TREATMENT OF LARGE HYDROPOWER AS A RENEWABLE RESOURCE

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Synopsis: The decision to treat large hydropower as renewable energy by the State of Vermont is likely to be a matter that will be discussed and debated by other states as they consider the content of renewable portfolio standards (RPS). The lessons learned and decision-making in Vermont will be helpful as other states consider changes to existing or proposed RPS standards or establishing new clean energy state policy goals. This article explores the legislative, political, and legal history in Vermont that led to the enactment of the 2010 law. It also sets forth the strategic reasons for treating large hydropower as renewable energy during the negotiations for a new long-term power contact with Hydro-Québec. This was a successful negotiation that ultimately resulted in a twenty-six-year extension of Vermont energy trade with Québec.

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I. Vermont’s Legislative Recognition of Large Hydropower as a Renewable Resource

A. Vermont Act 159 of 2010

On June 4, 2010, Vermont became the first state in the nation to treat electricity generated by large hydro facilities as a renewable resource when Governor Jim Douglas signed H. 781 into law as Act 159.1 It was an historic step. As he was leaving office in January 2011, Governor Douglas said about the law, “[t]his new power agreement is a tremendous step forward and it was enhanced when the Legislature agreed to define large-scale hydropower as renewable, making Vermont the first state in the nation to do so.”2

Vermont law defines “renewable energy” as “energy produced using a technology that relies on a resource that is being consumed at a harvest rate at or below its natural regeneration rate.”3 While Vermont law currently limits designating hydropower as renewable energy to hydropower produced by a “hydroelectric facility with a generating capacity of 200 megawatts or less,”4 Act 159 removes this capacity limitation effective July 1, 2012. As a result,

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4. Id. § 8002(2)(c).
electricity produced by a hydroelectric facility of any size will qualify under Vermont law as renewable energy.  

B. History of Renewable Energy in Vermont

Vermont first adopted a definition of “renewable energy” in 2003 in connection with enacting legislation authorizing utilities to offer their customers the option of purchasing renewable energy at special rates. The legislative enactment authorized the creation of renewable energy pricing programs whereby a utility can offer its customers renewable energy in exchange for the customer paying, on a voluntary basis, a premium over the otherwise applicable rate. The premium must be based on the difference between acquiring the renewable energy and the energy the utility would otherwise supply, and the costs of the program must “be borne solely by those customers who elect to participate in [it].” Pursuant to this authorization both Central Vermont Public Service Corporation and Green Mountain Power developed programs which allowed their customers to purchase power generated by methane produced from cow manure on Vermont dairy farms. Following the template established by the regulations the Federal Energy Regulatory Commission (FERC) promulgated to implement the federal Public Utility Regulatory Policy Act (PURPA), Vermont initially defined hydropower as renewable energy only if it were produced by a “hydroelectric facility with a generating capacity of 80 megawatts or less.”

This changed in 2005 when Vermont made a strategic political decision to amend the definition of “renewable energy” with respect to hydropower. This decision was made in the context of the enactment of legislation creating both a renewable portfolio standard (RPS) and a program allowing utilities to avoid the imposition of an RPS if they meet specified targets for the utilization of renewable energy. Specifically, the legislature increased the size of
hydroelectric facilities that would qualify as renewable energy generating facilities from 80 to 200 megawatts.\textsuperscript{14}

This decision was made to assist the state’s efforts to purchase a series of hydroelectric dams on both the Connecticut River, which divides Vermont and New Hampshire, and on the Deerfield River on the Vermont-Massachusetts border.\textsuperscript{15} These hydroelectric assets, some 567 megawatts of clean energy produced from thirteen hydroelectric stations and associated dams, were being sold by PG&E’s subsidiary, US Gen New England, to the highest bidder.\textsuperscript{16}

The hydroelectric facilities on the stretch of the Connecticut River that forms the boundary between Vermont and New Hampshire were developed to serve industrial load centers in Massachusetts.\textsuperscript{17} In the early 1900s, the Massachusetts legislature authorized the creation of special purpose utilities designed to generate power for direct sale to individual bulk users.\textsuperscript{18} As a result of that legislation Malcolm Chace of Rhode Island and Henry Harriman from Massachusetts formed a company that later became the New England Power Company.\textsuperscript{19} After securing charters from the Vermont and New Hampshire legislatures allowing water to be drawn from the river, they developed the hydro dam at Vernon, Vermont,\textsuperscript{20} which was the first one on this stretch of the Connecticut. None of the power generated by those facilities is utilized in Vermont.

