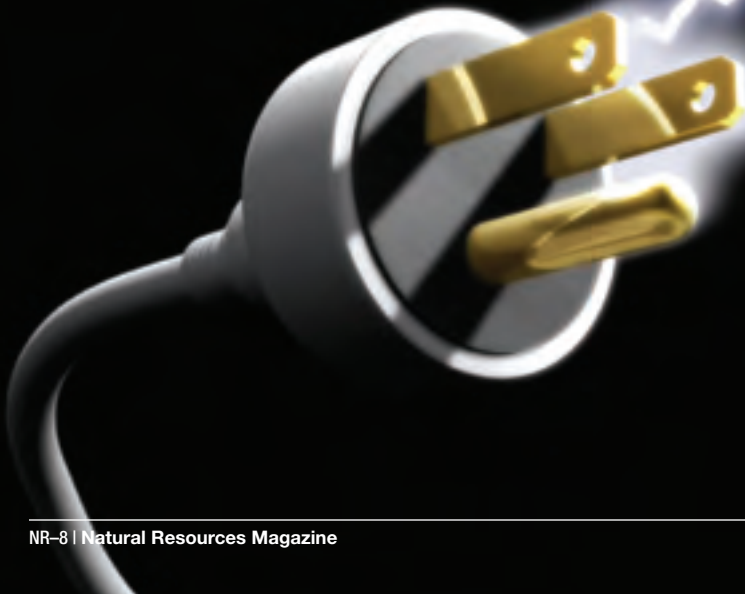




# POWERHOUSE RISING

An in-depth review of New Brunswick's  
proposed international energy corridor  
with Maine

By Charles Mandel



**The timing seemed off.** With the capital markets in crisis, access to easy money gone and credit collapsing, the announcement of a multi-billion-dollar project seemed a little, well, odd. Nonetheless, New Brunswick Premier Shawn Graham and Maine Governor John Baldacci told the press in March that they intended to put together one of the largest projects ever seen in Atlantic Canada. Their northeast energy corridor would originate in the Canadian province and flow through Maine, delivering power to New York and Massachusetts, a market of approximately 50-million people.

New Brunswick and Maine aren't just planning on selling electricity. That's old. Rather, alongside the 1,200 to 1,500 megawatts of electricity would move a steady stream of renewable power, including wind, tidal and natural gas. Part of the plan calls for the construction of a natural-gas-fired co-generation plant to work in tandem with a New Brunswick liquefied natural gas (LNG) plant and which would supply energy during times when wind power wasn't available. Fifteen-hundred megawatts sounds like a lot of energy, but ISO New England, the regional energy operator, has estimated the North-eastern region of the U.S. may require as much as 5,000 megawatts of electricity over the next decade.

The energy would originate from a variety of sources, many of them not yet built. Future wind power projects would supply some of the wattage, while further electricity would originate with the co-generation plant - a system that uses the same energy twice to generate heat and power (for example, by burning natural gas or coal, the plant can power a turbine but also heat the water to steam, using it to turn a turbine again to generate even more electricity). The electricity would flow over the transmission lines, while future stages would add pipelines to carry products such as natural gas.

One of the key pieces of the infrastructure would connect to the Irving-Repsol LNG terminal in Saint John (also known as Canaport), expected to begin operations in 2010. The Canaport LNG terminal - where liquid natural gas is converted back into a gaseous state after having been previously cooled and liquefied to shrink its volume to one-600th its size for transport in ships - would be the source of the natural gas to fire the co-generation plant.

Premier Graham told reporters that "through these challenging economic times, New Brunswick remains focused on a vision of economic self-sufficiency. The proposed energy corridor will help accelerate the development and deployment of clean, renewable and greenhouse-gas-free electricity resources in both New Brunswick and Maine, as well as provide leadership in helping address and support the overall North American security agenda."

Irving Oil announced its intention to become the first private-sector partner. In an interview, Daniel Goodwin, a spokesman with Irving, echoed Graham and said the project is intended to deliver clean, secure and reliable energy. Both Graham and Baldacci stressed the need for the region to achieve "energy independence," something sorely needed in an area battered with a severe downturn in the forestry pulp industry.





