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Freeing the Flow:
Proposals for Reform of Canadian Electric Industry Regulation

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Events of the past few years have shown significant problems with Canadian electric industry regulation at the federal and provincial levels. Regulatory authority is extremely limited at the federal level and political considerations, including "beggar thy neighbour" policies characterize provincial regulation. This paper explores the current situations and proposes possible reforms.

The origins of electric utility regulation

The story of electric utility regulation has largely been written in the United States. Regulation was required, because development of the industry took place principally by the private sector rather than through government action.

Soon after he invented the electric light bulb, Thomas A. Edison invented the electric utility. In downtown Manhattan, he set up a company – an investor-owned utility – to generate electricity and distribute it.

Edison argued that electric service was a monopoly by its very nature and sought to have local governments designate his companies as the sole authorized supplier for a given municipality or area. The exclusive franchise formalized the notion of the utility monopoly.

But the exclusive right to serve raised public concern just at the time the Sherman Antitrust law was coming into effect. People had become aware of abuses by market-dominant entities. The local government grant of a local franchise no longer provided sufficient protection.

Much depended on the definition of what constituted a monopoly. To be sure, there could not be competing electric lines, but was there competition between suppliers of electricity and natural gas? Relatively quickly, regulation evolved toward an industry-by-industry approach.

With regulation, the concept of the "regulatory bargain" evolved. In return for an exclusive market, a utility would have to accept that a regulator would serve as the "surrogate for competition" and would approve or set rates, including allowing it a profit. By 1905, New York State had created a commission to regulate electric rates.

Utility regulation focused on the utility as much as the consumer. Regulatory bodies were not conceived of as consumer advocates but were charged with protecting the public interest. This has meant both an interest in the financial viability of the utility by assuring it of adequate rates and protection for customers from abuse of the utility's market power.

Rate regulation was based on the notion of "cost of service." Utilities would claim the need to recover their costs plus an allowance for a return on the equity portion of their financing. Regulators could scrutinize utility operations and, after reviewing financial markets, set an appropriate level of profit on "rate base", the utility capital financed by equity. Utilities might seek court review, if they believed that the rates would result in government "confiscation" of their property, though such a claim was unlikely of success.

Where government or the people owned the utility (e.g., through a cooperative), little or no regulation was imposed in most states. It was presumed that government would have no desire to abuse a dominant position. Furthermore municipal utilities and cooperatives are governed by boards, whose members are either directly elected or responsible to elected officials. This enables customers to hold utility management accountable.

Investor ownership of most American electric utilities is the major distinction between the United States and most other countries, including Canada. In most countries, the utilities were owned by governments, which presumably lack motivation to exercise undue market power. In that case, less customer protection is needed.

The end result of the essentially private character of the American utility industry was that utility regulation developed first there and, because of the early precedents, has followed an American pattern when regulation was initiated in other countries.

Regulation Changes

In the early part of the 20th Century, state regulatory commissions were assigned responsibility for dealing with the electric sector. Previously, regulation had focused primarily on railroads.

With the triumph of alternating current, championed by Westinghouse and Tesla, over Edison's direct current, power could be transmitted over longer distances. When power could cross municipal borders, state regulators were needed to assume responsibilities for control.

Legislatures chose to assign regulatory authority to independent bodies. Setting fair rates requires expertise especially with regard to the profit to be allowed. The complex nature of utility operations relates to the importance of ensuring the reliability of the service provided to end users. What is needed to ensure reliability and efficient operations is usually a matter for experts, whose testimony must be subject to independent scrutiny. For these reasons, regulation was left to trained and independent authorities, immune to a large degree from electoral pressures.

For several decades, regulation focused on rates and sought to insure that the benefits of increased efficiency and economies of scale would be shared with customers. Electric utility regulation was relatively benign.

By the mid-1930s, power was flowing across state boundaries and the federal government was taking steps to promote electrification as part of economic recovery from the Great Depression. In 1935, the *Federal Power Act* was adopted, giving the Federal Power Commission (FPC) the authority to regulate transmission and wholesale power transactions.

The authority for this grant of power was found in the Commerce Clause of the U.S. Constitution. Article I, Section 8 of the Constitution provides that "Congress shall have power…[t]o regulate commerce … among the several states." Article VI states that "…the laws on the United States … shall be the supreme law of the land."