In 2003, the legislature created the Vermont Renewable Power Supply Acquisition Authority (VRPSAA) “to prepare due diligence and feasibility studies regarding the purchase of hydroelectric dams and related assets on the Connecticut and Deerfield Rivers.”\textsuperscript{\textsuperscript{21}} However, the company that ultimately acquired the dams bid $505 million for them, and the state and VRPSAA and its private partners decided they could not afford to submit a higher bid.\textsuperscript{22}

The Legislature nonetheless decided to change the definition of “renewable energy” relative to hydropower by increasing the size of eligible hydroelectric facilities from 80 to 200 MW\textsuperscript{23} so that the output from the largest of the


\textsuperscript{18} Id.

\textsuperscript{19} Id.

\textsuperscript{20} Id.


Connecticut River hydroelectric facilities would qualify. TransCanada now markets the output from the Connecticut and Deerfield Rivers as clean energy.24

II. THE ROLE OF STRATEGY AND POLITICS IN THE HYDROPOWER DEBATE

A. 1980-2005

Vermont’s interest in changing the treatment and legal definition of large hydropower has long been aligned with its strategic and political goals. For example, in the period from 1980 to 2005, Vermont policy-makers reached a consensus that if large hydropower were deemed renewable, it would hinder the development of smaller renewable energy projects.25 Yet, during that twenty-five year time period, the renewable developments that were built were not built as a result of how Vermont defined “renewable energy.” Instead eight hydro projects and one biomass facility built during this period were built as a result of the “must take” provisions in PURPA, and the six megawatt wind station built in southern Vermont during this period resulted from federal grants and incentives.26

During the same twenty-five year time period, Vermont was entering into power and energy supply arrangements with Hydro-Québec, the provincially-owned utility that generates most of its output from large hydroelectric generating stations.27 Because of its extensive system of large hydroelectric generating stations Hydro-Québec was in a position to sell considerable amounts of energy. On the other hand, Vermont’s ability to develop large generating facilities was limited due to a lack of natural resources, inability to access to large amounts of capital, and political and public resistance to siting large generating facilities within the state.28

During this period Québec political leaders were extolling the virtues of large hydropower as a renewable resource. However, there was heavy political resistance from renewable energy advocates in Vermont and New England who argued that treating large hydro as renewable would slow down the development of renewable energy projects in the region.29

This policy and mainly political argument began to lose some steam largely due to two brutal facts: (i) renewable energy projects were not, on a national level, getting built because of ever-changing federal incentives, and (ii) in Vermont, renewable energy projects were thwarted by the rigors of state and local permitting requirements. For example, a proposed wind farm slated for


East Haven, Vermont, was denied state approval on the basis that its developer had not conducted extensive studies of bird and bat mortality.\(^{30}\)

But perhaps the most important reason why political resistance to treating energy from large hydro facilities as renewable energy waned lay in the simple fact that two of the hydro dams on the Connecticut River, Moore and Comerford, have capacities of 192 MW and 164 MW, respectively.\(^{31}\) The result was the political decision in 2005 to increase the treatment of hydro as renewable from 80 to 200 megawatts.\(^{32}\) This set an important precedent for the 2010 decision by the Legislature and the Governor to remove the 200 megawatts limitation altogether.\(^{33}\)

**B. 2010 Power Contract with Hydro-Québec**

This time, Hydro-Québec and a power contract with Vermont utilities played an important role in the decision to change the Vermont law. Specifically, the incentive was to give Vermont more bargaining power with Hydro-Québec and to bring more value to Vermont consumers with a new contract. The contract was formally signed on August 12, 2010,\(^{34}\) after agreement was reached on all deal terms on March 11 of that year.\(^{35}\) The run-up to the new contract with the Vermont utilities and Hydro-Québec, however, started in September 2008 at meetings of the New England Governors and Eastern Canadian Premiers.

At the September 2008 meeting, Governor Jim Douglas of Vermont, Québec Premier Jean Charest, and I met to discuss a new long-term Vermont contract with the state’s utilities, as well as efforts to recognize large hydro as a renewable energy source.

