



THE ATLANTICA POWER MARKET: A Plan for Joint Action



GORDON L. WEIL

The AIMS Atlantica Papers #1

Brian Lee Crowley

Series Editor

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The Atlantic Institute for Market Studies (AIMS) is an independent, non-partisan, social and economic policy think tank based in Halifax. The Institute was founded by a group of Atlantic Canadians to broaden the debate about the realistic options available to build our economy.

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- a) initiating and conducting research identifying current and emerging economic and public policy issues facing Atlantic Canadians and Canadians more generally, including research into the economic and social characteristics and potentials of Atlantic Canada and its four constituent provinces;
- b) investigating and analyzing the full range of options for public and private sector responses to the issues identified and acting as a catalyst for informed debate on those options, with a particular focus on strategies for overcoming Atlantic Canada's economic challenges in terms of regional disparities;
- c) communicating the conclusions of its research to a regional and national audience in a clear, non-partisan way; and
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ATLANTICA

For some time AIMS has been promoting discussion about a geographical concept dubbed “Atlantica”. The region is broadly composed of the Atlantic provinces, eastern Quebec, the northern tier of New England states and up-state New York. These territories share a number of common characteristics — similar demographics, diversity and migration; a shared history, and interrelated transport issues. Perhaps most important, the residents of Atlantica have generally suffered from relative economic underdevelopment and growth compared to their respective national economies.

Atlantica may not merely be an accidental aggregation of like economies, or even a region reflecting a confluence of similar external forces. The regional characteristics may exist precisely because the border passes through it. Conceptually, at least, it is not too hard to understand why this may be so. Geographically, the axis of Atlantic Canada trade would seem to be naturally north-south — as historically it used to be until national policies imposed an east-west bias. The huge northward bulge of Maine represents a major obstacle between Atlantic Canada and the country’s industrial heartland. Maine and the other upper New England states, on the other hand, are a peninsula encircled by the border. Whatever local opportunities for development that might exist are frequently stymied by that frontier and drawn off southward along the interstate transportation corridors — reinforcing the relative isolation and underdevelopment of the north.

The existence and placement of boundaries, whether national or international, do matter. Borders are not merely cartographic creations. They are the intersections of government policies. Where those policies are not carefully harmonized and the implications of differences clearly understood, economic consequences ensue.

AIMS is proud to present Gordon L. Weil’s plan for an Atlantica power market as the first in a series of Atlantica Papers about the meaning of the border and the creation of a heightened cross-border consciousness of what the former mayor of Bangor, Maine, Tim Woodcock, calls “Our Shared Region”.

ABOUT THE AUTHOR

Gordon L. Weil has been professionally involved with Atlantic regional energy matters since 1980. He served as Maine State Energy Director and chair of the national and New England organizations of state energy agencies. He was also Maine's first Public Advocate with the responsibility for representing consumer interests in utility regulatory matters and Commissioner of Business Regulation.

Since 1982, Mr. Weil has headed an energy consulting team known as the Weil Consulting Group, whose members have been active in serving wholesale and retail power customers, developing transmission rules to support an open market and providing strategic energy counsel. The Group has served clients across the United States and Canada.

In 1993, Mr. Weil was responsible for the first major wholesale transaction in the United States to take advantage of the newly passed federal legislation requiring open transmission access. He developed the first competitive transaction involving the Bonneville Power Administration, a U.S. federal agency. He also made the initial proposal for what was adopted as an incentive rate system applying to all major electric utilities in Maine.

During the negotiations to create a single transmission tariff for New England and what became Independent System Operator-New England (ISO-NE), he was asked by the negotiating parties to assume the chairmanship of the talks in order to bring them to a successful result. Under his leadership, the negotiations came to a positive conclusion at the end of 1996.

Mr. Weil has testified before U.S. congressional committees, the Federal Energy Regulatory Commission, and numerous state and provincial regulatory and policy bodies. He was an advisor to the U.S. Department of Energy on emergency planning. He has written articles about the New England open transmission access process and the problems of opening access for *Public Utilities Fortnightly*.

Mr. Weil formed Atlantic Transco, a transmission investment and operations group, to seek to acquire and operate major transmission systems.

He is also Chairman of Weil Publishing Company, a legal publisher.

Mr. Weil is a graduate of Bowdoin College (Maine) and the College of Europe (Belgium) and has a Ph.D. in Public Law and Government from Columbia University (New York).



EXECUTIVE SUMMARY

“Atlantica” — the northeastern corner of the North American continent straddling the international border — is a natural area for the development of a competitive regional market for electricity. Such a market would enhance development opportunities, create jobs, provide more consumer choice, and promote prosperity.

Power has flowed relatively freely among U.S. states and southward from Canada for decades. In recent years, however, power market restructuring in the United States has changed traditional patterns of power trade, including those with Canada. This trend, combined with increasing demand for power in Canada, has meant that some provinces are now experiencing a significant decline in their power exports to the United States.

Competitive power markets have, however, proven difficult to develop, as the crisis in California, the Enron scandal, confusion in Ontario, and problems in Alberta show clearly. But Atlantica could learn lessons from these mistakes; indeed, some positive experience with power industry restructuring has already occurred in New England.

An enlarged regional market should operate under rules that promote free and open exchanges. Such rules should include:

- prices that reflect actual costs;
- the establishment of a level playing field for all competitors;
- a transmission system that is a carefully regulated common carrier, with all who use it being given equal treatment;
- separate control of generation and the transmission system;
- a system of prioritization that determines the precedence of transactions over transmission lines.

Power industry restructuring in Atlantica would require new transmission links, particularly to avoid bottlenecks of the kind that contributed to the catastrophic blackout of August 14, 2003. Yet, many transmission owners would be concerned that new lines could reduce their domination of the local retail market. Moreover, investment funds for new transmission in markets that have already been restructured have been relatively scarce, resulting in increased constraints. One solution would be to create an independent transmission company, whose only business would be transmission, which could purchase the transmission facilities of existing owners and operate them.

The greatest obstacle to the creation of an Atlantica power market is the conflicting policies and regulations of the many jurisdictions that would be involved. Much would depend on the political will to promote more coordination and a degree of uniformity among regulatory authorities. One possi-

ble solution is the “uniform law” approach, developed under the U.S. Constitution, which leaves states complete discretion with respect to their own legislation. An Atlantica Uniform Power Act, following the uniform laws model, might be the most suitable approach for states and provinces interested in creating a regional power market.

The creation of an Atlantica power grid would not require a government-run exchange to conduct the market for power. Rather, participants should determine when and how power exchanges develop. Ultimately, the market should be given an untrammelled opportunity to operate for the benefit of customers. As in any market, however, extraneous forces might affect benefits — unusual weather conditions coincident with the opening of the market or a run-up in fuel prices because of political events elsewhere could cause prices to increase at just the wrong moment. Customers would need information about the new market and their right to choose, either directly or indirectly. As with almost every other item customers purchase, choice does not guarantee good results; it only makes them possible.

