

2009

*New England Governors' Renewable
Energy Blueprint*



Working to Serve New England with
Low-Carbon, Secure, Cost-Effective
Energy Resources
September 15, 2009

September 15, 2009

The New England Governors' Conference, Inc.



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*“As New England’s
Governors, we believe we
have an opportunity in
these difficult economic
times to make a lasting
difference in the way we
generate and use electricity
and the associated
economic, environmental
and health benefits that
such a change will bring to
our region and our
citizens. “*

Letter to President Obama and
Congressional Leaders,
February 5, 2009

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EXECUTIVE SUMMARY

New England has a significant quantity of untapped renewable resources, on the order of over ten thousand (10,000) Megawatts (MW) combined of on-shore and off-shore wind power potential, as well as other low-carbon resources. Developing far less than the maximum potential would enable New England to meet its renewable energy goals and reduce reliance on carbon-emitting generation resources. More aggressive development of generation resources - with corresponding transmission infrastructure investment - would enable New England to export clean power to our neighbors. Developing these new renewable resources will help to diversify our power mix and has the potential to put downward pressure on the marginal prices for energy within the New England electricity market.

Whether New England develops some or all of its renewable resource potential, the challenges to bringing new resources to market are substantial. However, the region has the essential elements in place to help meet those challenges. First, New England has completed technical analysis to inform policy-makers' decisions about the economic and environmental consequences of various levels of renewable resource development. Second, New England has a long history of working cooperatively together, and with our Canadian neighbors, on complex energy and environmental matters. Third, New England has considerable recent experience successfully siting significant transmission facilities, including in some of the most densely populated areas in the region. New England also has substantial authority and experience in connection with competitive solicitations and contracts for generating resources to serve customers.

Combining New England's historic working relationships with its recent siting experience and power contracting authority will strengthen the region's ability to help bring new renewable resources to market within the current market structure. Moreover, solidifying a state-federal government partnership in this effort will reinforce New England's ability to meet its clean energy goals and advance the nation's interest in reducing carbon emissions, stabilizing and diversifying energy supply, and reducing reliance on foreign fossil fuel.

Accordingly, we set forth herein our view of the technical analysis and identify opportunities to coordinate and synchronize siting reviews and resource procurement across state lines. We also describe a variety of ways a state-federal partnership can assist our efforts to simultaneously advance state and national energy goals.

New England's Renewable Development Scenario Analysis

Decisions about whether and the extent to which renewable resource development makes sense for consumers should follow an assessment of economic and environmental data. To inform the most sensible way forward to serving New England customers with cost-effective, low carbon and secure energy resources, the New England Governors, through the New England States Committee on Electricity (NESCOE)¹ requested that ISO-New England, Inc.

¹ NESCOE is New England's Regional State Committee.

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(ISO-NE), New England's regional system operator, conduct an economic study, referred to as the Renewable Scenario Development Analysis (RSDA), of various renewable energy development scenarios and associated transmission infrastructure.²

The New England Governors believe the RSDA results demonstrate the following:

1. There is a vast quantity of commercial-scale and advanced untapped renewable resources in the New England region; this includes more than ten thousand (10,000) MW of on-shore and off-shore wind power potential. Even if developed at conservative levels, there are ample renewable resources to enable New England to meet renewable energy goals and to reduce reliance on carbon-emitting generation. If developed more aggressively, New England could export renewable power to neighboring regions.
2. Each of the New England states is seeking, through initiatives associated with various state laws, policies, and regional coordination, the aggressive development of renewable resource potential within and outside state borders.
3. All of the wind resource potential could provide downward pressure on the marginal prices for energy within the New England electricity market, with similar effects as those that would result from developing new, efficient combined-cycle gas fired generation; this price pressure would ultimately benefit New England consumers.
4. Wind generation would be eligible under all definitions of renewable energy credits in current state and proposed federal renewable portfolio standards; consequently, all such generation could realize a valuable stream of revenue associated with the creation and sale of renewable energy credits.
5. Since wind generation is a zero-carbon resource, development of New England's wind resources could provide downward pressure on the marginal price of carbon allowances in current regional or proposed federal carbon cap-and-trade programs.
6. A number of potential transmission projects can be identified that would allow for the reliable transfer of power from off-shore and on-shore wind resource regions to load across New England, and for export to our neighbors. The length of such transmission is modest on a national scale given the region's relatively small geographic footprint. The cost associated with such transmission varies

² ISO-NE's RSDA report is attached as Exhibit A.