Tim Hayward, who served as Chief of Staff for Governor James H. Douglas from 2003 to 2011, was a central player in the discussions between Québec and Vermont. He said in an interview on July 4, 2011:

> Having participated in dozens of meetings with top political and other officials from Quebec, and the other eastern Canadian provinces as well as New England Governors, there was never in my memory a session on energy or the environment where Quebec officials did not expound on the massive investments that have been made in these projects, and the enormous amount of clean, reliable and renewable

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electric energy being produced for Quebec, and indeed for the northeastern region of America.36

As Hayward describes it, Quebec officials were frustrated by the fact that despite passing laws requiring utilities to have renewable energy in their power portfolios, many American states disqualified large scale hydropower from being able to satisfy those requirements.37

As a result, Hayward “worked . . . with Quebec officials to amend a proposed resolution of the New England Governors’ and Eastern Canadian Premiers’ Conference, held in St. John, New Brunswick in 2009, [so that the resolution] declared large-scale hydro as renewable energy.”38 According to Hayward, “Québec Premier Jean Charest was the first to speak to . . . the resolution,” and it was ultimately adopted.39

Negotiations on all aspects of a new contract with Hydro-Québec spanned more than fifteen months before the March 2010 announcement by Governor Douglas and Premier Charest that a new long-term contract had been reached between Hydro-Québec and twenty Vermont utilities.40 There were preliminary discussions by Green Mountain Power, the Douglas Administration, and legislative leaders in 2009 about removing the 200 megawatt limit in order to be sure that energy imported to Vermont from Québec could qualify as renewable.

It was decided to postpone the renewable designation issue until more information from negotiations was available about the new Hydro-Québec contract. However, the fact that the Vermont Legislature was ready and willing to consider changing the Vermont law was an important positive bargaining tool for Vermont utilities in their fifteen-month negotiating period.

C. Support and Opposition

So by late March 2010 – after the announcement that Vermont utilities would buy 218 to 225 megawatts of energy from Québec for twenty-six years with some deliveries starting in 2012 and continuing until 203841 – the Vermont Legislature began in earnest to debate changes in the Vermont law on treatment of large hydro as renewable.42


37. Id.


39. Hayward email, supra note 36.


41. Press Release, supra note 40.

The legislation moved with unusual speed through the Vermont Legislature primarily because of a provision in the Vermont utilities’ contract with Hydro-Québec that provides that Vermont consumers will share in any financial benefits Hydro-Québec realizes by virtue of the environmental attributes associated with the energy delivered by Hydro-Québec into the New England market. Every megawatt-hour of electricity produced by renewable sources has environmental attributes associated with it, such as the avoidance of deleterious air emissions. In recent years, markets have been developed for the sale of these environmental benefits that is separate from the underlying energy. The development of these new markets has helped utilities in the region to meet renewable portfolio requirements by either building renewable projects or by just buying the environmental benefit. To facilitate this market place, the New England Power Pool (NEPOOL) has developed a system that tracks and issues a certificate on the fuel source and emissions data for every megawatt-hour of electricity that is either generated or imported into the region. These certificates can then be bought and sold in the energy market place.

At least 90% of the Hydro-Québec system power comes from large hydroelectric generation. The willingness of Hydro-Québec to share the financial benefits it may garner as a result of being able to sell the environmental attributes associated with the energy it produces and exports gave a tremendous boost to the legislative effort to amend Vermont’s definition of renewable energy with respect to energy produced by large hydro facilities. In fact, the Vermont House of Representatives, by a vote of 129 to 3, and the Vermont Senate, by a unanimous vote, overwhelmingly approved H. 781.

The legislation was widely reported on by Vermont media. A sampling of that coverage can be seen in the reporting by Bob Kinzel, the veteran State House reporter for Vermont Public Radio.

On May 7, 2010, Kinzel said about the hydro legislation:

Although the legislation never mentions Hydro Québec by name, the bill is specifically aimed at future contracts between Vermont and the Canadian power company. Under current law, no power contract can be designated as being renewable.

45. Id. at 9-13.
46. Id.
renewable if it generates more than 200 megawatts of power – one of Hydro Quebec’s dams produces 5000 megawatts.52

Kinzel’s report that day also stated: “House Natural Resources Chairman Tony Klein said Vermont customers w[ould] benefit directly from the legislation. That’s because Hydro Quebec will be able to market its power to other New England states as being renewable and Vermont utilities will benefit financially from this development.”53

Jake Brown, spokesman for the Vermont Natural Resources Council, best characterized the opposition in Vermont to give large hydropower a renewable moniker. Brown was quoted by Kinzel as saying:

