

New England Considers Canadian Hydropower Proposals

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Canadian hydropower may now displace costly natural gas in Rhode Island – and Massachusetts is considering taking action. House Bill 3968 would fast-track cost-competitive hydropower contracts in Massachusetts during 2014. Rhode Island passed similar legislation in 2013.

Both pieces of legislation have encountered skepticism from the environmental community. The Massachusetts legislation has been labeled “risky” because it may raise costs for ratepayers. Both bills may also put local power generators and renewable energy producers at an economic disadvantage.

The legislation in both states sets up quotas for the amount of hydropower to be purchased through long-term contracts and requires that ratepayer costs be competitive. The terms, amounts and durations specified in the two bills differ from one another. Neither of the legislative initiatives would allow hydropower to receive renewable energy credits.

To assess the potential impacts of the Massachusetts bill, New England Power Generators Association hired Susan Tierney, managing principal at The Analysis Group. On April 1, she published a report, “The Proposed ‘Clean Energy Resources’ Bill: Potential Costs and Other Implications for Massachusetts Consumers and the State’s and Region’s Electric System.”

The bill “would wreak havoc on the state’s and region’s electric industry,” Tierney said. She recommended putting hydropower on an equal footing with other resources in the market.

“I wish I could agree with the proposed policy... because I so strongly agree with the importance of moving toward electricity supplies with lower carbon emissions,” Tierney said. “But unfortunately, this particular bill is too much, too fast, too costly, and too risky for the state’s consumers.”

Tierney said the transition to introducing 35 percent hydropower into the state’s electricity supply would take place too rapidly for stability. Her report described the risks of fast-tracking the process.

Tierney said this bill could transfer the risks of hydropower investment to ratepayers. Such risks are currently absorbed by investors in New England. This shifting of risk, she said, might encourage customers who can go off the grid to do so.

From an energy security standpoint, Tierney said this bill would take money out of New England’s economy and transfer it to Canada’s.

Even though the Massachusetts bill does contain cost-competitiveness requirements, Tierney said it would be in the interest of Canadian power companies to charge high rates. She also said the need to invest in new transmission infrastructure may elevate costs for ratepayers.

Instead of following this dangerous course of action, Tierney said, Massachusetts should allow imported hydropower to compete on an equal footing with other renewable energy resources in the market. She also said she supports eliminating new risks to ratepayers due to hydropower contracts or transmission construction.

In contrast, a report by Black & Veatch, “Final Hydro Imports Analysis,” predicted a sunny outcome for ratepayers if New England states tap into Canadian hydropower. Across a range of scenarios, the total

average economic benefits per year varied between \$103 and \$471 million. The report focused on economic benefits and does not provide a comprehensive picture of other issues.

“The hypothetical transmission configuration with the greatest incremental impact on electricity prices and emissions is a 1,200 MW high-voltage DC cable from New Brunswick to Massachusetts plus a 1,200 MW high-voltage DC cable from Quebec through New York to Connecticut,” Black & Veatch said.

New England States Committee on Electricity (NESCOE) has considered the pros and cons of expanding access to Canadian hydropower in detail. Its 2013 publication, “Incremental Hydropower Reports Whitepaper,” outlined six possible courses of action that New England states could take to route Canadian hydropower to the region.

The first course of action would involve choosing among the menu of transmission improvements utilities have already proposed.

One of these transmission lines, The Northern Pass, would route electricity through New Hampshire, mostly aboveground – which local residents consider unsightly. This proposal has encountered intense grassroots opposition from New Hampshire residents. In response to concerns about visual impact and property values, the developers have suggested placing part of the line underground.

Another option, Green Line, would be partly aboveground and partly underwater. It would transmit wind power from Maine to Massachusetts. A company has proposed hydropower could also travel along the same line, supplementing the wind power.

A third option, the Northeast Energy Link, would involve building a power line from Maine to Massachusetts.

There are many other ways to facilitate bringing hydropower to New England, however, NESCOE’s report said. Second, the allowed amount of energy that Hydro Quebec may sell to New England states could be increased. Third, stakeholders could build new transmission lines that have not been proposed by companies yet. Fourth, regulators could change New England’s capacity market for electricity to make it easier to purchase hydropower. Fifth, regulators could account for hydroelectric power in a new renewable portfolio standard. And a sixth option – the one that the bills from Massachusetts and Rhode Island have pursued – is to competitively procure hydropower through long-term contracts.

Rhode Island passed legislation authorizing hydropower contracts in 2013. House Bill 6018 met with criticism for similar reasons to the current bill in Massachusetts. Environmental advocates were concerned hydropower might outcompete solar energy and wind energy. They were also uneasy about flooding due to new dam construction in Canada. The prospect of constructing The Northern Pass raised concerns as well.

Even if legislation passes to authorize the creation of large-scale, long-term hydropower contracts in these two states, technical obstacles related to transmission and reliability will still remain. NESCOE said it recommends building separate transmission lines for wind power and hydropower to obtain the maximum cost savings. Reliability problems may occur when energy is being transmitted over long-distance power lines.

New England's software for tracking energy consumption would need to be updated to reflect large-scale energy imports from Canada, NESCOE said. This software is owned by the New England Power Pool (NEPOOL). NEPOOL has updated its software to reflect new legislation before, according to NESCOE.

On the positive side of the situation, NESCOE said it sees hydropower as a potential replacement for part of New England's natural gas – which has been expensive during winter months in recent years. Hydropower can also step in to respond to shortages in supply once aging nuclear plants are taken offline.

During this process, ISO New England has maintained a neutral and evaluative stance.

“As the independent system operator for New England, the ISO does not take a position on the proposed legislation,” said Lacey Girard, media relations representative at ISO New England. “The proposed legislation is a matter of state policy and a state or states may choose to procure resources outside of the wholesale electricity markets. However, the addition of any new resource into the market can have an effect on market outcomes depending on a number of variables, and we can't predict how all the various market factors will play out.”

Girard said ISO New England's role includes analyzing the potential impact of underwater transmission lines. “The ISO's role is to do a technical analysis of the impact the project would have on the New England power system and determine what would be needed for the project to interconnect to the power grid in a reliable manner,” she said. “ISO New England does not take a position on these types of transmission projects.”