A work program for the creation of an open-access power market for Atlantica could involve the following steps:

- Step 1: The political heads of the governments involved should meet to launch the process, perhaps at the Conference of New England Governors and Eastern Canadian Premiers, with an invitation also extended to New York state.
- Step 2: Each jurisdiction should undertake any unilateral actions it sees fit to promote the creation of the market, provided they were consistent with the objective.
- Step 3: Regulatory consultations should take place.
- Step 4: The Atlantica Uniform Power Act and any other agreements on either side of the border or operating understandings should be drawn up through direct negotiations.
- Step 5: The negotiators should then propose a final text of the uniform law.
- Step 6: The necessary mechanisms to create and operate the market should be put in place.
- Step 7: With sufficient adoptions and operating arrangements in place, the market should be tested and then put into operation.

Political leaders in both Canada and the United States have spoken often of the benefits of stronger linkages in the northeastern part of the continent, but little progress has been made so far. An Atlantica power market could realize such ambitions without conflicting with the laws, regulations, and customs that control the actions of potential participants. The proposal for a regional power market is fraught with difficulties in light of short-term political realities, but the immediate practical challenges should not be allowed to prevent consideration of ways to draw the Atlantic Northeast together.

THE GOAL OF AN ATLANTICA POWER MARKET

The northeastern corner of the North American continent offers a natural area for increased joint economic action designed to take advantage of the inherent attributes of a more integrated, less compartmentalized market. The goals of such increased market scope would be to enhance development opportunities, create jobs, provide more consumer choice, and promote prosperity.

This area, called “Atlantica”, embraces, in this analysis, all of New England, northern New York state, Quebec, the Maritime provinces, and Newfoundland and Labrador, and consists of 12 separate jurisdictions. Across the middle of this group lies the international border between Canada and the United States, a line that creates special challenges for better integrating the region’s economies. Moreover, many of the provinces and states have a strong attachment to their own local rights and traditions. Accordingly, any market policy developed for the region as a whole must take into account the differences among these many jurisdictions. It must combine increased opportunity for integration with a respect for local traditions and values.

One sector where conditions suggest that increased integration is not only possible but also desirable is electricity. For decades, power has flowed relatively freely among U.S. states and southward from Canada into many of them. Developments in the United States have brought change to traditional power trade patterns, including those with Canada. For some Canadian provinces, at least, the sale of power once was a major export business; instead of continuing to expand, however, it is now contracting (Thurston 2003).



WHY HERE? WHY NOW?

The development of competitive power markets has proven to be more difficult than had been imagined. Many people are well aware of the California crisis, the Enron scandal, confusion in Ontario, and problems in Alberta. Retail markets have not functioned nearly as well as regulators and advocates had predicted, and some players have manipulated power exchanges.

Because of this history, why should we consider the development of a power market for Atlantica? The first and most obvious reason is that the region could profit from others' mistakes. Moreover, some positive experience with power industry restructuring has already occurred in New England, a key element of Atlantica. Finally, some areas in the region could be major supply resources for Atlantica.

The goal of an Atlantica market would be to enhance customers' choice and promote competitive pricing. Inefficient producers might be displaced by newer generators, which ultimately could benefit industries that rely on electric power in their processes. Where available, natural resources, such as natural gas, could be exploited by providing greater market access for generation based on them. Natural resource developers, generators, industry, and customers in general would benefit. Indeed, the entire community would benefit from the more efficient allocation of resources and possible environmental improvements.

While an enlarged regional market offers the prospect of such benefits, they are not guaranteed. The market must operate under rules that promote free and open exchanges rather than limiting participation or providing the opportunity for manipulation.

Critics of enlarged power markets worry that prices would be homogenized and that customers who pay low prices would actually suffer from being placed in a larger market. To deal realistically with such concerns, prices would have to be set to reflect actual costs, not artificially high simply to stimulate more new generation. NB Power, for example, has said openly that it is selling power below its cost of generating and distributing it, presumably forced to do so by political considerations. Such prices cannot be used as the basis for comparison with the market. To be sure, regulation would have to be in place to control anticompetitive tendencies or else the market would not produce cost-based pricing either. And the rules should not constrain the number of participants; otherwise, oligopoly pricing would replace regulation without much, if any, improvement for the consumer.

Experience with electric industry restructuring has shown the opportunities for increased benefits to consumers, but such benefits are not guaranteed unless the new market contains several essential elements, discussed later in the paper.

During the initial wave of restructuring in New England, developers launched a spate of new generation. In theory, more efficient new generators can handle increased customer demand and, through the operation of the market, displace less efficient generators. To a considerable extent the theory worked, and much new generation, mostly relying on Canadian natural gas as its fuel, came on line.¹ These new generators stimulated the development of two new gas pipelines from Canada into New England — Maritimes and Northeast (M&NE) and Portland Natural Gas Transmission System (PNGTS).

The new generators, encouraged by the relative ease of transmission access, have somewhat reduced U.S. requirements for Canadian power imports. This effect, coupled with increasing demand in Canada for electric power, has meant that Canada's market for exported power in the United States has begun to shrink - it is now forecast to fall by 50 percent. In response, however, Canadian suppliers have not moved rapidly to offer the wider variety of power products now sought in the United States. Moreover, because Canadian suppliers are able to export increased volumes of natural gas to the United States, few incentives exist for the development of large new Canadian power projects, using natural gas or other fuels, to serve the U.S. market. And hydroelectricity, perhaps the most popular Canadian electric export resource, requires considerable lead time to develop.

Because generators are increasingly sited closer to their fuel source than to their markets — metropolitan areas where environmental constraints limit new generation — Canada has an opportunity to recapture a share of the northeastern market. At the same time, excess generation in New England could compete in Canada.

¹ In Maine, for example, five new generators have come on line with a combined output of 1714 MW, roughly equal to the state's total load before restructuring.



HOW DID WE GET HERE?

The electric industry was conceived to be a natural monopoly. Forms of ownership — Crown corporations, investor-owned utilities, municipals, cooperatives — might vary but the economic form was always the same.

Then, in the 1970s, after the oil embargo and the development in the United States of a political impetus to reduce reliance on imported oil, interest grew in providing incentives for generation based on renewable resources. In 1979, the US Congress passed the *Public Utilities Regulatory Policy Act* (PURPA). Utilities were required to purchase power from generating companies using renewable resources at prices equal to the cost they otherwise would have paid for non-renewable-based power. Such PURPA generators, called qualifying facilities (QFs) could not be owned by the utilities and would not be subject to regulation. No parallel development took place in Canada. The development of PURPA generators had a far greater impact on the attempt to reduce reliance on imported oil than did such other measures as demand-side management or integrated resource planning.