These provisions give the federal government authority over interstate commerce. The new law defined transmission and the flow of power between entities selling and buying for resale as falling under interstate commerce. The Supremacy Clause meant that in case of conflict or in areas where the federal government was given control, state action would be superseded. This new situation was upheld in a series of Supreme Court decisions.

In practice, these provisions mean that matters relating to transmission, except for siting, are under the exclusive control of the Federal Energy Regulatory Commission (FERC), the successor of the FPC, because transmissions lines are invariably connected with lines in more than one state and thus are in interstate commerce. A FERC decision on rates for the use of a utility's transmission system must be passed through unchanged into the rates of retail customers receiving power transiting that system.

Thus, in the United States, there is a single regulator of electric transmission, eliminating any beggar-thy-neighbour inclination of individual states or utilities.

At the beginning of the 1970s, the electric industry began to change. The cost of money and materials began to increase and, thanks largely to the 1973 oil boycott, the price of fuels for generation rose. As the price of electricity increased, regulatory proceedings became more adversarial. In addition, the 1965 Northeast blackout had pushed the FERC to focus on measures to improve the transmission system.

The cost of fuel led to a transformation of the regulatory setting. The 1979 *Public Utility Regulatory Policies Act* (PURPA) embodied the first steps toward a requirement for conservation and renewable resources to be incorporated into power supply planning and regulation. For the first time, the law mandated that the transmission system be open to non-utility generators that met certain renewable qualifications. These generators would not be compensated for their cost of service; instead, they would receive "avoided cost", the rate given to the power supply they would replace.

The *Energy Policy Act* (EPAct) of 1992 forced an even more fundamental transformation. The transmission system was to become "open access" and available for use by generators, including those owned independently from traditional utilities. No longer would generation be considered necessarily to be part of an integrated utility and thus not a monopoly enterprise requiring regulation. To some this amounted to deregulation, but, in light of the need for market rules that would apply to generators, it was, in fact, industry "restructuring."

Without regulation in the traditional sense, generators or marketers buying and reselling their power could set "market based" rates rather that rates based either on cost of service or avoided cost. However, a supplier would not be allowed to dominate a given market and determine its rates; "market power" was regulated. Uniform, regulated rates would continue for transmission, though, with economic justification, special lower rates for specific customers might be allowed.

In the wake of the decision to restructure at the wholesale level under FERC jurisdiction, many states adopted similar retail access. In some states, this meant that utilities had to divest themselves of generation assets. In addition, several large organizations, known almost interchangeably as regional transmission organizations (RTOs) or independent system operators (ISOs) were created. In one case, an independent system administrator (ISA) was created to ensure reliability and manage a market without operating the grid**.** While no utility was allowed to manage its transmission to support sales from its generation, these organizations serve groups of utilities and operate regional markets.

FERC has required RTOs and ISOs to create complex markets for trading power supply. The traditional bilateral market between a willing buyer and a willing seller setting the transaction price has been replaced by hourly trading. Thus, FERC has decided that open access alone is insufficient; it must provide for a market to exploit open access.

At all levels of regulation, legislators required commissions to deal with a wider range of issues. Matters such as increased use of renewable resources, demand-side management, and assistance to low-income customers all came under regulatory purview.

The evolution of electric utility regulation was not exclusively related to developments in the United States. The rest of the world was experiencing the same increasing fuel costs and grid vulnerability that were affecting the United States. Regulation in Canada, continental Europe, Britain, Australia and New Zealand in particular began to take on some of the same responsibilities as in the United States. In some cases, these areas began innovating in market creation distinct from and ahead of the United States.

As a result, electric utility regulation across much of the world became part of a global pattern rather than simply being an offshoot of the United States. To be sure, because in many countries utilities remained under government ownership, regulation was more part of the legislative process than was the case in the United States.

Canadian electricity regulation

Electric utility regulation in Canada developed in significantly different ways from regulation in the United States. Yet it includes many similar provisions.