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significantly depending on the level of overall resource development: a lower level of investment would result in renewable resources sufficient to meet our renewable energy goals while more aggressive investment could enable New England to export renewable power to neighboring regions.

7. The expansion of near off-shore wind resources could be accomplished incrementally with lower-voltage and lower-cost transmission interconnections directly into heavy load centers along the coast.
8. The expansion of renewable resource development in our region could facilitate the retirement and/or repowering of existing coal- and oil-fired generation within New England without a meaningful impact on marginal energy prices.
9. In-region development of renewables and access to renewable energy from neighboring systems appears possible with significantly less capital investment for transmission infrastructure than would be required to import an equivalent quantity of power from more remote, out-of-region sources on new, high-voltage transmission lines.
10. Choices about the level of renewable resource development to meet various objectives can be substantially informed by cost considerations, given the differences in transmission infrastructure costs needed to accommodate incremental levels of renewable resources.

Opportunities to Synchronize the States' Power Procurement and Contracts

The New England states have substantial statutory authority and practical experience in connection with soliciting and contracting for generation resources. An initial review of such authority suggests sufficient mechanisms - and commonality of purpose - exist across New England to enable some degree of synchronization. Harmonizing procurement would strengthen the region's ability to facilitate development of those low carbon resources able to serve customers most cost-effectively.

In connection with the states' power procurement and contracting authority, the New England Governors observe the following:

1. Every New England state has current statutory authority to approve long-term contracts for capacity, energy and/or renewable energy credits (RECs).
2. Across New England, procurement is generally executed through competitive solicitations.

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3. Typically, competitive procurement is implemented by electric distribution companies, subject to the review and approval by the states' Public Utility Commissions. In some states, such as Vermont and Maine, state entities are authorized to act on the state's behalf. In all cases, however, the states are the ultimate arbiter of whether and what resources are awarded contracts.
4. The states generally have authority to determine appropriate contract term lengths.
5. State programs designed to promote in-state resources, such as Vermont's SPEED program, Connecticut's Project 150 and Rhode Island's off-shore wind initiative notwithstanding, a majority of the New England States, including New Hampshire, Massachusetts, Maine, Vermont and Connecticut, appear to have significant flexibility with respect to contracting for resources whether located within or out of state.
6. New Hampshire and Connecticut have regularly scheduled opportunities to assess needs and resource options in the context of their integrated resource planning proceedings, which provides flexibility to synchronize with states that may have less flexibility.
7. A common goal reflected in each New England state's authority to approve long-term contracts relates to securing low cost, cost-effective or cost-stabilizing power.

Opportunities to Coordinate Siting of Interstate Transmission Facilities

In recent years, New England has reviewed, approved and sited significant new transmission facilities to address reliability needs. Specifically, Connecticut, Maine, Massachusetts and Vermont have sited about four (4) billion dollars in new transmission facilities. Another five (5) billion dollars in new transmission projects is under study or construction throughout the region. On the generation side, more than 10,000 MW of new supplies of clean burning, natural-gas-fired generation has been added to New England's system. Our recent success provides a solid foundation for the states' to work cooperatively on proposed renewable resource projects and associated transmission facilities.

The states' distinct substantive and procedural statutory siting requirements prescribe in large part the way in which siting review processes must proceed in each state. However, the same laws, to varying degrees, present opportunity for interstate coordination. To the extent siting approvals can be coordinated within the bounds of state law, interstate transmission projects that emerge as the most cost-effective way to deliver renewable power to our consumers could be sited more quickly than would otherwise occur, by, for example:

1. Conducting approximately concurrent state siting reviews.

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2. Requesting from interstate transmission project applicants a common component of the application (including project description, maps, information on the facility's system impact, costs, and related items) as well as common testimony on the need the facility is intended to meet and the alternatives considered.
3. Issuing coordinated discovery on the overall project to ensure the states possess uniform information, presented consistently, and to streamline applicants' responses to state requests for information.
4. Conducting a joint hearing on specific issues, where authorized, in connection with the common findings states must make, such as need. A joint hearing on a narrow set of common issues would not displace local hearings as required by law or regulation that allow examination of state-specific criteria in support of state-specific findings.
5. Considering adopting joint, concurrent or similar orders on common required findings.