However one might evaluate the success of PURPA power, it undeniably showed that the generation portion of the electricity business was not a natural monopoly. Both the generation business and the wires business could be separated without harm to reliability or to customers. Utilities then began to ask for the same access to transmission systems as Congress had given the QFs and won, subject to the condition that those owning transmission systems would have to allow any generator, whether a QF or an independent, to use their wires to reach wholesale customers. Congress adopted this arrangement in 1992 as part of the *Energy Policy Act* (EPAct).

EPAct was carefully limited to wholesale transactions — power sales to utilities, which would resell the power to end users. The U.S. Federal Energy Regulatory Commission (FERC) has jurisdiction over such transactions, while state regulators have jurisdiction over retail transactions. EPAct allowed, but did not require, the states to authorize access to the transmission system to serve retail customers. In response, between 1993 and 2001 about half the states, notably those with the highest-cost power, authorized retail access.

In Canada, there was once again no parallel action. The Canadian federal government exercises almost no legislative or regulatory control over the electric industry, confining its jurisdiction to approval of energy exports and some overview of associated transmission matters, largely environmental. This model offers much less centralized policy and legislative oversight than in the United States. Moreover, in contrast to the United States, where investor-owned utilities predominate, provincial Crown corporations supply much of the electricity. These provincial utilities are subject to political influence that can cause them to follow the requirements of local public policy.

Still, forces began to be felt in Canada that pushed at least some provinces toward the path laid out by EPAct. The economic possibilities of a more entrepreneurial business were attractive, as was a more open U.S. market for Canadian sales. The United States had begun to demand that, if Canadian generators were to have access to U.S. customers, provinces must give U.S. generators reciprocal treatment. This emerging policy also pushed some Canadian utilities in the direction the United States was taking.

FERC reasoned that, if a utility's transmission system was to be open to third parties seeking to serve that utility's wholesale customers, equal treatment of all generators required that management of the wires be separated from control of the generation. Although it did not require divestiture of assets, FERC decreed strict rules to maintain a wall of separation between generation and transmission. Accordingly, many states, notably those requiring transmission and distribution access for retail customers, either imposed even stricter rules or required divestiture of generation.

Although the process was sometimes called “deregulation” of the electric industry, it was not. The prices charged for power supply would be set by the market, not by regulators, But regulators took on new responsibilities for controlling the operation of the market and continuing to regulate the monopoly wires business. It soon became evident that what was happening was more properly called industry “restructuring”.

As a result, differing regimes developed in the states and provinces in the Atlantica region. In New England, FERC required the creation of a centrally managed high-voltage transmission system. While the New England Power Pool (NEPOOL) had overseen the development of generation and some transmission in the region since 1972, individual owners kept control of transmission. That meant that a transaction between Maine and Connecticut could encounter four separate and cumulative transmission rates through a process known as “pancaking”. By 1987, the region had moved to a simplified rate system, with no pancaking, administered by an independent agency, hired by NEPOOL and known as Independent System Operator-New England (ISO-NE). New York followed suit and created a similar system.

Six of the seven states in the region — Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, and New York — took the next step and required that transmission and distribution utilities divest themselves of their generation assets. Only Vermont, with more than a score of utilities for a relatively small population, refrained from requiring divestiture or mandating retail access.

In the five Canadian provinces in the region, restructuring has been less rapid and less extensive. Wholesale access gradually became a theoretical possibility, but only in 2002 did the first significant transaction take place, involving the Summerside, Prince Edward Island, municipal utility.² Also,

2 A long-standing customer of Maritime Electric, Summerside entered into a power supply arrangement with Emera, headquartered in Halifax, Nova Scotia.



Hydro-Québec created a separate energy marketing company for purposes of dealing with the U.S. market, but little else changed in the region.

The relative lack of movement toward restructuring in eastern Canada had several causes. First, the absence of any federal policy meant that no action was required. Second, since each province has one dominant utility, either a Crown corporation or one having a close relationship with the provincial government, the status quo of a vertically integrated utility with traditionally light-handed regulation was not one to be abandoned lightly. Third, the experience with retail access in the United States (and further west in Canada) did not appear to be working well, so it seemed wise not to rush into the same error.

Geography also played a role. While a North American electricity market continued to develop, however slowly, Newfoundland and Labrador, PEI, and Nova Scotia, three of the five provinces in Atlantica, were effectively denied access to that market because they were bottled up behind two provinces, Quebec and New Brunswick, that were under no legal obligation to let power flow in or out of these captive markets.

In the United States, utilities struggled to come to terms with the mandates of EPAct and its implementing regulations (FERC Orders 888 and 2000) and new players, both generators and marketers, began to play influential roles. One positive result was clear: customers were no longer put at risk for generation decisions made by their utilities. Generation investment was now to be made by investors, not by ratepayers, and if generators failed or operated at too high a cost to enter the market, only the investors would suffer. Because of the need to continue to recover from ratepayers the stranded costs of earlier generation mistakes, prices remained about the same but offered the prospect of gradual reduction.

One other result was also clear, at least to some. FERC and state regulators believed that a sophisticated commodity market should be established from the outset. An hourly, day-ahead market, subject to elaborate rules, could ensure not only that customers got the best deal, but also that only the most sophisticated players could be involved in the market, thus limiting choice. Canadian utilities understandably were reluctant to adopt untried rules to create such markets, which they thought were neither necessary nor desirable.

THE RULES OF THE ROAD

As the new electricity market has evolved since 1993, participants have learned the new rules that must apply for energy exchanges to occur on a fair and open basis.³

The purpose of the new market is to provide consumers choice, which can occur only when true competition exists among players, which are independent of one another. Choice is not, however, an end in itself, although some regulators and generators seem to think it is. They suggest that regulators should increase market-clearing prices, even artificially, to allow higher-cost generators to participate in the market. But if choice does not produce better results for customers than a regulated monopoly, the experiment fails.

Competition must take place on a level playing field. If a generation owner also owns a transmission system that others must use, the rules should prevent the owner from using its own wires to give itself a favoured position over its competitors.

For a market to develop, the transmission system must be a common carrier, with all who use it being given equal treatment. The system would remain a monopoly, however, and would have to continue to be carefully regulated. When the system is inadequate to meet demand, mechanisms must be established to set priority use fairly and to add new facilities. Such mechanisms must be based primarily on the use of differential pricing by location, applied to all users, so that limited space is made available to those who are willing to pay a premium, generally those with lower-cost power supply.

Obviously, operational control of the transmission system must be separated from control of generation, through explicit measures. At one end of the spectrum are codes of conduct under which employees of one entity are expressly banned from contact with employees of the other.

At the other end is outright separate ownership, which imposes on the vertically integrated utility the responsibility of disposing of the ownership of either generation or wires; usually generation is sold. In Canada, where the seller may be a Crown corporation, the process might be called “privatization”, because the new generation owner is likely to be an investor-owned company. However, the purchaser could also be a nonprofit entity so long as ownership is clearly separated. In the United States, both sellers and purchasers have usually been investor owned.⁴

3 For a comprehensive statement of FERC’s view on market organization, see FERC, *Notice of Proposed Rulemaking, Standard Market Design*, Docket No. RM 01-12-000.