The relationship of government to utility regulation in Canada is marked by the understanding that regulatory functions are an integral part of government functions. Rather than insulating independent regulators from the government of the day, Canadian practice reflects the view that it is acceptable for regulatory decisions to reflect the views of the current government. One effect is that policy may shift relatively frequently as governments

change, a situation that can produce less certainty for participants in the regulatory process.

While regulators play a quasi-judicial role, their decisions are subject to review by the government and may be overturned by political leaders. Such reversals may be rare, but the mere potential for government action can have an influence on the regulatory process. The power of government suggests that regulators are subject to political control more than judicial review.

To be sure, as in any democratic system, the legislative body may adopt policy directives to be followed by the regulator. However, the exercise of power in this way is distinct from directly exercising the power to reverse or vacate a decision relating to a specific set of facts.

Given the nature of the Canadian federal system, the provinces exercise almost all electric utility regulatory authority. Federal authority might have come to play a larger role if there were more interprovincial power trading. But the sheer size of provinces has made it relatively unlikely that most provinces will seek to use supply from a neighbouring province. This situation stands in sharp contrast to the United States. Without Alaska only four of the 10 largest jurisdictions among the states and provinces are found in the United States. In other terms, six of the eight largest jurisdictions are Canadian provinces – Quebec, Ontario, British Columbia, Alberta, Saskatchewan and Manitoba. With a majority of provinces likely to take care of their own power supply, the predominance of provincial regulation is understandable.

Because most utilities are owned by the provinces, the level of provincial regulatory authority is usually limited by provincial law. In that way a government can strongly influence utility policy even on a short-term basis. Utility policy becomes a current political issue.

The role of the National Energy Board (NEB) with respect to electric matters developed relatively late and has been quite limited when compared with FERC jurisdiction. The NEB has been significantly involved in regulating natural gas, because there is far more interprovincial trade with regard to this resource compared with electricity. Obviously, each province cannot take care of its own natural gas requirements; so much trade must be interprovincial.

Like natural gas, telecommunications, also a utility service, is subject to federal regulation. Section 7 of the *Telecommunications Act* states that these services play "an essential role in the maintenance of Canada's identity and sovereignty", which justifies federal regulation. The regulator is the Canadian Radio-television and Telecommunications Commission (CRTC).

In time, provincial electric legislation has followed much the same course as federal policy in the United States. Open access, to a greater or lesser extent, has been mandated. To some extent, the increase in open transmission access may have been influenced by the reciprocity provisions in FERC rules to which Canadian exports may be subject. The provinces have also enhanced their focus on conservation, efficiency and the use of renewable resources. More utilities have been privatized, requiring closer regulatory scrutiny, especially over rates.

With open access transmission has come the creation of market management organizations, similar in intent to the ISOs (independent system operators) and RTOs (regional transmission operators).They are active in Alberta and Ontario. Manitoba, with a relatively high volume of trade with the United States, voluntarily participates in the American Midwest Independent System Operator. New Brunswick has an independent system operator.

In 1959, the NEB was given authority over international electric transmission lines. This grant of authority reflected the increasing volume of exports to the United States. And, of course, the regulatory authority on the other side of the border is the U.S. federal regulator. In practice, this NEB authority has needed to be seldom exercised and is usually more ministerial than regulatory. The analogous proceeding in the United States is the issuance of a Presidential Permit, an action of the Department of Energy and not FERC mainly to insure that reliability is not downgraded and that environmental laws are observed.

The expansion of NEB authority over transmission did not extend to interprovincial transactions, as a 1981 decision by the Supreme Court of Canada made clear:

> *In the absence of federal legislation, the provincial legislature's authorization of a provincial statutory board to entertain applications for the construction of intraprovincial facilities and to empower an applicant to connect its local facilities with those of an agency in an adjoining province but without presuming to regulate the interconnection fell within the provincial*

> *authorization in relation to local works and undertakings. There was no operative federal legislation to underscore federal exclusiveness or to support federal paramountcy. Fulton et al. v. Energy Resources Conservation Board et al., [1981] 1 S.C.R. 153 at 154.*

This decision was based upon Section 92 (10) of the then *British North America Act*, which was soon to become the *Constitution Act*. The provision gave provincial legislatures authority over electric transmission unless "declared by the Parliament of Canada to be for the general Advantage of Canada or for the Advantage of Two or more of the Provinces." As the Court found, Parliament had not made such a declaration even with respect to the interconnection.