Opportunities for State-Federal Partnership

A state-federal partnership in which New England and federal officials work together to advance development low-carbon, cost-effective energy resources elevates the probability of success in advancing New England's objectives and the nation's interest in reducing carbon emissions, diversifying energy supply, and reducing reliance on foreign fossil fuel.

Accordingly, the federal government should:

- Respect regional system planning processes and consider the results of regional transmission system plans and renewable resource scenario analysis as guidance in connection with interconnection wide analyses and any federal financial support for renewable energy infrastructure development.
- Support New England's plan to encourage development of renewable resources in the context of competitive market mechanisms or solicitations for the benefit of consumers. To the extent federal financial assistance is directed to renewable resource development, direct such assistance to resources that emerge in the market, or through competitive processes, and support those that would serve customers most cost-effectively.
- Give priority to renewable resources identified in regional processes as the most cost effective means to serve customers when some or all of the following occur:

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- The associated facilities are offered and supplied through existing regional wholesale market mechanisms, or through state or regional procurement processes that result in acquisition of the lowest-cost resources.
- New federal funds are made available for the development of renewable resources and associated infrastructure.
- The Department of Interior, Minerals Management Service prioritizes permitting applications for off-shore wind projects located in *federal* waters to expedite approvals. Formal coordination by and between state and federal permitting processes, such as, for example, a rebuttable presumption of the validity of certain facts and findings developed in state proceedings, could expedite approvals without compromising the purpose of the review and approval process.
- The federal resource agencies prioritize permitting applications for off-shore wind projects located in *state* waters that require federal permits to expedite review and approval. Again, formal coordination by and between state and federal permitting processes, such as, for example, a rebuttable presumption of the validity of certain application requirements, pre-construction studies, facts and findings developed in state proceedings, could expedite approvals without compromising the purpose of the review and approval process.

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I. INTRODUCTION: NEW ENGLAND GOVERNORS' RENEWABLE ENERGY BLUEPRINT

The very best wind resource in the country, from the perspectives of resource size, distribution, capacity factor, reliability, proximity to population centers, and minimization of environmental impact, is located a short distance off the major load centers of the east coast. New England also has significant on-shore wind potential: excluding on-shore wind that present siting challenges, such as locations close to the Appalachian Trail, the region could generate 10,000 MW or more of on- and off-shore wind power. In addition, New England has the potential to generate ocean tidal power as well as additional biomass capabilities. Developing even a portion of the region's renewable resources would suffice to meet our regional renewable energy goals; more aggressive development, at higher transmission costs, would allow New England to export renewable power to neighboring regions.



New England's neighbors to the north in Quebec and the Maritimes have vast renewable resources and they are developing more, although not all will be available for export to New England. New Brunswick has identified 4,500 MW of wind potential that it intends to develop. New Brunswick is also seeking to increase the output from another no-carbon resource, the nuclear plant at Point LePreau, from 1,165 to 2,330 MW. Nova Scotia and Prince Edward Island have set a goal to develop 2,000 MW of wind power over the next several years. Quebec currently produces 41,000 MW of power, most of which (97%) comes from hydro-electric generation. Quebec is seeking to develop an additional 2,400 MW of wind generation and plans to bring an additional 2,600 MW of hydro-power into service by 2020, with about 1,000 MW of that expected to be in service by 2012. Newfoundland and Labrador are similarly exploring further development of their renewable energy resources.

The New England states' long history of working collaboratively on complex energy and environmental matters will be valuable as we move forward together on renewable resource development; so will our historic working relationship with our neighboring Canadian Provinces on energy and trade issues. As our nations address the climate challenge in the coming decade, it will make sense to expand our level of cooperation on energy development and trade, particularly with respect to accelerated commercialization of the vast amounts of on- and off-shore renewable resources in the Northeast and in Eastern Canada.

Given the significant, high-quality low-carbon resource potential in and around New England, the Governors communicated their intent to develop a Renewable Energy Blueprint to President Obama and Congressional leadership. By letter dated February 5, 2009, the Governors stated that the Blueprint would serve as a basis for a state-federal partnership to support the development of cost-effective, low-carbon, secure energy resources in or proximate to New England.