4 FERC has encountered strong opposition in some states to its requirements that control, if not ownership, of transmission must be turned over to independent operators, which may be compensated on a fee-for-service basis by transmission owners and may operate as not-for-profits. In states where there is no retail access and most of the load is thus outside FERC jurisdiction, the utilities have argued that they must control transmission. This may be one of the crucial battles of restructuring, because independent operation of transmission is essential to competition among generators.



A system of prioritization is also required to determine the precedence of transactions over transmission lines since, with open access, transmission owners are less able to control transmission schedules. Longer-term transactions could displace short-term ones, and those meeting firm requirements would have priority over those that could be interrupted. Of course, the transmission operator would need to make available information on reservations to use the lines to enable a potential user to know when access is available. In the United States, such an information mechanism is known as the Open Access Same-time Information System (OASIS).

This information transfer would not solve the problem of bottlenecks, known technically as “congested interfaces”. A congestion management system should also be put in place to ensure that a supplier on one side of a bottleneck can serve a customer on the other side, even if that means purchasing replacement power on the customer’s side of the interface. Another essential element of restructuring is a method of determining the charges and payment responsibility for relieving congestion by adding new transmission lines: Should these new lines be the responsibility of the new generators, or all customers who would benefit from greater system reliability, or a combination?

Until restructuring began in New England, bulk power sales were bilateral arrangements between a willing buyer and a willing seller, with the transaction involving a fully bundled product in which electricity was sold that continuously met all the customer’s ever-changing purchase requirements. No other party had any interest in the market conditions of such a bilateral exchange other than to provide transmission passage for the power supply. Competition existed only to the degree that the purchaser sought multiple offers.

With restructuring, it soon became clear that a two-part power supply market would develop. Bilateral transactions continued, but power exchanges allowed for an open market for shorter-term power trades. FERC said that the most appropriate market required a new price set each hour, with generators able to offer their resources up to 24 hours before the following day’s market price was set. Prices were set not only for the basic power supply, but also for many ancillary services,⁵ meaning that a purchaser might actually be participating in several markets simultaneously. In other words, FERC virtually mandated that a relatively mature commodities market mechanism be launched from the outset.

Although a restructured power industry in Atlantica would require some market mechanism, it is probably far more modest than the one FERC imposed. Normally, most transactions would remain bilateral and take place in a more informal and customer-driven market setting — an approach that seems to represent the prevailing view in Canada. A residual power exchange market could emerge gradually as needed, operated by an entity created by buyers and sellers, a process similar to the evolution of most stock and commodity exchanges. No intrinsic reason exists for the market to be hourly or for bids to be received only 24 hours in advance.

5 FERC requires ancillary services to include “load following” (generation that changes output as demand changes) and reserves of varying degrees of availability; they may also include a number of other generation-related services.

Although FERC's requirements went beyond what a newly emergent market would require, some states have gone even further in their restructuring efforts. California, for example, eliminated almost all bilateral transactions, forcing customers to use a power exchange handling short-term transactions. The state was so confident that the system would work that it failed to provide adequate safeguards to prevent the market manipulation designed to produce artificial profits. A combination of rules that actually limited customer choice and a lack of adequate protection led to the meltdown of the California system.

The complexity of the FERC-mandated system and the collapse of energy market restructuring in California has provided a justification for jurisdictions in both Canada and the United States to seek to avoid restructuring. Where end-use customers enjoy reasonable rates, utilities have held that a new regime would only cost them more or expose them to greater risk. But the discouraging aspects of restructuring are the result of the nonessential requirements imposed by regulators, not intrinsic to a new regime in itself.

Experience with restructuring has, however, made clear the continuing need for regulation. But regulation, too, must be restructured. Historically, the central element of utility regulation has been to set rates, based on a utility's proving its costs and being allowed an authorized return on investment. Under a restructured regulatory system, generation rates would be set by the market. The monopoly aspect of the business — wires — would continue to be regulated as in the past.

Regulators, whether utilities boards and commissions or others, would also have to play the role of securities and competition regulators and independent auditors, because the financial viability of market participants has become increasingly influential in decisions to purchase and sell power. The Enron collapse shows that the behaviour of market participants needs to be monitored far more closely and continuously than it has. Not only should transactions be under surveillance to ensure that they are not being "laundered", but far more accurate and timely information about them is required.

In some jurisdictions, such as New Brunswick, where utility regulation historically has been relatively weak, the regulator must be given the tools and authority to deal with a broad range of matters affecting service, reliability, and cost. In nearly all jurisdictions, greater attention to creating competitive conditions and then watching carefully how the competitive market operates is needed to apply the necessary new rules of the road.

THE NEED FOR NEW INFRASTRUCTURE

Power industry restructuring in Atlantica would create the need for new transmission links. Historically, vertically integrated utilities could site their own generators relatively close to their customers, and would not acquire resources from outside their systems unless adequate transmission facilities were in place. But an open, competitive market would change such a highly centralized process.

Generators are likely to be sited where the environmental impact is the most manageable, often far from the built-up areas of highest load concentration. Because decisions about where to site generation and how large the facility should be are separate from decisions about building new transmission, the need for new transmission can be driven by forces other than the economic criteria used by the previously integrated utilities. Although the result might seem more inefficient, the tradeoffs are that customers would no longer assume generation risk and that lower-cost generation might be developed. Because the cost of generation, including payments for planning errors, is far greater than the cost of transmission, which also has a smaller environmental impact, the benefits of the open market outweigh its potential inefficiency.

Because restructuring would increase the possibility of enhanced sales from one utility's service territory to another, transmission line owners would also have to address the problem of constraints, or bottlenecks, between territories. Indeed, such bottlenecks could impede the growth of a competitive market.

In Atlantica, transmission bottlenecks would be a significant barrier to the creation of a regional power market. The catastrophic blackout of August 14, 2003, illustrates both the problems and, curiously, the advantages of transmission limitations.

Where few transmission ties exist, as between New York and New England, or where they are limited by the nature of the interface, as between Quebec and New England, cascading problems can be limited. The development of an Atlantica power market would, however, almost certainly require the addition of new transmission links, which could either enhance the chances of cascading blackouts or help avoid them. Underlying the 2003 blackout was the failure both of the voluntary system promoted by the North American Electric Reliability Council and of utility regulators to insist on enforceable reliability standards. In developing a regional power market for Atlantica, regulators would also need to provide financial incentives, discussed later in this paper, to ensure that adequate transmission is built.⁶ A regional power grid can contribute to increased reliability, but the problem encompasses a much wider area.

⁶ For additional comment on this matter, see Weil (2003).

DEVELOPING AN ATLANTICA GRID

Since the restructuring of power markets began to develop, many transmission owners have been reluctant to see new facilities built because of concerns that new lines could reduce their domination of the local retail market. In addition, investment funds for transmission have been relatively scarce, resulting in increased constraints.