The regulation of the Canadian electric industry was more decentralized, less stringent and more political than the system that has evolved in the United States. Despite later changes, as discussed below, Canadian regulation reflects the political and geographical realities of the country. It also reflects the lack of a clear constitutional mandate for either greater regulation or more federal authority.

Issues in interprovincial transmission

In most cases, where a transaction takes place over lines connecting two adjoining provinces, the Canadian commercial model – an arm's length business transaction between two parties – has often worked satisfactorily. Each province retains responsibility for the reliability of its system. Similarly, transactions flowing between a province and the United States usually reflect a mutually beneficial deal, leaving the NEB to carry out a permitting function. Of course, on the American side of the transaction, FERC's regulatory powers apply.

Given the Canadian geography, relatively few transactions originate in one province, cross another with power being delivered either in a third province or to the U.S. market. The three tables (below and on the following page) show the role of international and interprovincial power exchanges. The contrast among provinces becomes clear when it comes to interprovincial transactions. As noted above, these transactions remain under provincial control, and for the larger provinces, this situation is largely workable.

Table 1. Canadian Interprovincial and U.S. Electricity Trade

	Trade (gigawatthours)					Total Use
	Canada		United States			
	To	From	To	From	Net	
AB	1,209	1,781	155	223	-640	51,350
BC	1,119	1,101	4,439	7,289	-2,832	63,669
MN	1,782	174	11,093	534	12,167	19,824
NB	1,557	1,466	1,780	642	1,229	13,563
NL	30,095	17	0	0	30,078	8,944
NS	27	281	31	63	-286	11,419
ON	4,501	3,712	11,090	7,070	4,809	131,313
QC	3,559	33,967	15,712	3,356	-18,052	177,124
PEI	0	1,161	0	0	-1,161	1,130
SK	840	1,032	392	203	-3	17,918
Total	44,689	44,692	44,692	19,380	25,309	496,254

Source: Statistics Canada, Electric Power Generation, Transmission and Distribution, Table 3. Supply and disposition of electric energy, electric utilities and industry, 2007

Totals differ due to rounding

Table 2. The Relative Importance of Canadian External Power Transactions

	Exports to Canada/Use	Imports from Canada/Use	Exports to US/Use	Imports from US/Use
AB	2.35%	3.47%	0.30%	0.43%
BC	1.76%	1.73%	6.97%	11.45%
MN	8.99%	0.88%	55.96%	2.69%
NB	11.48%	10.81%	13.12%	4.73%
NL	336.48%	0.19%	0.00%	0.00%
NS	0.24%	2.46%	0.27%	0.55%
ON	3.43%	2.83%	8.45%	5.38%
QC	2.01%	19.18%	8.87%	1.89%
PE	0.00%	102.74%	0.00%	0.00%
SK	4.69%	5.76%	2.19%	1.13%
Total	9.01%	9.01%	9.01%	3.91%

Source: Calculated from Table 1.

However, the position of the four smaller provinces is significantly different. They do not occupy an area so great that their need for long-distance imports is merely marginal. The combined area of the four – Newfoundland and Labrador, Prince Edward Island, Nova Scotia and New Brunswick – is less than the area of the sixth largest province, Manitoba. Their combined population is less than that of any of the four largest provinces.

Table 3. Canadian Interconections

	With two or more province	With US
AB	X	X
BC	X	X
MN	X	X
NB	X	X
NL		
NS		
ON	X	X
QC	X	X
PE		
SK	X	X

These four provinces could benefit from interprovincial trade in electricity to provide economies of scale and increased reliability. But, with the exception of New Brunswick, each is effectively subject to the regulatory regime of neighbouring provinces. They do not have access to alternative supplies or the opportunity to make sales except with the consent of other provinces.

In practice, such diversity has undermined efficient use of resources. At worst, it has risked the kind of "beggar thy neighbour" policies that FERC has been able to prevent.

The case of Labrador is unusual and undoubtedly has raised the most significant issues in interprovincial transmission. In order to complete the Churchill Falls hydro project, the Churchill Falls Labrador Corporation (CFLCo) signed a supply contract with Hydro Quebec running from 1976 through 2041. This bilateral arrangement has been impervious to attempts by successive Newfoundland and Labrador governments to modify its terms. Flows under this agreement are the largest cross-border transactions in Canada. The power may be used for consumption in Quebec and, by Quebec, for sales into the United States.