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The foundation of the Governors' request for a partnership with federal officials is consumers' economic and environmental interests: consumers will be best served by state and federal officials partnering to support development of resources that are, when evaluated on equal footing with other like resources, the most cost-effective way to meet our energy, environmental and energy security objectives. A state-federal partnership will complement states' initiatives to meet our carbon challenge, including robust requirements in connection with net metering, renewable portfolio standards, renewable power contracts, renewable siting reform, and energy efficiency programs, as well as the new collaborative siting and contracting efforts we discuss here.

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II. NEW ENGLAND'S RENEWABLE DEVELOPMENT SCENARIO ANALYSIS

To inform the New England Governors' and other policy-makers' decisions about the best way to accomplish this objective, NESCOE requested that ISO-NE conduct a Renewable Development Scenario Analysis, or RDSA, focused on renewable energy development in and proximate to the region. The states presented this request to ISO-NE's Planning Advisory Committee (PAC).



The purpose of the RDSA was, in broad terms, to help identify the significant sources of renewable energy available to New England, the means to reliably distribute them within the region's power grid, and the estimated cost of energy for generation and transmission. More specifically, the RDSA was requested to obtain an overview of potential on- and off-shore wind resources in the region, conceptual layouts of associated transmission system interconnections, and related information on: (1) associated combined costs of generation and transmission; (2) changes in transmission system operation and reliability; (3) differences across scenarios in total, and by state, in generation (MWh) from regional renewable resources under various scenarios; and, (4) differences across scenarios in total, and by state, in emissions (CO₂, NO_x, and SO₂).

The New England states, with technical support from ISO-NE, developed the key assumptions for the RDSA. The assumptions were then reviewed by ISO-NE's PAC. The assumptions were designed to illuminate various future scenarios, in the year 2030, wherein large-scale wind is integrated into the region's grid. The purpose was to reveal environmental and economic data in connection with incremental wind development scenarios, ranging from 2,000 MW up to 12,000 MW of on- and off-shore wind, as well as associated transmission. The level of assumed resource development, whether conservatively, in amounts sufficient to meet our renewable energy goals, or, more aggressively, in amounts that would enable New England to export renewable power to neighboring regions was to be presented with corresponding levels of associated transmission costs.

The analysis considered the following:

- demand and supply levels for New England;
- representative future Installed Capacity Requirements;
- demand resource penetration;
- plug-in hybrid electric vehicle penetration;
- the level of existing resources, including generation, demand resources, and imports;
- energy storage;
- retirement of older oil- and coal-fired generation; and,

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- expansion of interconnections with neighboring regions.

The RDSA evaluated more than thirty (30) supply and delivery forecasts. These included a base case that assumes additional wind resources are developed and that no existing coal and oil generating units retire. An alternative base case assumed 1,500 MW of additional natural gas-fired resources are developed instead of additional wind resources. The RDSA evaluated a low, medium and high range for most of the assumptions above, and includes multiple sensitivities. ISO-NE conducted the study and shared the results with the states and the PAC.

What the RDSA was *not* designed to do is important. First, because the study looks out to a single year in the 2030 timeframe, it was not intended to identify precise supply and demand levels. Second, through the RDSA, the New England states did not identify preferred locations for resource development or preferred transmission pathways. Current market mechanisms and specific proposals by entities in the market will identify what resources ought to be built where, by whom, and the appropriate transmission pathways to deliver power to New England load centers. Similarly, by requesting the RDSA, the states did not seek to identify the kind of resources best suited to meet consumer needs in the year 2030, or to achieve various state and federal policy objectives. The study is in the nature of a “what if” scenario analysis intended to identify power system integration issues, but is not meant to discount the value that New England’s low-carbon resources will contribute to New England’s energy and environmental future, or to diminish the strong interest of all states in increasing efficiency and reducing demand.