A vertically integrated utility includes the cost of transmission as part of its overall cost of service and in the rate base used to calculate the utility's cost of capital. Yet regulators offer few incentives for an integrated utility to invest in transmission. One solution to this problem would be the creation of an independent transmission company (ITC), whose only business would be transmission, which could purchase the transmission facilities of existing owners and operate them. As a regulated utility, the ITC could serve existing load and also act as a merchant operator, investing to serve incremental load at its own risk, but with an authorized return. Because of its freestanding status, the ITC could have a capital structure designed to increase its profitability and provide incentives for new transmission without increasing rates. Moreover, an ITC could be created with little or no cost to consumers. Existing transmission owners could maintain a stake in the new company, although they would have to be passive owners with only a limited vote.

Although FERC has encouraged the idea of ITCs because of their ability to invest in new facilities, existing transmission owners have been reluctant to part with the right to serve their own loads. Where generation has been divested, the owners may now be purely wires companies, which are hardly likely to want to sell off their major assets. In such cases, FERC requires that power pools, such as exist in New England and New York, adopt and administer single transmission systems, no matter who owns the constituent parts. In both areas and in northern Maine, which is connected with New Brunswick rather than with the rest of New England, independent operating or administrative entities exist. These structures ensure that the systems will be operated independently of generators and even of distribution system owners. FERC has not, however, provided investment incentives. A more centralized planning process has been put in place, but the mechanism for causing new facilities to be built over the objections of existing transmission owners has not yet produced satisfactory results.

In eastern Canada, no transmission assets have yet been transferred to new entities, and transmission continues to be operated by vertically integrated utilities. Although transmission access has increased because of the individual actions of provinces such as New Brunswick and Quebec, independent



management of transmission has yet to take place, so control remains with the utility. No financial incentives exist for building new transmission.

The fundamental first step toward the creation of a regional power grid is the recognition that the control of transmission must be separated from the control of generation. U.S. regulators have recognized this necessity, but it has not yet been fully adopted in eastern Canada. New Brunswick, perhaps the keystone to restructuring north of the border, has made it part of government policy, but has not yet implemented it.

In eastern Canada, provincial utilities could consider the sale of transmission assets to an ITC. Although ownership of these assets would be a highly sensitive political issue, the provincial utilities could retain substantial passive ownership while realizing significant revenues to offset stranded debt burdens. Transmission could be expanded without additional cost, increasing the markets for generation based in these provinces. Separating the ownership of generation and transmission would help develop a more active market and one that was open to the region.

Independent operation of transmission could pave the way for the introduction of an integrated transmission tariff. The elimination of transmission-rate pancaking would not mean lost revenues for any utility, although costs would be recovered differently. By having harmonized, if not identical, rates across the region, power trade would likely increase.

TOWARD A REGIONAL REGIME

The greatest obstacle to the creation of an Atlantica power market is the conflicting policies and regulations of the many jurisdictions that would be involved. In the United States, ultimate regulatory authority over transmission and wholesale transactions is assigned to FERC, while states control retail services and siting within their borders. National policy on transmission and markets predominates over state authority. In Canada, however, the jurisdiction of the federal National Energy Board is limited to authorizing international transmission lines. In all other matters, the provinces exercise complete control; moreover, they have given considerable autonomy to the utilities themselves. Each province may have its own policy, including opposing the creation of markets with links outside the province. Any evolution in this situation would depend on the political will in all jurisdictions to promote more coordination and a degree of uniformity among regulatory authorities.

Canada is not likely, however, to adopt the kind of national regulatory system as exists in the United States, nor is FERC likely to allow utilities under its jurisdiction to be released from at the least the broadest U.S. mandates simply to forge new relationships with Canadian utilities. If the ideal were a single regulatory body for the Atlantica region, it would have to be on the U.S. model. But that model has not yet proven itself in its home country and is so inconsistent with Canadian provincial policies that this proposition is surely excluded.

In addition to political barriers, legal difficulties preclude the creation of a truly regional regulatory system. In Canada, the federal government cannot force any province into a regional arrangement, and the provinces themselves must reach agreements, much as if they were treaties among nations. In the United States, the individual states cannot enter into formal agreements with one another — known as *interstate compacts* — without the approval of Congress, and no state may conclude an international agreement with a foreign government, since doing so would infringe on the federal government's exclusive constitutional right to conduct foreign relations. As a result, an interjurisdictional agreement to create a cross-border regulatory system is virtually impossible.

The Uniform Law Approach

One possible solution might be to create a system similar to that under the 112-year-old U.S. National Conference of Commissioners on Uniform State Laws. Just as the provinces have extensive jurisdiction apart from the federal government, the states have exclusive control over many areas. Yet, under the U.S. Constitution, each state is required to give “full faith and credit” to the actions under state law of every other state. As a result, a single state might find itself having to rec-



ognize an action approved elsewhere that would not be lawful in its jurisdiction. To minimize that problem, the states created the Uniform Law Commissioners “to draft proposals for uniform and model laws on subjects where uniformity is desirable and practicable and work toward their enactment in legislation”.⁷ The Commissioners develop uniform laws, which the legislatures of all 50 states may then adopt. There are now about 200 such laws, the best known of which is the Uniform Commercial Code.

Uniform laws leave states complete discretion with respect to their own legislation. No state is compelled to adopt a uniform law, and no state is banned from adopting additional, noncontradictory laws. In other words, uniform laws may seem to be the lowest common denominator in the areas addressed, but most of the time the result is well above the bare minimum.

An Atlantica Uniform Power Act, following the uniform laws model, might be the most suitable approach for states and provinces interested in creating a regional power market. For example, the participants might choose to cover only wholesale transactions without preventing some jurisdictions from adopting laws requiring retail access as well. Premiers and governors could name representatives to participate in negotiations to develop basic uniform policies. Once a single proposal had been developed, it could then be placed before the legislative bodies of each jurisdiction.

Under such a uniform law, each participant would allow wholesale customers access to power suppliers from anywhere within Atlantica (U.S. customers, in fact, already have such access from within the United States). In those jurisdictions that chose to allow retail customers to have market access, suppliers could use the same uniform law provisions to serve them.

The uniform law would have to include provisions to prevent suppliers from exercising control over transmission facilities, in order to protect against anticompetitive management of those facilities to benefit their own generators. Similarly, each jurisdiction would have to adopt essentially the same method for determining the priority of transactions on transmission lines. Obviously, before a transaction could cross a border, it would need to be subject to the same priority to ensure effective open access. On the U.S. side, FERC has determined most of these priorities, but they are logical extensions of traditional utility practice, so the adoption of compatible rules in Canadian provinces would probably mean little change.

As transactions were scheduled to use transmission lines in the region, information would have to be made available to owners and potential users of the system. Canadian utilities have already adopted OASIS-type systems, so it should not be difficult to agree on a centralized version. Possibly, a single regional office could be charged with the maintenance of the information system, providing a basis for more centralized management of transmission when that became desirable.

