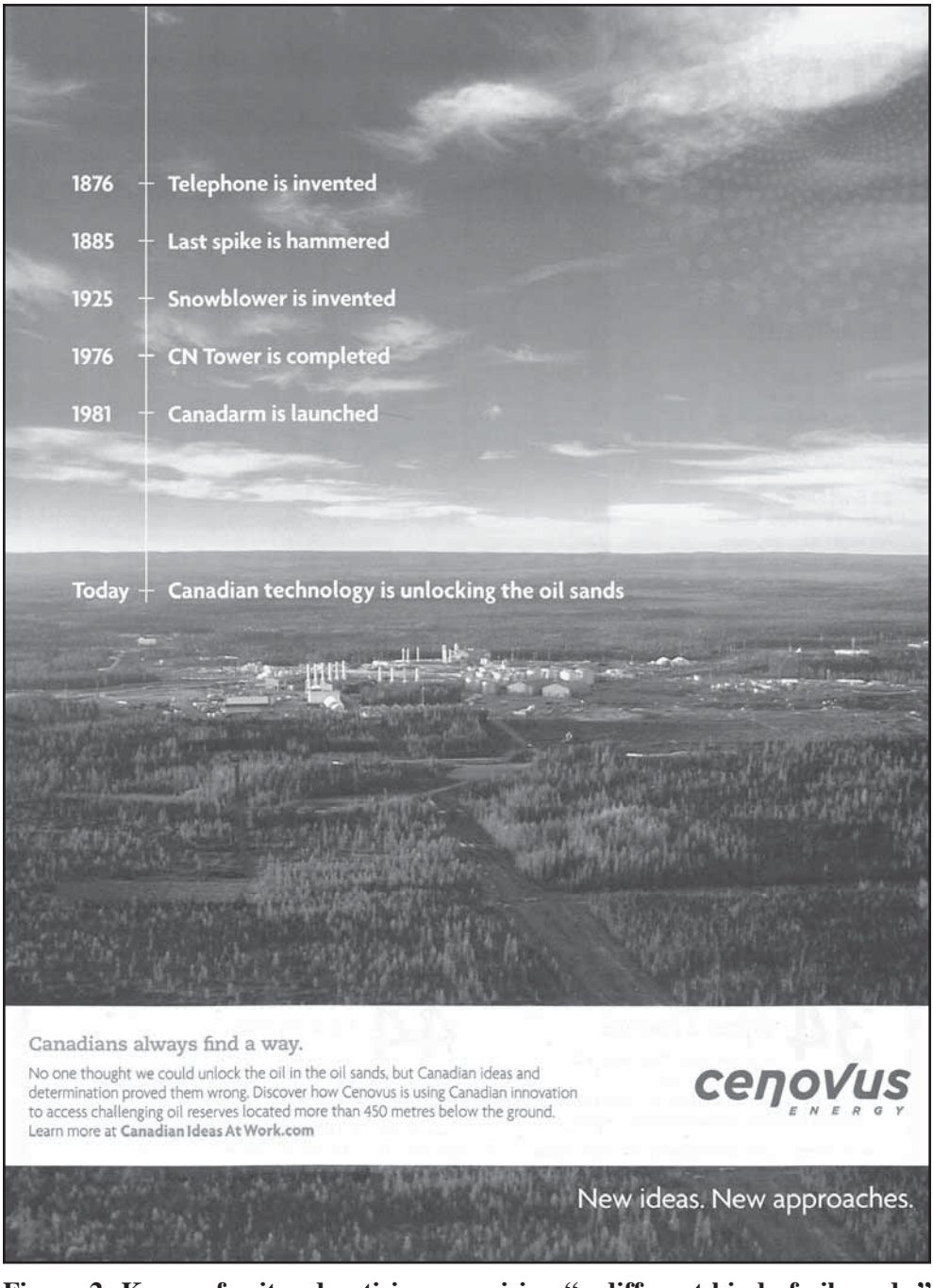

Figure 2: Known for its advertising promising "a different kind of oil sands," this typical Cenovus ad (2011) shows an unbroken expanse of boreal forest as the inspiration for (but unaffected by) the overlain chronology of Canadian technological achievements.
Source: *The Hill Times* (6 August 2012), 17.