Another event also shows the effect of purely provincial regulation. In 2009-2010, Hydro Quebec offered to acquire N.B. Power, a transaction that would have given it full use of the New Brunswick transmission system for flows from both Quebec and New Brunswick. The consolidated utility would have increased Quebec's exports to the United States by more than 25 percent and could have enabled it to become a major supplier of both Nova Scotia and P.E.I. This proposed arrangement was dropped in March 2010.

Neither the Churchill Falls transaction nor the proposed Quebec-New Brunswick deal was subject to regulatory scrutiny outside of the directly concerned provinces. In the case of Churchill Falls, Labrador (but not Newfoundland) is part of the Hydro Quebec transmission system and, by terms of the agreement, it is subject to Quebec regulatory authority. Under the proposed Quebec-New Brunswick accord, no approval was required by the New Brunswick Energy and Utilities Board and much of New Brunswick regulations would have had to track decisions of the Quebec Régie de l'énergie.

The position of the three "locked in" provinces is similar to the situation of utilities in New England, where there has long been a regional system, at first voluntary and later federally mandated. The three provinces are mainly served by investor-owned utilities, which must be subject to more stringent provincial regulation than applies to crown corporations. They serve relatively small areas (especially when Labrador is excluded) with relatively small populations. They could benefit from participating with New Brunswick in regional arrangements that could improve operations and reliability and reduce costs. But they lack any existing regional framework, either voluntary or regulatory, for improving their situation.

Since the development of open access transmission in the United States, the reciprocity provisions of FERC orders have imposed on Canadian transmission owners selling power to the United States the obligation to offer open access transmission as well. But regulatory supervision of the practical application of open access is lacking, because it is generally left to the provincial regulator.

Although FERC has no legal authority in Canada, its influence has been great. Though the provinces may choose to interpret compliance with the FERC-mandated system as they wish, they have shown an understanding that the basic principles of open access must be acknowledged.

Revisions to the Canadian Federal System

The year following the Fulton decision, the now named *Constitution Act* was patriated and made subject to exclusive Canadian control. One major change was the addition of Section 92A, which deals with provincial control over electric energy among other matters.

After first giving provinces jurisdiction over electric generation, Section 92A of the Canadian Constitution states: "(2) In each province, the legislature may make laws in relation to the export from the province to another part of Canada of…the production from facilities in the province for the generation of electrical energy, but such laws may not authorize or provide for discrimination in prices or in supplies exported to another part of Canada."

But this authority is conditional, according to the following provision: "(3) Nothing in subsection (2) derogates from the authority of Parliament to enact laws in relation to the matters referred to in that subsection and, where such a law of Parliament and a law of a province conflict, the law of Parliament prevails to the extent of the conflict."

In a provision that deals with rate-setting, subsection (4) provides: "In each province, the legislature may make laws in relation to the raising of money by any mode or system of taxation in respect of … *(b)* sites and facilities in the province for the generation of electrical energy, and the production, therefrom…."

Finally, subsection (6) states; "nothing in subsections (1) to (5) derogates from any powers or rights that a legislature or government of a province had immediately before the coming into force of this section." This provision preserves Section 91, discussed above, but that earlier authority did not preclude federal government legislation.

With respect to interprovincial transmission, the *Constitution Act* provides for the possibility of concurrent federal-provincial jurisdiction subject to federal supremacy. However, unlike in the United States, subsection (4) appears to place transmission rates principally under provincial control though they may not be discriminatory.

As the Court found in 1981 was the case pre-patriation, even with the new provisions, Parliament did not take action to establish a role for federal jurisdiction over interprovincial transactions. As a result, the provinces continued to exercise *de facto*

exclusive control over interprovincial electric facilities and transactions.

In the framework of negotiations relative to the Meech Lake amendments to the Canadian Constitution, the federal government sought to provide concessions to provinces through amendments to the *National Energy Board Act.* These changes represented the first major effort to develop the NEB's jurisdiction over transmission and to include within it interprovincial facilities.