⁷ For more information on the Uniform Law Commissioners, see their website <www.nccusl.org>.

Another area that the uniform law should cover is transmission planning. Although the early stages of the creation of a regional power grid might not need a single planning agency, each jurisdiction should be required to adopt the same standards for determining when new transmission was required to support existing or planned transactions. Without such coordination, the regional system could be undercut by the failure of a jurisdiction to allow necessary transmission additions.

Under the uniform law, there would be no single regional regulator. Instead, the law would provide for reciprocal treatment: its benefits would be available only to states or provinces that had adopted it and faithfully applied its provisions. The result inevitably would be a more uniform approach to regulation and the strengthening of regulatory authority in some provinces.

Going beyond these provisions to a more advanced status would require an additional commitment by the jurisdictions involved. The most important step would be the adoption of a method of avoiding transmission-rate pancaking. The New England states and New York have already moved toward a harmonized regional rate, but the Canadian provinces have not. This means that, for example, a transaction flowing from Nova Scotia to Boston could incur four transmission charges imposed by Nova Scotia, New Brunswick, the MEPCO line connected New Brunswick and Maine, and New England.

The most extreme form of rate harmonization is the “postage stamp” rate, based on the notion that the cost of a postage stamp is the same to send a letter around the corner or across the country. Under such a scheme, all transmission owners would submit charges for the use of their lines by covered transactions, and the charges would then be divided by the quantity of transaction to derive a single regional rate for all eligible transmission. The advantage of a postage stamp rate is that it would promote the most open market. Inevitably, however, such a rate would increase transmission costs for some participants and lower them for others, creating what some customers might see as subsidization of others in order to bring them into the system. Such cross subsidization is characteristic of all utility operations, because the cost of serving each customer differs from the cost of serving any other customer, but it might not be readily acceptable politically for entire transmission systems.

A more acceptable alternative is the “licence plate” rate, which is based on the notion that each driver pays an auto licence fee in his or her own province or state but may drive anywhere else without paying again. In a power grid using such a system, each transmission customer would pay the transmission charge of the utility on which it is located and gain access to the entire market. This system might require a settlement among transmission owners to ensure that each recovered its costs, so that those companies making payments to others would have to raise their transmission rates slightly. In this case, the subsidy would be hidden from the customer. Alternatively, the system could operate with no settlement, especially if this approach would promote beneficial transactions for areas that lost some transmission revenues in the process.

Whatever the solution, a market designed for growth must have a harmonized rate system. By its very nature, the replacement of transmission-rate pancaking by a single rate would serve to promote trade.

Is a Formal Market Operation Needed?

Would the creation of a regional power grid for Atlantica require the setting up of an official regional entity — a government-run exchange — to conduct the market for power? If so, would it need to be accommodated in the uniform law? In my view, such an officially mandated market operation is not essential and might not be feasible across a number of independent jurisdictions.

The proposed arrangement could succeed without the provinces and states entering this area. The uniform law could deal with bilateral transactions — that is, those reached through a direct agreement between the buyer and the seller — an approach that would cover the overwhelming majority of power supply arrangements. Transmission would be the common carrier of such transactions.

Bilateral transactions would not, however, account for all power transactions, because participants might want to purchase generation output for resale, ancillary services, or temporary supplies. Thus, rather than set up an official regional entity to conduct this market, the uniform law could simply allow market participants to establish their own “unofficial”, but regulated, power exchanges and schedule the use of transmission to accommodate transactions in those exchanges.

Allowing participants to determine when and how power markets develop would be consistent with the historical growth of exchanges in both the United States and Canada, where all major exchanges are private but subject to regulation. Governments did not establish the New York or Toronto Stock exchanges, and there is no need for them to set up power exchanges. They will come into being if participants need them.

Regulatory Concerns

A regional transmission system and power market inevitably would require new forms of utility regulation. Although less attention might be paid to rates than in the past, they should continue to be regulated. The emphasis, however, should be on consumer protection. Transmission should be operated independently of generation interests and fairly to all comers. Participants should be prevented from manipulating the system, including by hoarding and providing false information. When power exchanges develop, they should be subject to strict regulation to ensure their impartial operation and their ability to detect and resist manipulation.

Atlantica already contains a mechanism that could serve as the kernel of much of what must be done. FERC has allowed Northern Maine, a small and isolated region, to create its own quasi-centralized system for the operation of transmission for the benefit of both wholesale and retail customers. That system, the Northern Maine Independent System Administrator (NMISA), is a much-simplified version of the complex FERC requirements for markets and ISOs.⁸ The system allows for open access,

⁸ For more information, see website <www.nmisa.com>.

although the number of suppliers is small. Its simplicity shows that progress toward a more open system is possible without excessive complexity, and that FERC is willing to apply its national standards broadly to promote market development in special situations such as the Atlantica market would be. The NMISA involves not only U.S. utilities but also NB Power, thus providing the notion of a cross-border institutional arrangement.

THE SCOPE OF THE ATLANTICA MARKET

In Canada, five provinces are either entirely or partially within the Atlantica market. In power terms, the three Maritime provinces of New Brunswick, Nova Scotia, and Prince Edward Island are bound to one another and to the other two provinces (Quebec and Newfoundland and Labrador) in such a manner that they are integral to the Canadian segment and, in fact, are the core of the Atlantica market. New Brunswick is the keystone to the structure that would link the provinces and states and has experience with transactions with New England.

Quebec and Newfoundland and Labrador are the outer tier of the Canadian segment. Although Quebec has links to New Brunswick, New England, and New York, making it a part of the natural bridge between the two segments, two factors set it apart. First, Hydro-Québec's use of direct current interconnections with New Brunswick and New England can limit the types of transactions that can flow between its system and those of its neighbours. The use of different transmission power does not create an insurmountable barrier, however, since technical solutions are possible.

Second, given its large size and its interconnections with Ontario, New York, and other systems, Hydro-Québec inevitably would view the Atlantica market as only a part of its commercial interest. Although improved transmission access to New England using a harmonized rate and new facilities undoubtedly would be attractive to the utility, given its interest in increased market opportunities in the U.S. northeast, Hydro-Québec might be only a limited participant in the proposed Atlantica market.

For its part, Newfoundland and Labrador faces a geographic reality that could limit its direct involvement. The province's power grid is not well connected with the region but appears to function regionally as part of the Hydro-Québec system. Its load is not large enough to attract distant suppliers and only its largest hydro resources are interesting to outside markets. Historically, the province has not been able to sell power directly to systems beyond Quebec. For it to move into a larger role in the Atlantica market would depend on its obtaining its own access across the Hydro-Québec system, which a uniform law could facilitate.