Canada" ingenuity while quietly reinforcing the myth of inexhaustibility (Figure 2).

Since the 1960s and the decline of the region's coal industry, these historical patterns and investments – political and economic – have been preserved in Nova Scotia's energy sector by the exploration and development of offshore oil and gas. While the province counts natural gas towards its clean energy targets, it still is, of course, an extractive non-renewable energy source. Exploration of the Scotian Slope, about 250 kilometres away, established massive natural gas operations near Sable Island (1999) and Deep Panuke (2007), thanks in part to active research funded by the province. "We will continue to invest in important geoscience information and knock on the doors of the world's top oil and gas companies," said Premier Darrell Dexter in 2012, sounding not unlike his predecessors a century earlier.[37] In a contradictory but utterly Canadian moment, Sable Island was also proudly named a national park reserve in 2010, and attained the full status of a national park in 2013. In January 2012, the Canada-Nova Scotia Offshore Petroleum Board awarded $970 million in offshore exploration rights to Shell Canada; four months later, it issued the largest call for offshore bids in the province's history. Accordingly, much of the federal/provincial dialogue since the 1980s has been taken up with negotiation over federal transfer payments in light of – or more precisely, in anticipation of – new fuel royalties. Transfer payments are literal compensation for Confederation, attempts to create "economic equality within the Federation" between so-called "have" and "have-not" provinces. While Newfoundland is presented as the Atlantic "have" province (Figure 3), Nova Scotia has not yet made the transition from the one to the other on the basis of its oil and gas sector. But the historian sees in these negotiations an echo of the calls for "better terms" after 1867 and attempts to negotiate greater

1971," *Journal of the Fisheries Research Board of Canada* 28, no. 12 (December 1971): 1912-14, or D.J. Scarratt et al., "Some Biological and Chemical Investigations of a Major Oil Spill on the Canadian East Coast," paper presented at the International Council for Exploration of the Sea, Council Minutes, E:14, 1970). There is an extensive literature of the environmental and health assessments and remediation efforts at the Sydney coke/steel/mining sites; see, for example, Jacqueline Holmes and Justin Hollander, "When Landowners are More than Green: Case Studies of Regenerating Atlantic Canada's Devastated Landscapes," in *Land and Sea: Environmental History in Atlantic Canada*, ed. Claire Campbell and Robert Summerby-Murray (Fredericton: Acadiensis Press, 2012), 201-19. On the Irving refinery, see "Refining's Renaissance: Connecting Atlantic Canada's Refineries with Cheap American Crude Oil," *Ivey Business Review* (23 March 2013). On the proposal for Saint John, see "New Brunswick Premier Pushes Cross-Country Pipeline as 'Game-Changer'," *Globe and Mail* (28 January 2013).

37 The province (like others) created a technical college in 1907 for engineering, specifically metallurgical and mining engineering, to provide an educated workforce for the coal industries. See also http://www.novascotiaoffshore.com/; Media Release, 30 April 2012, http://novascotia.ca/news/release/?id=20120430001; "Premier Welcomes Shell to Nova Scotia Offshore," Media Release, 20 January 2012 http://novascotia.ca/news/release/?id=20120120001; http://www.gov.ns.ca/energy/resources/RA/offshore/NS-Offshore-Profile-January-2012.pdf; and http://www.gov.ns.ca/energy/resources/RA/maps/Onshore-Offshore-Rights.pdf.

Also in 2012, however, Dexter's government instituted a two-year moratorium on shale gas fracking, thanks in part to province-wide opposition to the practice especially in more scenic areas of Cape Breton.