March 25, 2009: (L-R) NB Energy Minister Jack Keir, Maine Governor John Baldacci, NB Premier Shawn Graham and Jeff Matthews of Irving Oil in Saint John, NB to announce a joint New Brunswick/Maine initiative to explore development of the northeast energy corridor.

It all sounds fantastic, but will the corridor ever get built?

That's the problem. As wonderful as all these proposals are, that's all they are at the moment - proposals. While no one is saying what the exact price tag of all this pie-in-the-sky is, energy analysts peg it in the billions. And while Graham and Baldacci talked a lot about securing energy independence and so on, the fact is they only committed to exploring the idea and its "great potential." For its part, Irving Oil said it would start conducting commercial and technical feasibility studies on the first phase of development. Certainly, the announcement was one way for the province and state to test the waters for the project and maybe build a bit of excitement in slow economic times.

Goodwin conceded it's not the best time to finance large-scale projects. "These are clearly challenging times and by no means has any decision been taken to proceed with this project. The availability of capital is obviously a real challenge we would have to work through," he said.

John Kerry, director of the Maine state Office of Energy Independence and Security, said this summer the state will

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start to assess the framework for a public-private partnership. Kerry said according to the state's policies, any transmission line that crosses Maine should bring a tangible return to its citizens and rate-payers. That said, Kerry noted the state is eager to reduce its dependence on foreign petroleum products and other fossil fuels in favour of developing renewable resources such as wind and biomass materials. "Our hope is we will create a public policy that will encourage the transmission of affordable and clean power from our Canadian neighbour and develop a long-term sustainable relationship with our neighbours to the south, where there is a great demand for energy."

Tim Curry, president of the Atlantica Centre for Energy in Saint John, agrees it's not the best time to try to secure financing, but he backs up Kerry, noting that the demand for energy over the long haul is likely to make the corridor a possibility - particularly if it's able to deliver clean, green energy to the markets. "I could see that the investment case for a company with access to capital and the appetite to continue to grow the business might make sense."

Curry argues that the proposal will in fact

"unlock" pent-up energy demand. He cites the fact that New Brunswick has available as much as 2,400 megawatts of harvestable wind energy. Yet, most of that has remained untapped. Curry says no one is willing to build the wind farms until a path opens to the market; the hope is the corridor will spur a flurry of wind projects in both New Brunswick and Maine.

Curry cites what he refers to as all the "standard" issues. That encompasses everything from the project undergoing a rigorous environmental and economic impact study, to looking at return on investment, competition and so on. "There's a complex and significant task to put together the business case that will allow an investment decision to be made," he warned.

Not many are doubting the corridor's ability to recoup its investment - should it ever get built. Bill Hastings, an energy executive in Maine, said the project would confirm Maine's position in the energy business as being no longer at the end of the line, but right in the middle of things. Traditionally, states like New York and Massachusetts have relied on petroleum from Texas, Louisiana and Oklahoma to

provide their power. But with offshore oil on the decline, those heavily populated and therefore high-energy areas need a new source of supply. At the same time, the shift from traditional forms of energy to renewables makes the corridor look even more attractive.

Currently, not a lot of energy is shipped via Maine. An old wooden pole transmission line from more than 30 years ago crosses the border. In 2006, the International Power Line began sending energy from Point Lepreau to Maine. Newfoundland and Labrador recently sealed a power corridor arrangement with Hydro Quebec to sell to Emera Energy. While Premier Danny Williams made much of the announcement, the province is only sending over 250 megawatts of power to be sold into the American market.

The synergy between New Brunswick and Maine is undeniable. The former will produce the power and the latter will deliver it. For a couple of years now, Saint John has aggressively touted itself as an energy hub. And there is some truth to that label. Energy processing already takes place in the area, with the Irving refinery located there. Now Irving Oil wants to build a second \$7-billion



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According to Kerry, **Americans view the Canadian actions as protectionism** and argue it causes a **“chilling effect”** among some project proponents, such as LNG producers.

refinery that would become the largest privately-financed project in Atlantic Canada if it moves ahead. The \$1.4-billion refurbishment of Point Lepreau, an aging CANDU 6 nuclear reactor, is underway. As well, the company also channels energy from elsewhere: Irving’s joint venture with Spain’s Repsol YPF SA to build the \$750-million Canaport LNG plant that will take in shipments of liquid gas from places such as Algeria and Qatar.