In the United States, similar inner and outer layers exist. The inner group consists of the New England systems that are members of NEPOOL, a tightly integrated generation and marketing system. The outlying northern Maine system, however, is essentially a part of the eastern Canadian grid through its interconnections with New Brunswick. NEPOOL transmission owners are subject to the centralized management of ISO-NE and FERC integration requirements. Although only one major

line exists between New Brunswick and Maine, NEPOOL and New Brunswick have a history of cooperative operation.

New York is even less involved in the potential Atlantica market than is Quebec. The state has limited transmission ties with New England and Quebec but instead looks west to neighbouring regions in the United States and north to Ontario. In addition, New York's market is larger than that of all the inner-tier jurisdictions on both sides of the border combined. In short, New York is the jurisdiction least likely to perceive significant economic benefit from the Atlantica market and so may be reluctant to make concessions to encourage its development.

Smoothing the Way

One important step toward the creation of a regional power market would be for all the provinces to agree to give outside suppliers the opportunity of serving wholesale loads in their jurisdictions. Quebec and New Brunswick have already made progress toward this basic relationship; the others need to be encouraged to do so.

A second important step would be to separate the control of transmission from the control of generation. The U.S. entities and Quebec have already accepted this separation, and New Brunswick has adopted policies to proceed in the same way. Action would remain to be taken elsewhere in Atlantic Canada, where the benefits of such an action would outweigh the disadvantage of moving away from the vertical integration model.

Some participants would not proceed beyond these first two steps, and the relationship between outer- and inner-tier participants would remain similar to current relationships between adjoining open-access systems. Meanwhile, the inner tier — the Maritime provinces and New England — could adopt a more completely integrated market than the region as a whole. (See Table 1 for a summary of the relative positions of potential participants in an Atlantica power system.)

The scheduling of transmission transactions between New Brunswick and New England is already carried out cooperatively, so it would certainly be possible to adjust the Maritimes system to accommodate scheduling responsibilities on a centralized basis. The current New Brunswick mechanism could easily be developed further within the long-established Maritime Power Pool, at which point the Maritime and New England systems could coordinate their power transactions even more easily, although a technical upgrade would be needed to make virtually instantaneous scheduling changes possible.

A Maritime group could also deal with regional transmission planning and coordinate with ISO-NE. Perhaps the most important reason for such a coordination mechanism would be the need to ensure that new generation in the Maritimes would have efficient market access to the rest of the Atlantica region. This group could also coordinate transmission development with Hydro-Québec.

**Table 1: *The Atlantica Power Market***

Core	Inner Tier	All Participants
New Brunswick	New Brunswick	New Brunswick
Northern Maine	Northern Maine	Northern Maine
Nova Scotia	Nova Scotia	Nova Scotia
Prince Edward Island	Prince Edward Island	Prince Edward Island
	Maine	Maine
	New Hampshire	New Hampshire
	Massachusetts	Massachusetts
	Connecticut	Connecticut
	Rhode Island	Rhode Island
	Vermont	Vermont
		Quebec
		Newfoundland and Labrador
		New York

Rate harmonization on the U.S. side would necessarily be based on the New England tariff; on the Canadian side, there should be, if possible, a single rate regime in the Maritimes. In effect, then, the Maritime provinces would first harmonize their rates and then the New England and Maritime rates would be blended.

In short, a gradual and tiered approach would permit the various jurisdictions to move cautiously toward the development of an Atlantica market in accordance with their own market policies. Initially, a new Maritime–northern Maine transmission group could be formed that would be linked with ISO-NE. Then, both the geographic and operational scope of the market could be increased.

PRICE AND COMPETITION

The purpose of the creation of an Atlantica market must be to bring economic benefit to customers, offering a real prospect of lower costs through competition. If this goal can be accomplished, economic development may be encouraged and prosperity increased.

Although it might be desirable to offer customers *retail access* to an enlarged power market, experience suggests that most of the benefits could be achieved through *wholesale access* at much lower risk to individual customers and with increased chances of the success of the undertaking. Retail access requires, for example, far more complex rules, which either serve to discourage suppliers from entering the market or offer a greater chance for manipulation.

A hybrid system, similar that used in Pennsylvania, might work. Under such a system, utilities could continue to own and operate generation, while transferring to others the management of transmission. Customers would have the option of buying power from the traditional utility supplier or having that entity transmit power to them from third parties. The principles of this approach are, in fact, consistent with New Brunswick's proposed market rules. The primary challenge of such a system, however, is how to ensure that a level playing field exists for all generators.

Experience shows that, contrary to expectations, small residential and commercial customers prefer to purchase power as part of large groups, rather than individually. Suppliers can offer better prices to large groups than they can to a relatively smaller number of small customers dispersed over the service territory of the wires companies. Electric service, which is dependent on generating stations, is not like telephone service, which is purely a wires operation. The largest customer group is, in any case, likely to be the default class — customers who do not make any choice besides the traditional provider (or, in Maine, the supplier selected by competitive bidding to serve their load). Suppliers like such customers because their sheer number minimizes the effect of customers entering and leaving the system and keeps the load stable. By contrast, large industrial customers may seem attractive, but if a factory closes, it can have a significant negative impact on the supplier.

Wholesale customers exist all across the Atlantica market — every jurisdiction has at least one consumer-owned utility, municipal or cooperative. Although, historically, many of them may have purchased power supply from the surrounding utility, most already have the option of purchasing from others. The creation of an open-access market would serve to increase their choice. Some jurisdictions, like New Brunswick, have already moved toward treating large industrial customers, which are presumed to be capable of deciding how much risk they will accept in their power supply, as if they were wholesale customers (see New Brunswick 2000).

Another way to use the wholesale approach to provide market access would be to allow part of the residential and commercial load of the vertically integrated utility to be open to competition. This might be done from the top down, by size of customer, as New Brunswick's policy suggests. Alternatively, a utility could create geographically cohesive administrative units within its utility service territory and open one or more of them to competition. This process might be accomplished gradually as the utility's generation reached a time when it could be economically replaced; instead of the utility building a new unit, the market could be opened.

The essential element in opening the market directly to an increased number of customers is a gradual approach, rather than trying to start full-fledged market access under sophisticated market rules. Canadian experience in Alberta and Ontario and U.S. experience in California shows that many pre-conceptions about how that market will operate may not be correct and that the process is difficult, requiring the accretion of experience. In the wake of California's calamity, a gradual approach is also advisable to restore customer confidence in the market system as opposed to the regulated monopoly.

If the market is to work at any stage of development, customers must receive price signals that are as nearly accurate as possible. Traditionally, the costs of operating a vertically integrated utility have been allocated to customers under "rate design" that did not necessarily reflect the actual cost of serving the customer — for example, rates for industrial customers might be higher than service to them justifies, with the effective subsidy flowing to residential customers who dispose of the mass of votes at election time. But there is not much point in restructuring to allow price competition if the political-regulatory system continues to obscure price signals. Without a new rate design, customers may well notice no difference between the costs before and after restructuring. The development of more accurate price signals should be accomplished by rate class (that is, residential, commercial, industrial), not by individual customer, so that postage stamp rates within classes would remain, as is now the case.