38 For the provinces, the objective was to retain equalization monies until their oil and gas sectors matured. The result was a series of agreements between Ottawa and the provinces known as "Atlantic Accords," beginning with the Canada-Newfoundland Atlantic Accord (1985) and the Canada-Nova Scotia Offshore Petroleum Resources Accord (1986). An accessible description of

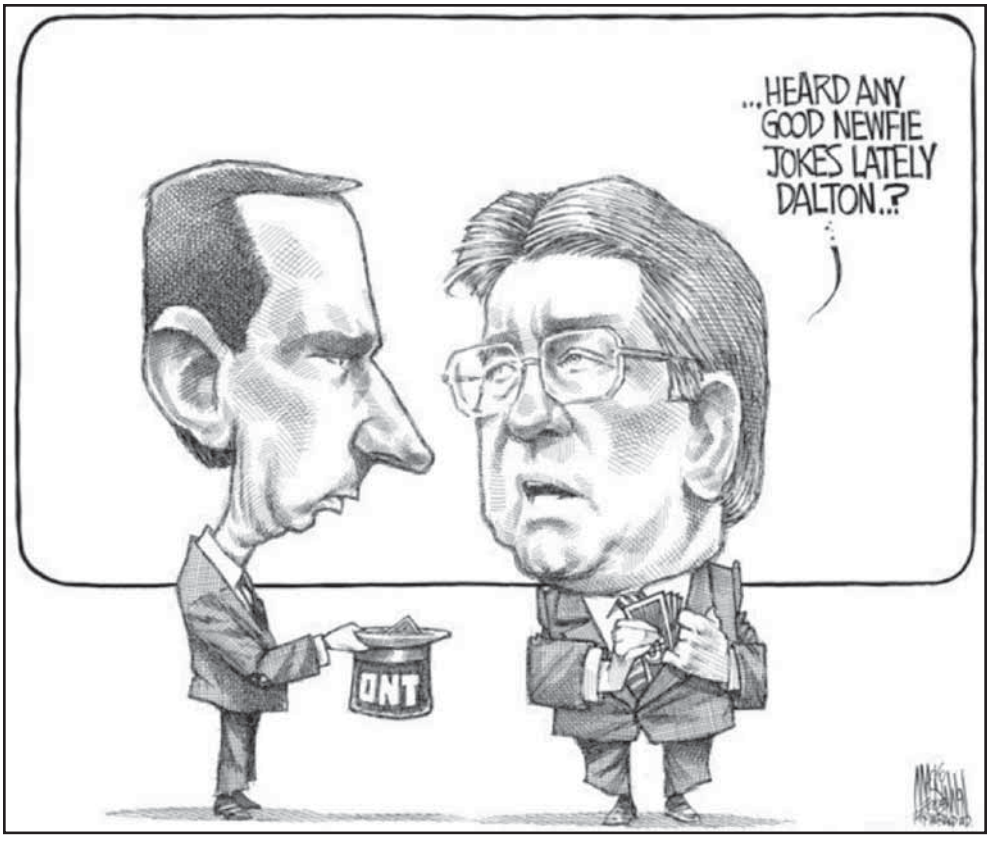

Figure 3
Source: Bruce MacKinnon, 2 May 2008, courtesy the Halifax *Chronicle Herald*.

federal subsidies for decades thereafter.[38]

Even the proposals for renewable energy require the construction of massive new infrastructure, and have been couched – by governments, and repeated in the media

these negotiations and their constitutional implications can be found in André Plourde, "Oil and Gas in the Canadian Federation," Working Paper No. 2010-01 (Calgary: University of Alberta, 2010).

Newfoundland and Labrador has seen a remarkable increase in its GDP since 1997 (with the opening of the Hibernia field), but this has also led to concern over dependence on a single industry; in 2012, 31 per cent of the province's GDP came from mining and oil extraction. See http://www.economics.gov.nl.ca/E2012/OilAndGas.pdf and http://www.stats.gov.nl.ca/Statistics/GDP/PDF/GDP_Industry.pdf

While generally positive about the potential for offshore oil and gas, J.D. House further notes that this industry has given Newfoundland "a misleading impression of affluence" and not won it "have" status, not least because "downstream benefits" are not equitably shared between, especially, the rural areas where fuel facilities are developed (such as Guysborough County, Nova Scotia) and foreign markets and investors. See J.D. House, "Myths and Realities about Petroleum-Related Development: Lessons for British Columbia from Atlantic Canada and the North Sea," *Journal of Canadian Studies* 37, no. 4 (Winter 2002): 9-32.