“...So Vermont would be in many ways a domino falling and in our view a standards being dropped which is very unlike Vermont. Vermont is a place that has high standards and is proud of its high standards and what we’re doing here is really just slicing off a little piece of our reputation and giving it to Hydro Quebec.”54

Brown’s statement reflects a longstanding feeling in Vermont that the state is ahead of the rest of the nation on environmental issues. It also harkens back to the controversy that arose in the state in the early 1990’s when Vermont’s utilities agreed to purchase significant amounts of power on a long term basis from Hydro-Québec.55 Many perceived the Vermont utilities’ desire to do business with Hydro-Québec as aiding Hydro-Québec’s ability to develop large hydro facilities in the northern part of the province that were opposed by the region’s native people and by environmentalists in the United States.56 While the Vermont utilities ultimately received approval for those transactions, the controversy over them left a negative impression of Hydro-Québec in some peoples’ minds.57 That legacy is reflected in Brown’s statement.

However, in 2010 the threat of global warming was much more pronounced than it was in the early 1990s, and the Vermont Legislature and the Governor were not swayed by the view embodied in Brown’s statement and approved the legislation designating electricity from large hydro facilities as renewable.

III. IMPACTS OF RECOGNITION

Since the passage of the Vermont law, other states in the region have been looking at the Vermont initiative. The Government of Québec has applauded the Vermont law and its Premier, Jean Charest, is urging other Northeastern States, such as Massachusetts, Connecticut, Rhode Island, New York, and New Jersey, to follow Vermont’s lead.58 Those states have RPSs, which require their utilities

53. Id.
54. Id.
56. Id.
57. Id.
to have specified percentages of renewable energy in their supply portfolios.\textsuperscript{59} If by purchasing power from Hydro-Québec those utilities can satisfy their RPS obligations that power will have more value to them than would otherwise be the case.\textsuperscript{60}

The Vermont Public Service Board on April 15, 2011, gave formal approval to the new contract.\textsuperscript{61} This important regulatory decision solidifies Green Mountain Power’s (GMP) renewable energy portfolio for its customers for another generation.

It also contributes to GMP’s energy strategy, set in place in 2008, to provide customers with reliable energy with less carbon at competitive pricing. GMP has developed a policy of pursuing low carbon, low cost, and reliable power sources in order to both continue the state’s low carbon emission profile and to position the company for what it sees as the next era in the development and utilization of energy resources – the post fossil fuel era.\textsuperscript{62}

Vermont’s pace-setting decision to treat large hydroelectric production as renewable will, in my opinion, have long-term positive benefits, and it will help to stimulate new smaller renewable projects. Why do I believe it? For this primary reason: large hydroelectric is a very clean source of base load power, which is a necessary complement and back-up for intermittent generation produced by wind and solar. Large hydroelectric facilities are a natural ally and friend for smaller renewable projects. They are not enemies. In Vermont, these two electric generation sources are seen as vitally linked to the success of each other. As a result, by virtue of treating electricity from large hydro facilities as “renewable energy” by 2015 GMP will offer its customers an energy supply that is between 50 to 60% renewable.

In fact, it is because of Hydro-Québec energy and Vermont’s new contract that my company can continue its aggressive push to develop in-state renewable energy supplies that state policy strongly encourages and our customers tell us they want more of.

The landmark Vermont law signed on June 9, 2010 set the stage for this new reality and, I believe, will help encourage the growth of renewable energy in a cost-effective manner in Vermont and the Northeast.


\textsuperscript{60} Michael Lee-Murphy, \textit{CT Hurries Up and Waits on Canadian Hydroelectric Power}, CT NEWS JUNKIE (Aug. 11, 2011, 5:09 PM), http://www.ctnewsjunkie.com/ctnj.php/archives/entry/hurry_up_and_wait_on_canadian_hydro/.

\textsuperscript{61} The Vermont Public Service Board issued its unanimous decision in Docket No. 7670 in favor of the new contract on April 15, 2011. The Certificate of Public Good that was issued pursuant to 30 V.S.A. section 248 contained this important notation: “No company shall sell any renewable energy credits (“RECs”) or other environmental attributes obtained as a result of the purchase of energy from HQUS [Hydro-Quebec Energy Services (U.S.) Inc.] to more than one consumer, or make any claims regarding those disaggregated attributes in any marketing or advertising if it has sold those disaggregated attributes.” Certificate of Public Good Issued Pursuant to 30 V.S.A. § 248, Docket No. 7670 (Vt. Pub. Serv. Bd. Apr. 15, 2010).