For Irving Oil, the investment makes a lot of sense. They would locate the natural gas-fired co-generation plant beside their LNG terminal, using waste heat from the turbine to warm up the LNG and alternately using coal to keep the turbine cool. Obviously, Irving would be one of the first in with a product to export, likely a significant opportunity for them. Curry pointed out that the co-generation power plant is well-

sited to balance loads of wind energy on the network, because it can be powered up quickly. And while gas is still a hydrocarbon, it’s cleaner than others and so fits the renewable portfolio nicely.

As for Maine, it is well-positioned between the source of the energy and the market, according to Hastings. The state will earn money charging right-of-transit fees for the energy as it flows south and just the presence of the corridor and the revenues it generates will help attract more businesses, Hastings believes. He calls the plan immediate and said the state needs to pay attention so that the opportunity doesn’t slip away.

Despite such a favourable climate for new energy transmission, it’s not the first time such mega-projects have been proposed – or stalled. Plans for a second nuclear reactor, Point Lepreau II, haven’t progressed much

since the idea was first voiced three years ago. Nor did calls for a coal-fired plant in Belledune ever kick-start that project. So despite political efforts to seemingly shout new sources of energy into being, the market has so far resisted. Another issue is the American “forward capacity” market that encourages the construction of power plants through the use of incentives. Already several new plants are underway; whether they will supply enough electricity to the region to negate the need for a transmission corridor – especially one carrying green fuel – remains to be seen.

Perhaps the most contentious challenge to the corridor comes from the issue of LNG transport. It is a sore point with the Americans that the Canadian federal and provincial governments have protested the passage of LNG tankers in Passamaquoddy Bay. The main issue is that the governments

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– with pressure from a number of different local groups – insist that the Bay isn't suitable for the "heavy industry" of the LNG tankers. The Bay, of which two-thirds is in Canadian waters, includes everything from significant marine historic sites to large aquaculture operations. According to Kerry, Americans view the Canadian actions as protectionism and argue it causes a "chilling effect" among some project proponents, such as LNG producers.

The result is the state's LNG producers and developers have become involved in the corridor legislation, Kerry said. They're worried that if the corridor is developed, but not directed to their locations, that it could become a threat to their economic viability if the corridor skips past them, carrying only New Brunswick-produced energy to the larger American markets. This has caused the industry to oppose the corridor without some additional studies first and to lobby even harder for passage through Passamaquoddy Bay. Curry agrees some "resentment" exists from industry over the LNG issue and that groups on both sides of the Bay have concerns about how tanker passage through the bay would impact

tourism and fishing. "That's a discussion that has to be had," Curry said, adding it won't be helpful if that side issue snarls up the newer project, which is meant to benefit both sides of the border.

Kerry argues, however, that concern over competition with American LNG facilities and renewable resources remains one of the barriers that must be overcome. "Where they are really apprehensive is that someone will come in and exact too low a price for the corridor we are proposing and then have a hegemony on an energy corridor for multiple uses." Specifically, Kerry noted, Maine's producers grew worried when they realized the Irvings' involvement in the corridor might prevent the development of a Maine LNG facility because of the opposition of the federal and provincial governments.

At least one energy analyst said the construction of the Irving-Repsol LNG facility has already pretty much quashed demand for further facilities. Indeed, the addition of a third LNG tank to the facility is meant to show other potential gas producers that before they could complete a full-blown facility, the Canaport one could

simply add more capacity. Coupled with an excess of natural gas in the U.S. market right now, it's unlikely that many of the current LNG projects on the books will go ahead.

The other concern for Maine is if a high-voltage direct-current transmission line runs from Northern Maine through to Massachusetts, that it will be of limited benefit to Maine rate-payers and may, in fact, even discourage the development of renewable wind power in the area. The latter might not happen because of concerns they'd have no where to sell the energy. Goodwin said he's aware that people have a lot of concerns and questions, but is looking forward to a healthy debate that will sift through the information and allow for informed decisions.

According to Hastings, the proposed energy corridor is a "very good thing, a real change of pace. There's barriers to everything in business. I think we're going to need to be creative and engaged." And Goodwin concurs: "With each successful project we're able to do in Atlantic Canada helps to make the next project even easier because we become an even brighter circle on the global energy map."•

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