– in language primarily if not almost exclusively about economic growth, investment and cost, and provincial (forgive the pun) empowerment.[39] Tentative ventures in tidal energy on the Bay of Fundy have been characterized in terms of advancements in hydraulic machinery and as a means of technological incubation in the province.[40] The NDP government has argued for a massive hydro-electricity project on the Lower Churchill River in Labrador at Muskrat Falls, to be jointly developed with the province of Newfoundland and Labrador, as a lower-cost alternative for energy supply. A key consultant report submitted early in 2013 ranked domestic generation (particularly wind power) higher than hydroelectricity supplied by either Muskrat Falls or Hydro-Québec in delivering on the province's lesser goals: diversity of supply and, eventually, cleaner energy. But the report recommended the Maritime Link Project above the other two options on essentially economic grounds: reliability of supply, which in turn promises more competitive pricing. More telling was the report's ranking of the Maritime Link higher on achieving emission and renewable targets.[41] In a country well-versed in the high-modern logic of hydroelectric dams, these conclusions themselves were predictable.

But woven throughout are reminders that key to all of this is Nova Scotia's geographical location in Atlantic Canada, and that such technological innovation may carry with it political reincarnation. The proposed "Maritime Link" transmission cable, designed to carry electricity from Labrador to Cape Breton – and possibly at some point on to New England by way of New Brunswick – suggests the coastal affinity of a Maritime Union and the memory that for Nova Scotia schooners

39 "Most of the new renewable energy needed to meet both 2015 and 2020 commitments will come from large-scale projects." See Power Advisory LLC, "Analysis of Proposed Development of the Maritime Link Relative to Alternatives," prepared for Nova Scotia Department of Energy (16 January 2013), 12. Another example of this occurred in 2010 when Korean company Daewoo took over the plant at Trenton – that since the 1870s had turned out steel and railway stock – to manufacture wind turbines. The focus was entirely on employment, the amount of government subsidy, and the appeal of Nova Scotia to investors.

40 R.H. Clark, "Energy from the Fundy Tides," Canadian Geographical Journal 85, no. 5 (1972): 150-63, is a wonderful early example of the lasting technological focus and high-modern tone of tidal development. That said, the first turbine planted on the floor of the Bay of Fundy in 2009 with some fanfare broke within a matter of weeks. See http://www.cbc.ca/news/canada/nova-scotia/story/2010/06/11/ns-fundy-tidal-blades.html; the Fundy Energy Research Network, http://fern.acadiau.ca/Home.html; and Nova Scotia, Marine Renewable Energy Strategy (May 2012), http://www.gov.ns.ca/energy/resources/publications/Nova-Scotia-Marine-Renewable-Energy-Strategy-May-2012.pdf.

41 Power Advisory LLC, "Analysis of Proposed Development of the Maritime Link," 33; see also the company's updated analysis of 17 April, submitted with the testimony of John Dalton on behalf of the Department of Energy to the Nova Scotia Utility and Review Board hearings on the Maritime Link, http://novascotia.ca/fairenergy/docs/Dalton-Direct-Evidence-and-Exhibits.pdf.