In unbundled markets, such as exist in most of New England, the supplier sets the price for power supply according to market conditions and its own costs. Large customers may receive different rates than the bulk of customers, reflecting higher hourly use of generation and the cost of protecting against their leaving the market, but there is less price differentiation than had existed previously. As smaller customers move into the market in smaller groups, more price differentiation may occur.

Where retail customers remain locked into the vertically integrated utility, the absence of accurate pricing can serve as an impediment to expanding customers' choice. Where there is competition, either wholesale or retail, power supply pricing undoubtedly will seek its own level, set by the market. Rate design for the regulated, wires portion of the electric service should be set to reflect the actual cost of service. Because transmission is a small part of the total cost of providing power to a customer, the adjustment should have a limited effect.

As noted above, there may be concerns that the market price for power supply in an enlarged Atlantica market might be higher than it is now in certain jurisdictions, which could then face higher costs because of the creation of the market. Some of the apparently low rates in some areas are due,

however, to public policies that provide rate subsidies or force generators to sell power below cost. Such policies are inconsistent with the operation of a market and should be phased out transitionally in the wires charge. The homogenizing of rates could be gradually undertaken by applying the Pennsylvania approach, until transmission ties among the various jurisdictions were increased.

If blending transmission rates across jurisdictions or introducing a new rate design for wires service to end-use customers would cause some customers' rates to increase, governments and regulators would have to make sure to avoid rate shock. This could be accomplished by phasing in rate changes over a sufficiently long period that customers do not experience a significant increase in any single year. Numerous models, such as those applied in New England, are readily available for cushioning transitional effects. At the same time, the beneficial effects of the introduction of the market would begin to be felt in the form of a gradual reduction in both wires charges and the costs of recovering stranded cost or debt, the lack of new stranded cost or debt, and competition among multiple suppliers.

Another lesson from past experience with restructuring power systems is that legislative bodies, while modifying the traditional regulatory system, have frequently taken advantage of the transition to impose what amount to additional taxes on utility rates in the name of energy conservation or to assist low-income customers. These goals, while laudable, undermine the flow-through of the benefits of customer choice. In the end, the customer will want to know if change has brought a lower rate; such additional charges run counter to the basic policy.

A final cost issue relates to financial incentives for the new owners of generation and transmission facilities. Since the advent of restructuring in the United States, there has been no shortage of generators and, in fact, many planned projects were mothballed when it became apparent that supply would far outstrip demand. Thus, no incentives are needed for generators. Owners of transmission and other wires companies, however, need financial incentives to build more facilities at their own risk. In vertically integrated systems, the amount of the overall return on investment in transmission was only as much as regulators allowed, and was determined by an authorized capital structure of equity investment and debt. Without changing rates, regulators could authorize a change in this structure so as not to lower rates but to enhance the actual return. In effect, transmission owners could reduce their costs and not pass the savings through to customers. Where the original transmission owners did not have a traditional investor-based capital structure and were financed mostly by debt, regulators could agree to an initial capital structure to be imputed to the original owners as the starting point of the change on the capital structure. As a result, the new owners could be provided needed incentives without additional cost to customers.

Ultimately, the market should be given an untrammelled opportunity to operate for the benefit of customers. But the results of restructuring should not be oversold. As in any market, extraneous forces might affect benefits — for example, unusual weather conditions coincident with the opening of the market or a run-up in fuel prices because of political events elsewhere could cause prices to increase at just the wrong moment. Customers would need information about the new market and their right to choose, either directly or indirectly. As with almost every other item customers purchase, choice does not guarantee good results; it only makes them possible.

A WORK PROGRAM FOR ATLANTICA

The provinces and states that make up Atlantica could take the following steps to create a regional open-access power market.

Step 1: Heads of government meet.

The premiers and governors of the jurisdictions involved should meet to launch this process. One obvious opportunity is the Conference of New England Governors and Eastern Canadian Premiers, which includes all Atlantica jurisdictions except New York; presumably that state could be invited to be represented. At the meeting, the heads of government should aim to agree on the objective, designate negotiators for each jurisdiction, and set a schedule for completion of the Atlantica Uniform Power Act.

Step 2: Jurisdictions take unilateral actions where possible.

Consistent with the agreement to proceed, each jurisdiction could undertake any actions it saw fit to facilitate the accomplishment of the market. Such measures might include the repeal of legislation preventing such a market or the adoption of measures that would permit or encourage actions by private parties to promote the establishment of the market. Such actions would be encouraged provided they were consistent with the objective.

Step 3: Regulatory consultations take place.

Both because of the need to work within the limits of existing regulatory regimes and because regulators would play important new roles in the restructured market, the designated negotiators would first meet with FERC, and with provincial and state regulators to discuss Atlantica's objectives. Information on likely regulatory attitudes would be invaluable in shaping the uniform law. In addition, negotiators should hold discussions with the New England and New York independent system operators and with provincial authorities in New Brunswick and Quebec.

Step 4: Negotiate and draft the uniform law and any related agreements.

The Atlantica Uniform Power Act should be drawn up through direct negotiations. If additional agreements on either side of the border or operating understandings were required, they, too, would be negotiated. This step is likely to require the most time in the development process.

Step 5: Adopt the uniform law.

The negotiators should propose a final text subject to the approval of the governors and premiers, who would then present the uniform law to their respective legislatures. If sufficient adoptions permit-

ted the formation of a viable group while awaiting the approval of all jurisdictions, participants that had adopted the uniform law could then put the first phase of open access in place among themselves.

Step 6: Establish the necessary mechanisms.

By agreement among the participants, individual states, provinces, or other entities could be designated to provide the services required to ensure the operation of the market. In particular, this could prove necessary for management of the transmission system.

Step 7: Put the market into operation.

With sufficient adoptions and operating arrangements in place, the market should be tested and then put into operation.

Creating an Atlantica power market might seem like an ambitious undertaking, especially in a region where many potential participants have been reluctant to accept market rules that seem ineffective or harmful, where some do not seem willing to depart from the traditional model of the vertically integrated utility, and where concerns exist about the loss of control to outside agencies. Because the potential gains are sufficiently attractive, however, the new market is worth considering, particularly if these concerns can be adequately addressed. The uniform law approach, which would leave the power of decision to provinces and states that freely enter negotiations requiring their common consent, offers a promising route to success.

Political leaders in Canada and the United States have spoken often of the benefits of stronger linkages in the northeastern part of the continent, but little substantial progress has been made. An Atlantica power market is the kind of project that could realize these ambitions without conflicting with the laws, regulations, and customs that control the actions of all potential participants. To be sure, any proposal for moving toward a regional power market is fraught with difficulties in light of short-term political realities, but the immediate practical challenges should not be allowed to prevent consideration of ways to draw the Atlantic Northeast together.



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