The New England Governors’ believe the RDSA establishes the following:

1. There is a vast quantity of commercial-scale and advanced emerging untapped renewable resources in the New England region; this includes more than ten thousand (10,000) MW of on-shore and off-shore wind power potential. Even if developed at conservative levels, there are ample renewable resources to enable New England to meet renewable energy goals and to reduce reliance on carbon-emitting generation. If developed more aggressively, New England could export renewable power to neighboring regions.
2. Each of the New England states is seeking, through initiatives associated with various state laws, policies, and regional coordination, the aggressive development of renewable resource potential within and outside state borders.
3. All of the wind resource potential could provide downward pressure on the marginal prices for energy within the New England electricity market, with similar effects as those that would result from developing new, efficient combined-cycle

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- gas fired generation; this price pressure would ultimately benefit New England consumers.
4. Wind generation would be eligible under all definitions of renewable energy credits in current state and proposed federal renewable portfolio standards; consequently, all such generation could realize a valuable stream of revenue associated with the creation and sale of renewable energy credits.
 5. Since wind generation is a zero-carbon resource, development of New England's wind resources could provide downward pressure on the marginal price of carbon allowances in current regional or proposed federal carbon cap-and-trade programs.
 6. A number of potential transmission projects can be identified that would allow for the reliable transfer of power from off-shore and on-shore wind resource regions to load across New England, and for export to our neighbors. The length of such transmission is modest on a national scale given the region's relatively small geographic footprint. The cost associated with such transmission varies significantly depending on the level of overall resource development: a lower level of investment would result in renewable resources sufficient to meet our renewable energy goals while more aggressive investment could enable New England to export renewable power to neighboring regions.
 7. The expansion of near off-shore wind resources could be accomplished incrementally with lower-voltage and lower-cost transmission interconnections directly into heavy load centers along the coast.
 8. The expansion of renewable resource development in our region could facilitate the retirement and/or repowering of existing coal- and oil-fired generation within New England without a meaningful impact on marginal energy prices.
 9. In-region development of renewables and access to renewable energy from neighboring systems appears possible with significantly less capital investment for transmission infrastructure than would be required to import an equivalent quantity of power from more remote, out-of-region sources on new, high-voltage transmission lines.
 10. Choices about the level of renewable resource development to meet various objectives, from meeting renewable portfolio standards to exporting renewable power to our neighbors, can be substantially informed by cost considerations,

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given the differences in transmission infrastructure costs needed to accommodate incremental levels of renewable resources.

III. OPPORTUNITIES TO SYNCHRONIZE THE NEW ENGLAND STATES' POWER PROCUREMENT AND CONTRACTING

Bringing New England's untapped renewable resources to market requires developers and investors to have confidence that there will be committed buyer(s) for a renewable facility's output over the long term. One means to provide some of that assurance in New England is each state's current authority over the procurement and contracting for some combination of capacity, energy and Renewable Energy Credits (RECs). Interstate coordination to aggregate the states' supply needs and contracting authority would strengthen the region's ability to support those renewable generation projects most able to serve New England consumers cost effectively.



The sections that follow describe each New England states' authority to procure capacity, energy and/or RECs and associated contracting mechanisms. It then discusses, in general terms, areas that present potential opportunities to synchronize solicitations and contract awards. Specific paths to coordinate timing and regulatory review and approvals by and between the states will require more detailed analysis and development of mechanisms that reflect and respect state laws.

A. NEW HAMPSHIRE

The State of New Hampshire, through the New Hampshire Public Utilities Commission (NHPUC), can approve long-term contracts with renewable and other power sources. The NHPUC has authority to approve recovery of such contract costs pursuant the state's default service charges mechanisms. The NHPUC also reviews power procurement contracts in the context of RECs. New Hampshire utilities are neither required to enter nor prohibited from entering long-term power purchase agreements.

Default Service

By state law, two of New Hampshire's three regulated electric utilities procure default service³ through the competitive market. In practice, the state's electric utilities have procured default service through long-term contracts, defined as between two (2) and three (3) years, as well as short-term contracts, defined as between six (6) months to one (1) year. New Hampshire's largest electric utility uses a combination of its own generation assets and purchased power contracts to supply default service in its territory. The NHPUC reviews the

³ Default service means electricity supply that is available to customers who are otherwise without an electricity supplier.

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reasonableness and prudence of the costs but does not formally approve the underlying supplemental power contracts.