42 Great Big Sea, "Boston and St. John's," *Turn* (CD, Warner Brothers Records, Canada, 1999). Nalcor Energy (the provincial utility of Newfoundland and Labrador) and Emera (the parent company of Nova Scotia Power) first signed an agreement regarding the Lower Churchill in 2010. The project is critical to Nova Scotia's "40% by 2020" goal because it is anticipated that this hydro power will provide one quarter of the 40 per cent target when operational in 2017. The agreement entails a controversial $1.5 billion cost to Nova Scotia (the 20 per cent of the estimated cost of the project) of sharing the cost of the subsea transmission cable (the "maritime link") over 180 km and the "Labrador Island Link" between Labrador and Newfoundland as well as a 35-year

"there isn't that much ocean between Boston and St. John's."[42] And it is as easy to call to mind a parallel thread of history as well: an older suspicion of central Canada. One of the criticisms levelled against the Muskrat Falls deal by the Liberal opposition has been that the Nova Scotia government discounted a possible arrangement with Hydro-Québec too quickly; the NDP responded with an ad clearly designed to hit a regionalist nerve:

> The ad says that although Nova Scotians may not know much about [Liberal leader Stephen] McNeil they do know that he is "opposed to clean Atlantic Canadian power from Muskrat Falls." It suggests that he is in bed with Hydro-Quebec, and warns about how poorly Hydro-Quebec treated Newfoundland – a reference to Newfoundland's view that it got ripped off in its deal with Quebec over Churchill Falls.
>
> "So if you want Quebec-Hydro controlling our power, Stephen McNeil is your guy," says the female narrator, an ominous tone in her voice.[43]

Even the government's characterization of the Muskrat project as "fair energy" suggests a contrasting history of *unfair* energy.[44] It is a skillful political maneuver, calculated to evoke anxieties about an erosion of authority to a more powerful jurisdiction, and to echo Joseph Howe's warnings of 150 years ago:

> [The Maritime colonies] naturally desire to preserve the great privileges they enjoy, and to develop their resources without being involved in entanglements difficult to unravel, and from which, when once enthralled, there may be no easy means of escape.[45]

Energy futures in energy past

Nova Scotia *has* been trapped by past and present: in the grooves of past practice and the realities of a global economy still driven by fossil fuels.[46] It does not yet have the economic or political motivation to support dramatic environmental innovation. A privatized energy utility will prefer cheaper imported coal and existing infrastructure

contract of supply. In return for bearing 20 per cent of building costs, Nova Scotia would receive 20 per cent of the energy with the option to purchase additional energy at market rates.

It is worth noting here Richard Starr's forceful argument from *Power Failure* (Formac, 2011), that an "energy myth" is central to Nova Scotia's economic (failed) past: a persistent belief that an energy resource (whether coal, gas, or hydro) will prove to be the golden goose through exports to richer markets – notably the American eastern seaboard.

43 "Three Reasons Tongues are Wagging about a Nova Scotia Election," *Globe and Mail,* 4 March 2013.

44 http://novascotia.ca/fairenergy/.

45 Howe, "Mr. Howe on Confederation," 471.

46 In August 2012, the Texan geophysicist leading Shell's Deepwater Nova Scotia Venture told the Maritimes Energy Association that "[Natural] gas is not what we are looking for. We are looking for oil." See CBC News, "Oil the Goal for $1B N.S. Offshore Program: Shell," 23 August 2012, http://www.cbc.ca/news/canada/nova-scotia/story/2012/08/23/ns-offshore-oil-1-billion.html.

to maximize profit; infrastructures and ideologies of energy extraction and distribution take on a technological momentum of their own.[47] Like most of Canada, the province's economy is still oriented toward natural resources. It lacks the depth of revenues and expertise of Ontario, Quebec, Alberta, and British Columbia – provinces to which, ironically, Nova Scotian expertise migrates, and doubly ironically, often to employment in the extractive industries.[48] And, despite efficiency programs, the bulk of the discussion has centred on new production rather than reduced consumption, which is arguably more important for long-term energy supplies. Lastly, there has not been a real groundswell of public support for a new energy paradigm; the majority supports the clean energy targets in theory, but local communities do not always want wind farms in practice. This is a relatively older, conservative audience with a "history of mistrust and politicization" of energy supply and innovation.[49]