Under Section 58.16, the NEB may issue a certificate for "an interprovincial power line in relation to which an order made under section 58.4 is in force." That section allows the Governor in Council to designate a proposed transmission line to fall under NEB jurisdiction and to specify "the considerations to which the Board shall have regard in deciding whether to issue such a certificate."

This provision was intended to respond to concerns from the three "locked in" provinces. It was not a broad assertion of federal authority, instead only promising a case-by-case look at specific lines as they were proposed. There was no guarantee that NEB jurisdiction would ever be extended to interprovincial lines, only that the federal government's authority to do so as permitted by the *Constitution Act.*

Because the grant of piecemeal regulatory authority would be made by the government, the decision was likely to be considerably more political than economic. Nowhere could one find a clearer example of regulatory authority being subject to political control and thus not being truly independent.

At the same time, Section 58.21 was added to provide comfort to the Quebec government. It echoes the Fulton decision:

> *A provincial regulatory agency designated under section 58.17 has, in respect of those portions of international power lines that are within that province, the powers and duties that it has under the laws of the province in respect of lines for the transmission of electricity in the province to another place in that province, including a power or duty to refuse to approve any matter or thing for which the approval of the agency is required, even though the result of the refusal is that the line cannot be constructed or operated.*

The scope of provincial jurisdiction is contained in section 58.19 and relates to siting, land acquisition, environmental impact and abandonment. In other words, Quebec could block any transmission line crossing its territory even if its purpose was to transmit power to the United States.

The interplay of the two new provisions, 58.0 and 58.16, is best understood by looking at the Churchill Falls conflict. Newfoundland and Labrador might ask the federal government to take jurisdiction over a transmission line from Churchill Falls into or through Quebec. Further, the federal government could lay down the conditions to be taken into account by the NEB in considering the matter. There was at least the prospect that Newfoundland and Labrador might not be completely at the mercy of Quebec, as it believed it had been.

If Churchill Falls power was meant to be transmitted to the American market, where it would not be subject to the equal cost treatment mandated by the Canadian Constitution, it would face the ability of Quebec to deny it such access. The authority under sections 58.21, a clear statement that the NEB could be limited to its traditional and limited authority of international lines, maintained Quebec's control over Churchill Falls power. The change for the "locked in" provinces was only a promise; the change for Quebec was a guarantee.

In *Trans Canada Power Corp.*, EH-1-96, the NEB dealt for the first time with the 1990 changes to its basic law. It noted that it may issue a permit for an international power, a relatively routine matter to which section 58.21 applies, giving the provinces effective control. A second approach is caused by the conversion by the government of a permit request into an application for a certificate, a more extended review process. In this case as well, provincial law prevails "subject only to the paramountcy of federal laws of general application and to conditions imposed by the Board". The government must consent to the certificate.

An applicant may elect to apply for a certificate under Section 58.23 and not a permit. This third approach avoids the application of provincial law. "An international power line authorized by an elective certificate remains under federal law for all purposes and the provisions of the Act relating to pipelines are adopted, with the necessary changes, for the regulation of international power lines authorized under this instrument," said the Court.

In the TransCanada case, decided in January 1997, the NEB addressed claims by Alberta interveners that the applicant should be required to comply with the *Alberta Electric Utilities Act*. While the NEB recognized that it could require such compliance, it decided that it would not impose such a requirement. It noted that it had not made a rate determination, which presumably would be subject to Alberta jurisdiction.

The case is significant because it provided the NEB the opportunity to assert its authority over an international transmission line, though not for rates. If an applicant seeks an elective certificate, it may avoid Section 58.21 provincial jurisdiction. The decision falls within the discretion of the NEB based on three conditions: the relationship between the subject of the application and the proposed provincial condition, whether the condition would prejudice later rights of the applicant and if there are other forums that can judge if any provincial requirements apply.

The TransCanada case amounted to a declaration that the NEB could assert exclusive federal authority over an international transmission line at least with respect to certain major aspects of the project. But the decision made clear that the assertion of exclusive jurisdiction was discretionary and would be decided on a case-by-case basis.