Contracts for Renewable Energy Credits, With or Without Associated Power

New Hampshire also has authority to approve multi-year agreements with renewable energy sources for RECs in conjunction with, or independent of, purchased power agreements from such sources. In order to approve such contracts, the NHPUC has to determine that they are substantially consistent with statutory factors, such as cost-effectiveness, diversity of resources, the promotion of competitive market innovations and solutions, and economic development benefits to New Hampshire. The NHPUC reviews renewable power contracts for reasonableness and consistency with statutorily-defined state energy policies including the need to “meet the energy needs of the citizens and businesses of the state *at the lowest reasonable cost while providing for the reliability and diversity of energy sources...*” [Emphasis added]. The NHPUC also has to determine the extent to which such procurements are likely to create a reasonable mix of resources, in combination with the electric distribution company’s overall energy and capacity portfolio, in light of the state’s energy policy and either the integrated least cost resource plan, or a portfolio management strategy for default service procurement that balances potential benefits and risks to customers.

There are no statutorily mandated time lines or time limitations on power purchase contracts.

Power purchase contracts are not required to be sourced from within New Hampshire. However, the purchase of RECs “to meet reasonably projected renewable portfolio requirements and default service needs” in conjunction with or independent of renewable power purchase contracts have to be substantially consistent with “economic development and environmental benefits for New Hampshire.”

Least Cost Integrated Resource Planning

New Hampshire undertakes Least Cost Integrated Resource Planning biennially, when each electric distribution company files a least cost integrated resource plan with the NHPUC. These plans include an assessment of supply options, provision for diversity of supply sources, and integration of demand-side and supply-side options. The NHPUC define a “Least Cost Integrated Plan” as including a planning and selection process for new energy resources that evaluates the full range of alternatives, including new generating capacity, power purchases, energy conservation and efficiency, and renewable energy resources, in order to provide adequate and reliable service to customers at the lowest system cost.

B. VERMONT

In Vermont, the Department of Public Service (DPS) represents the state in any negotiation, arrangement or proceeding for the procurement of electric energy from outside of Vermont or electric energy generated in Vermont to contract for power and its resale to the electric distribution companies for distribution within the state. Such arrangements are subject to

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approval of the Public Service Board and the Governor. However, the DPS can only contract for purchases from sources inside Vermont if a seller so requests and if the DPS determines that the power purchase and resale furthers the state's needs.

Any proposed purchase in excess of five (5) years is subject to the Vermont Public Service Board's (PSB) approval.

The DPS may, if the PSB and Governor approve, enter contracts to resell power outside Vermont, if such resale is incidental to and in furtherance of the state's needs. The DPS, with the approval of the PSB, is authorized to enter into contracts for the transmission of such energy from the place of purchase to the points of resale.

Sustainably Priced Energy Development

Vermont's Sustainably Priced Energy Development Program, or SPEED program, promotes the development of in-state energy sources that use renewable fuels to ensure that to the greatest extent possible the economic benefits of the new energy sources flow to the Vermont economy in general, and to Vermont ratepayers in particular.

Vermont's SPEED goal is to supply all new load growth from January 1, 2005 through July 1, 2012 with SPEED resources. A minimum SPEED Goal is to generate 5% of Vermont's January 1, 2005 load (287,421 MWH) with SPEED resources. Thereafter, a SPEED Goal is to generate 20% of Vermont's load with SPEED resources by 2017.

C. MAINE

The State of Maine, through the Maine Public Utilities Commission (MPUC), can approve long-term power contracts with renewable or other resources. The MPUC is authorized by statute to direct Maine's electric utilities to enter into long-term contracts for capacity and associated energy, which statutes define what types of resources qualify and establishes a resource priority order.

Specifically, the MPUC is authorized to solicit long-term contracts through periodic competitive bid processes. Such solicitation is to occur no less often than every three years, unless the likely benefits to ratepayers from any contracts that might result from the solicitation process will not exceed the likely costs. Long-term contracts must be for capacity and associated energy with the primary purpose being to lower and stabilize electricity rates in Maine. Contracts can be for demand or supply resources and cannot exceed ten (10) years unless the MPUC finds a longer term to be prudent.

Maine law establishes the following order of priority for choosing among capacity resources:

- (1) New interruptible, demand response or energy efficiency capacity resources located in Maine;

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- (2) New renewable capacity resources located in Maine;
- (3) New capacity resources with no net emission of greenhouse gases;
- (4) New nonrenewable capacity resources located in Maine. The Commission shall give preference to new nonrenewable capacity resources with no net emission of greenhouse gases;
- (5) Capacity resources that enhance the reliability of the electric grid of Maine. The Commission shall give preference to capacity resources with no net emission of greenhouse gases; and,
- (6) Other capacity resources.