But history informs – it need not prescribe. As David Wheeler, co-author of the 2009 renewable energy strategy, reflected in 2013, there has been a notable change in the political climate: "Between 2007 and 2010, this province established something of a political consensus on energy policy," including a commitment to increase energy efficiency, phase out coal-fired power generation, and expand wind power.[50] Even alongside the dominant emphasis on oil and gas exploration, these new priorities are not immaterial (however much that sounds like damning with faint praise). In light of Canada's historical incapacity of developing a national energy strategy, responsibility for change will fall to the provinces.[51] And it can be argued that Nova Scotia's history might make it more sympathetic to renewable energies than other jurisdictions. In focusing on the economics of environmental innovation, we likely underestimate the role of "sentiment and symbolism" in maintaining or, more to the point, changing attitudes about environmental practices.[52] There is a remarkable palimpsest of energy

47 Matthias Heymann and Kristian H. Nielsen, "Hybridization of Electric Utility Regimes: The Case of Wind Power in Denmark, 1973-1990," in *Energy Transitions in History: Global Cases of Continuity and Change, RCC Perspectives*, ed. Richard W. Unger (Rachel Carson Centre, Munich, 2013), 69 – referring to Thomas P. Hughes, *Networks of Power: Electrification in Western Society, 1880-1930* (Baltimore: Johns Hopkins University Press, 1983).

48 Demitrios Konstadakopulos, "The Limits of Ecological Modernisation in Canada's Atlantic Provinces," *British Journal of Canadian Studies* 20, no. 2 (September 2007): 202-5. This could be seen as a form of "knowledge transfer," or the export of expertise, but in Canadian political economy it is more generally read as a further indication of an intraregional imbalance of power and unequal dependency. Nova Scotia Power was privatized in 1992 and has remained one of the most controversial corporations in the province, largely due to criticism over rate hikes (for the consumer) and profit margins (for the company).

49 Adams and Wheeler, *A New Renewable Energy Strategy for Nova Scotia,* 1.

50 David Wheeler, "Maritime Link Should Proceed on Balance of Probabilities," *Chronicle Herald,* 28 May 2013.

51 In July 2012, Nova Scotia hosted the premiers' Council of the Federation to discuss a national energy plan – entirely without input from Ottawa. The *Globe and Mail* chided the federal government for abdicating its constitutional responsibility and thus encouraging "provincial autonomy in an area where it has not hitherto existed, with the risk of a patchwork system that does not offer consistent protection." See "Streamline, Don't Abdicate" (editorial), *Globe and Mail*, 10 August 2012.

52 I owe this phrase to Graeme Wynn's "'Deplorably Dark and Demoralized Lumberers'? Rhetoric and Reality in Early Nineteenth-Century New Brunswick," *Journal of Forest History* 24, no. 4 (October 1980): 179.

landscapes here, and renewable energy projects can be cast as making use of familiar regional features. This is a constructive use to which the golden age might be put: invoking the imagery of propulsion by wind and tide. We now plant tidal turbines where we used to plant ship cradles, both activities making use of the unique heights and speeds of the Bay of Fundy. Most of the existing wind projects follow the old path of the Intercolonial Railway into the Pictou highlands and the mining towns of Cape Breton, finding new use for a topography exhausted in and by heavy manufacturing and coal production (Figure 4). While biomass is a small part of the renewable strategy, the construction of a new biomass plant at a struggling mill in Port Hawkesbury is far from coincidental; it is meant to find new use for the longstanding and locally critical forestry industry of Cape Breton.[53]