Has much changed with respect to federal jurisdiction over electric transmission since the NEB was given some degree of authority in 1959? Probably not. There remains no grant of explicit and automatic federal jurisdiction. Rates may be decided at the provincial level even when the NEB deals with other aspects of a line.The federal government retains the final say over NEB recommended decisions in this field, though in practice it does not overrule the Board.

Perhaps most importantly, no interprovincial transmission line has ever been determined by the federal government to be subject to NEB review.

Proposals for improving regulation of electric transmission

The reasons for a lack of strong federal regulations are the nature of the Canadian system in which provinces have considerable powers and the understandable resistance of some provinces that might not need such regulation or that believe that they would suffer economic harm from outside regulators.

Despite the absence of federal regulatory authority over most electric industry functions, it has been involved in the development of the industry. It has supported new infrastructure and efforts to increase regional action.

In terms of geography, the three “locked in” provinces are in the extreme east. If New Brunswick, which could have a substantial interest in improved transmission access, is included, the line between provinces that might support federal or outside transmission regulation would be at Quebec’s eastern border.

There is no tradition of the NEB having regulatory authority over a specific region. In contrast, FERC allows the ISOs and RTOs to develop differently from one another under similar general rules, while large parts of the country in the south and west must provide open access but not through regional entities. The NEB lacks the authority to require utilities to enter into regional arrangements or to turn transmission operations over to an independent body, as FERC can do.

The challenge is to create a framework that will enhance the opportunities for trade in electric power and prevent discrimination against the “locked in” provinces. Three possible approaches are worthy of further investigation: (1) uniform laws, (2) an interprovincial agreement, and (3) a new form of federal regulation.

(1) The uniform law approach

Because the provinces have a great deal of discretion on transmission matters, there seems to be no obstacle to their agreeing to enter into a common arrangement that each finds to be of benefit. A pattern exists for achieving the cumulative effect of individual provincial actions – the uniform law approach.

In the United States as is the case for the provinces, states have certain functions under their exclusive control. Under the Constitution, they must give “full faith and credit” to actions of other states. The result could be that a state is forced to recognize as lawful another state’s policy that it would not adopt on its own. To minimize the chances of this happening, states have created a system of uniform laws. A model law is developed through negotiation and then adopted by the legislature of each state. There are now over 200 such laws in the United States.

The Atlantic provinces could follow the same approach and develop joint rules to be embodied in parallel provincial laws for the management of the grid. A transmission interconnection between that Newfoundland and Labrador and the Maritimes would have to be negotiated.

The involvement of New Brunswick in a regional arrangement requires consideration. It is not "locked in" and so enjoys the benefits of access that are enjoyed by provinces to its west. Why join a regional entity? There is no doubt that, because of its location, a high volume of transactions in and through the region would have to use its transmission system. These transactions would provide significant revenues to NB Power. They would provide substantial offsets as New Brunswick customers, relatively heavy users of electricity, face increasing rates.

The provinces could agree to the designation of a single system operator for the four-province transmission grid. This same entity could manage the market for power sales within the region and for exports. Each provincial transmission owner could be assured of full cost recovery and a rate system could be adopted to be applied uniformly. The provinces could determine if a "postage stamp" system, under which all users paid at the same rate, could be readily established or a "licence plate" system, under which each user pays the rates of its own home system but gains access to all systems in the region, would be necessary, at least as a transition.

Regulation would have to be aligned in the four jurisdictions. With similar regulatory regimes, the requirement for reciprocal treatment would insure a uniform regulatory approach. To some degree, an independent system operator could be self-regulating.

Such an approach could not take place without the political support of all provinces involved. Because of the need for a uniform system applied in each province, the arrangement would have to be permanent and able to be terminated or modified only by unanimous agreement. In effect, then, once established this system could not be subject to changes in policies in a single participating province, even when the government changed hands.

(2) The interprovincial agreement

The four provinces could choose to enter into an interprovincial agreement that would cover the same matters as the uniform law approach. This agreement could provide for stronger regional bodies.

Rather than depending on reciprocity and the independence of an independent system operator subject to a single province's application of the uniform law, an interprovincial agreement could create a form of regional regulation. A regional regulatory body composed of some members of each province's utility regulatory entity or a new and completely independent body could be created.