Maine law includes explicit policies to:

- (1) increase the share of new renewable capacity in Maine by 10% by 2017;
- (2) reduce electricity prices and price volatility;
- (3) reduce greenhouse gas emissions; and,
- (4) develop new capacity resources to mitigate the effects of federal or regional mandates.

D. MASSACHUSETTS

Long-Term Renewable Energy Contracts

Massachusetts has several sources of authority to approve long-term contracts. In summary, the Massachusetts Department of Public Utilities (DPU) can approve a long term contract of any duration or type if proposed by an electric distribution company to meet basic service needs or to reduce the delivered price of power. In addition, recent legislation has required distribution companies to solicit long-term contracts for the purchase of renewable power, and companies can submit for DPU approval contracts of any duration to meet their obligations under the Renewable Portfolio Standard (RPS).⁴

Massachusetts has specifically authorized its electric distribution companies to enter into long-term contracts with renewable energy resources and developers in order to facilitate the financing of renewable energy generation within the Commonwealth of Massachusetts (Commonwealth), its waters, and adjacent federal waters.⁵ As stated in the authorizing statute, a long-term contract is for a term of ten (10) to fifteen (15) years and requires approval by the DPU. The contracts can be for energy, RECs or both.⁶ Distribution companies are not required to enter long-term contracts that would, in the aggregate, exceed 3% of total annual energy demand from all distribution customers in their service territories.

Between July 1, 2009 and June 30, 2014, each of Massachusetts' electric distribution company must conduct at least two (2) solicitations for long-term contract proposals from

⁴ Massachusetts' RPS program was established by statute. See M.G.L. c. 25A, § 11F.

⁵ Section 83 of chapter 169 of the Acts of 2008, An Act Relative to Green Communities.

⁶ The MDPU issued regulations related to such contracts. See 220 C.M.R. § 17.00.

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renewable energy projects or resources within the Commonwealth, its waters, and adjacent federal waters. The distribution companies may elect to solicit additional proposals during this period.

In conducting solicitations, Massachusetts' electric distribution companies must:

- coordinate with the Massachusetts Department of Energy Resources (DOER) in developing timetables and methods for solicitations and contracting;
- consider participating in a DOER-administered solicitation process prior to conducting their own solicitations; and
- consider multiple contracting methods, such as long-term contracts for RECs, energy, or both.

The electric distribution companies may consider additional methods of soliciting proposals, such as public solicitations, or individual negotiations.

Long-term contracts must be with renewable energy generation sources that have a commercial operation date after January 1, 2008 and be qualified by DOER as eligible to participate in the RPS.

In approving any proposed long-term contracts, the DPU must find that the proposed contracts:

- provide enhanced electricity reliability within Massachusetts;
- contribute to moderating system peak load requirements;
- are cost-effective to Massachusetts electric ratepayers over the term of the contract;
- create additional employment in Massachusetts, where feasible; and
- are cost-effective mechanisms for procuring renewable energy on a long-term basis.

After purchasing renewable energy, RECs, or both, Massachusetts' electric distribution companies can sell the energy to their basic service customers, and retain RECs for the purpose of meeting their RPS requirements; sell the energy into the wholesale electricity spot market, and sell the purchased RECs through a competitive bid process; or, select an alternative approach.

The long-term contract provision described above does not limit consideration of other short- or long-term contracts for power and/or RECs submitted by an electric distribution company to the DPU for approval.

In Massachusetts, the obligation to solicit long-term contracts is separate from the obligation to meet RPS requirements. Electric distribution companies may propose such long-term contracts to meet applicable annual RPS requirements but may meet RPS requirement by other means (e.g., simply purchasing RECs or paying the alternative compliance payment).

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Basic Service Procurement

In Massachusetts, the electric distribution companies procure power for their basic (i.e., default) service customers through competitive solicitations by customer group at fixed monthly prices. Currently, each distribution company procures its power for basic service residential and commercial customer groups on a staggered basis, securing half of its basic service supply for a twelve (12) month term semi-annually. Each electric distribution company procures power for its industrial customer group quarterly. In addition, however, DPU has the authority to approve long-term contracts of any duration and type, if proposed by a distribution company to credit distribution customers or meet future basic service needs.⁷

E. RHODE ISLAND

Long-Term Renewable Energy Contracts

Rhode Island facilitates development of new renewable energy resources by authorizing long-term contracts between them and electric distribution companies. Rhode Island's goals, as defined by state law, are to stabilize long-term energy prices, enhance environmental quality, create jobs in Rhode Island in the renewable energy sector, and facilitate the financing of renewable energy generation within the state or adjacent state or federal waters.