The notion of advancing provincial "revenues and independence" through energy resources is equally familiar. Energy security here means independence or protection from external control, whether unstable global fuel markets, a minority status in national politics, or Canada's deteriorating international reputation. Nova Scotians "will want to be self-reliant to the greatest extent possible," concluded the 2009 strategy, "and not have their energy prices dictated by actors outside of Nova Scotia who do not answer to Nova Scotians or their responsible authorities."[54] What the authors of that report did not recognize (or mention), of course, was that "how Nova Scotians feel" about volatile fuel prices in 2012 could also have been said about concentrated corporate ownership in 1925, national tariffs in 1867, or inequitable royalty rates in 1830. The renewable energy initiative itself arose for the same reasons that have always motivated individual provinces to develop their own energy resources: to assert autonomy within the federation and to further their particular economic interests. What is new is that while fossil fuel-rich provinces such as Alberta continue to defy federal control of energy resources in the spirit of provincial rights, they also tout their alternative energy projects as symbols of their ability to be maîtres chez eux. This has become more important, and more obvious, in the last decade, with the sharp decline in Canada's international reputation for environmental protection. At COP 15 in 2009, for example, the provincial delegation presented itself clearly as Nova Scotia first and Canadian second in its entrepreneurial promotion of local projects and its conscious effort to disassociate from the federal government.[55] Like the merchants of the 19th century, the green energy campaign tries to present Nova Scotia as a small but vital and autonomous member of the global community.

The renewable energy program's emphasis on community-scale projects also recalls (however unwittingly!) the colonial-era history of smaller coastal

53 See http://www.nspower.ca/en/home/aboutnspower/makingelectricity/renewable/map.aspx. Joshua MacFadyen's research into biomass practices in the oil age, particularly on Prince Edward Island, promises to be a useful contribution: "Wood Energy in Canada," in Sandwell, *Powering Up: A History of Fuel, Power and Energy in Canada, 1800-2015*.

54 Adams and Wheeler, *A New Renewable Energy Strategy for Nova Scotia*, 7.

55 That said, it is inaccurate to think of clean energy as solely the initiative of even the most independently minded of the provinces. Federal funding has supported tidal energy, biomass, and smart grid technology projects in Nova Scotia, and federal electricity sector greenhouse gas emission targets were a major factor – albeit translated into an "equivalency agreement" tailored to Nova Scotia's coal profile – in the province's long-term energy plans.

Figure 4: Lingan Generating Station near New Waterford, Cape Breton (2013). Nova Scotia Power's largest generating station, originally solely coal-fired but now with wind turbines.
Source: Photograph by author.

communities self-reliant in energy production but linked in commerce and character. Urging community-scale investments (as the current plan does) counters the 20th-century trend of centralization and externality, whether coal conglomerates or a single provincial utility, in favour of something resembling more the seaboard communities of colonial Nova Scotia with their own "revenues, resources, and independence." While Halifax Regional Municipality, a World Energy City, has attracted the most attention for its geothermal buildings and "solar city" program, even more appropriate – and suggestive for other Nova Scotian communities – is the geothermal system in Glace Bay, which uses water underground in abandoned mines for heating.[56] A return to small-scale municipal energy strategies, using a diverse array of sources, may be an answer for coastal communities in Nova Scotia.

On that note, it is worth noting the similarities between Nova Scotia (and, for that

56 For the HRM, see http://www.halifax.ca/environment/energyplan/documents/EnergySuccessMapJune172010.pdf (2010); http://www.halifax.ca/solarcity/, and "Here Comes the Sun," *Globe and Mail,* 27 December 2012. For Cape Breton, see http://www.cangea.ca/projects/archive/cape_breton_abandoned_coal_mines_direct_heat_project/.

matter, neighbouring Prince Edward Island) and another small, coastal territory with a leading profile in renewable energy. While Nova Scotia returned to its coal-fired generators amid the oil crisis of the 1970s, Denmark took a longer forward-looking view by committing to research and development of a renewable energy sector, specifically wind turbine design, and safeguarding a domestic market for renewable energy, notably through feed-in tariffs. This hybrid model of energy delivery has managed to combine locally-generated power with the conventional large-scale grid, a hybridization that required state commitment (including national R&D), sympathetic utilities, the adaptation of small-scale equipment manufacturers to wind technologies, innovations in near- and off-shore wind power, and, notably, decentralized local ownership of turbines. This combination of large and small is what has enabled the island of Samsø to render itself carbon-negative, and a net exporter of electricity to the mainland.[57] While the 2009 Nova Scotian strategy frequently referenced Ontario's renewable energy plan as a comparator and model, Nova Scotia arguably shares more with Denmark. Obviously a nation-state is more fully autonomous than a province, but the key lesson is that long-term state commitment is essential, maritime environments are wonderful sources of sustainable energy, and small size need not be a deterrent.