The regional regulator could ensure the application of the provisions of the interprovincial agreement and be directly responsible for supervision of the independent system operator. It could also administer rules to ensure that the market operated to be neutral and not subject to manipulation or control by participants. Its costs would be covered by a small surcharge to the transmission rate. Changing its own rate would depend on the unanimous decision of the participating provinces.

While the powers of a regional regulator could not exceed those of any province under federal law, its existence could contribute to the economic development of the region and provide the basis for increased cooperation. It would provide a sense of permanency to the undertaking.

(3) A new form of federal regulation

The approach that would provide for the greatest regulatory independence and neutrality would be a change in the jurisdiction of the NEB. While this would require legislation by Parliament, it need not seek to impose the kind of national uniformity that would be guaranteed to fail politically.

As previously noted, the Atlantic provinces face a markedly different system from the other six provinces. The "locked in" provinces have no direct access to the American market and, despite the relatively short distances involved, are mainly limited to trade only with contiguous provinces. A new form of federal regulation must take these realities into account.

Under this approach, the NEB would be given jurisdiction over any transaction between two jurisdictions that passed over the territory of another province. For example, a transaction in either direction between Nova Scotia and New England would be subject to NEB jurisdiction as would a transaction between Quebec and P.E.I. NEB control would be mandatory.

The need for some form of extra-provincial regulation was apparent when Hydro Quebec proposed to acquire N.B. Power. Hydro Quebec sought to gain control over almost all of the New Brunswick interconnection capacity with New England. An impartial outsider might have determined that Hydro Quebec control of all Canadian interconnections with New England should not be allowed because of the chilling effect it would have on the development of other "green" resources that could find an export market in the United States.

As it was, there was a neutral regulatory body that would have reviewed Hydro Quebec's control of all interconnections to determine if that control would give the Quebec utility excessive market power in New England. That regulatory authority would have been FERC, resulting in the only regulatory scrutiny over the transaction being exercised by a non-Canadian commission. This curious result in itself should stimulate interest in a Canadian approach.

Had this proposed approach existed, it would have applied to the original Churchill Falls transaction. Newfoundland and Labrador could have sold to the American market instead of being forced to sell to Hydro Quebec. And a regulator could have set a reasonable rate for both Quebec as the transmission provider and the supplying province.

The regulator could also have the authority to approve mergers across provincial borders. In that way, the NEB could provide neutral assurance that customers would be no worse off because of a merger.

What about the kind of interprovincial transactions that involve two neighbouring jurisdictions? Review by the NEB could be optional with the decision to be made by the entities involved in the transaction, not by the federal government. The parties could choose federal regulation or make the deal without such review.

If two or more provinces chose to create a regional system operator, or administrator, and power market, an idea that could work well in the Maritimes possibly plus Newfoundland and Labrador, an interprovincial regulator would be a necessity.

The essentials of improved electric industry regulation in Canada

From this review of options for improving electric industry regulation in Canada, essential elements of any reform have emerged.

1. The current system of regulation unfairly discriminates between three provinces – Newfoundland and Labrador, P.E.I., and Nova Scotia – and the other provinces. Such discrimination should be eliminated.
2. The current federal system for NEB review of interprovincial transactions does not function and offers no real protection for any province. This system must either be circumvented or reformed.
3. There is now no federal regulatory regime applying to transactions from one province across another to connect with the U.S. market. A regulatory system should be put in place to control such transactions.
4. Regional regulation does not exist, but is possible either through a uniform law approach, an interprovincial agreement or federal regulatory reform. It should be pursued without the imposition of a single, Canadian system.
5. Political control of regulatory decisions undermines confidence in the neutrality of regulation and in its consistency on which generation and transmission planning decisions depend. Decisions of utility regulatory boards and commissions should be placed under judicial review and relieved of political review. Of course, legislatures should continue to determine policy matters.
6. Canadian provinces have differing needs with respect to utility regulation. Regulatory reform should respect those differences and allow for them. Reform should allow for greater levels of regulation where appropriate and necessary and not be limited to imposing a national standard representing only the lowest common denominator.
7. The system of regulation in effect in the United States is neither necessary nor desirable in the Canadian context. However, reforms to the Canadian system of regulation can increase the compatibility of the regimes in both countries, which should enhance the opportunity for Canadian exports and greater efficiency.

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