Conclusion: "The wind itself is free"

Much Canadian history has focused on the encouraging, stabilizing, and progressive narrative of nation-building, which prioritizes the accomplishments (or shortcomings) of the nation-state after Confederation. The relationship between or continuities along colonial and postcolonial status has not been as central.[58] The paradigm of metropolis and hinterland, preferred by historians of post-Confederation Canada, can apply to a colony and imperial centre as much as to a province or to the national capital. But apart from the resentment of a western hinterland sometimes wanting in, we have not really applied either dynamic to the story of energy in Canada – even as postcolonial historians elsewhere are questioning energy as both a tool and legacy of colonization and global dynamics in terms of where it is produced

57 As of 2001, only 10-15 per cent of turbines were controlled by the utility companies. See Heymann and Nielsen, "Hybridization of Electric Utility Regimes," 70-2, and Judith Lipp, "Lessons for Effective Renewable Electricity Policy from Denmark, Germany and the United Kingdom," *Energy Policy* 35, no. 11 (November 2007): 5481-95. See also Miguel Mendonça, Stephen Lacey, and Frede Hvelplund, "Stability, Participation and Transparency in Renewable Energy Policy: Lessons from Denmark and the United States," *Policy and Society* 27, no. 4 (March 2009): 379-98. Denmark currently generates over 22 per cent of its total energy (33 per cent of electricity) from renewables – with two-thirds of that coming from wind power. See Danish Energy Agency, *Energy Statistics 2010,* http://www.ens.dk/en-US/Info/FactsAndFigures/Energy_statistics_and_indicators/Annual%20Statistics/Documents/Energy%20Statistics%202010.pdf. To be fair, while roughly approximate in size (Denmark – 43,000 square kilometres: Nova Scotia – 55, 000) Denmark has a population of 5.5 million and Nova Scotia less than one million.

58 Where colonial/post-colonial has been central is in the writing of Aboriginal history, which obviously takes a very different perspective toward the Canadian state.

59 There is interesting work being done by the World Energy Cities Academic Partnership (www.energycities.org/academic-programs), including by the University of Houston (host of the 2010 workshop "Energy Capitals: Local Impact, Global Influence"), and in conjunction with the

and by whom and where its results might be transported.[59]

Historians of Atlantic Canada have put a heavier emphasis on the costs of Confederation as an explanation for the fate of the region in the 20th century, when provincial and national paths diverged in the political woods, and the path travelled by Nova Scotia made all the (lamentable) difference. This is true as far as it goes: after all, getting lost in the woods is what happens when you turn inland, away from the coast. But Nova Scotia's complicated and multi-faceted energy profile shows that it is important to take the long view, and not telescope history to 1867. The province's commitment to unsustainable fossil fuels not only predated Confederation, but was and remained entwined with the demographic and political realities of a smaller entity in a larger federation. Fossil fuels, whether coal or offshore oil, have been seen as the means of escaping a status of inherent disadvantage, although history has not borne this out. But history also reminds us that there is more to Nova Scotia than coal (or oil): there is a second tradition of entrepreneurial, self-reliant, and globally minded thinking, supported by other energy sources – energy sources to which the province is now returning. In 2012, the provincial energy minister commented "Nova Scotia has one of the best wind regimes in North America. The wind itself is free . . . ."[60] The wind, Joseph Howe might add, would not be the only thing.

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Rachel Carson Center for Environment and Society, Munich (i.e. the 2012 workshop "Energy Resources: Europe and Its Former Colonies"), both of which should appear as published collections shortly. See http://www.history.uh.edu/energycaps/index.php.

60 "New Renewable Projects Provide Jobs, Investments," Nova Scotia Department of Energy media release, 2 August 2012, http://gov.ns.ca/news/details.