The Rhode Island Public Utilities Commission (RIPUC) has to adopt regulations to require all approved projects, regardless of their location, to provide other direct economic benefits to Rhode Island, such as job creation and increased property tax revenues.

Specifically, beginning July 1, 2010, Rhode Island's electric distribution companies must solicit proposals annually from renewable energy developers and enter into long-term contracts for the purchase of capacity, energy and RECs from newly developed renewable energy resources. Long-term contracts are defined as not less than ten (10) and not more than fifteen (15) years, or longer with RIPUC approval.

The electric distribution companies will propose a timetable and method of soliciting proposals from renewable energy developers and the execution of the contracts. The timetable is to result in the electric distribution company having the minimum long-term contract capacity under contract within four (4) years of the date of the first solicitation. The projects under contract need not be operational within four (4) years. The process will include an annual public solicitation and may also include individual negotiations.

Electric distribution companies do not have to enter into long-term contracts that would, in the aggregate, exceed ninety (90) megawatts, but may do so voluntarily if the RIPUC agrees. The electric distribution companies will follow a four (4) year phased schedule:

- By year end 2010: 25% of 90 megawatts;
- By year end, 2011: 50% of 90 megawatts;

⁷

M.G.L. c. 164, s. 94A.

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- By year end 2012: 75% of 90 megawatts;
- By year end, 2013: 90 megawatts.

All long-term contracts require RIPUC approval. The RIPUC will approve proposed contracts if it determines the contract is commercially reasonable; the requirements for the annual solicitation have been met; and the contract is consistent with the purposes of the enabling statute.

As long as the electric distribution company has entered into long-term contracts, they will not be required to enter into power purchase contracts with renewable generation projects for power or RECs with terms of more than three (3) years to meet RPS requirements.

All energy and capacity purchased by an electric distribution company must be immediately sold into the wholesale spot market, unless the RIPUC approves otherwise. The electric distribution companies may, but will not be required to use the energy, capacity and other attributes purchased for resale to customers and/or to use the RECs to meet their RPS obligations.

Long-Term Contracts with Rhode Island Wind

Separately, Rhode Island has adopted a process by which a wind developer can develop and request the RIPUC to require the electric distribution company to enter a long term contract with a wind power project between 100 and 150 megawatts located in the waters of Rhode Island or adjacent federal waters.

Default Service Procurement

In Rhode Island, the electric distribution companies procure standard service through competitive processes and enter contracts approved by the RIPUC. The RIPUC has recently opened a proceeding to result in the promulgation of Rules and Regulations Governing a Long-Term Contracting Standard for Renewable Energy (Docket No. 4069).

F. CONNECTICUT

Connecticut, through the Department of Public Utility Control (DPUC), has broad authority to direct procurement of resources, including renewable resources, under its Integrated Resource Planning (IRP) process. Specifically, each year, the electric distribution review the state's energy and capacity resource assessment and develop a comprehensive plan for the procurement of energy resources. Resource needs have to be met first through all available energy efficiency and demand reduction resources that are cost-effective, reliable and feasible.

The proposed procurement plan provided to the DPUC for approval has to specify a number of items:

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- the total amount of energy and capacity resources needed to meet the requirements of all customers
- the extent to which demand-side measures can cost-effectively meet these needs
- needs for generating capacity and transmission and distribution improvements
- how the development of such resources will reduce and stabilize the costs of electricity to consumers
- *the manner in which each of the proposed resources should be procured, including the optimal contract periods for various resources.* (Emphasis added.)

The procurement plan has to also consider, among other items:

- approaches to maximizing the impact of demand-side measures
- *the extent to which generation needs can be met by renewable and CHP facilities* (Emphasis added)
- the optimization of the use of generation sites and generation portfolio existing within the state;
- fuel types, diversity, availability, firmness of supply and security and environmental impacts thereof, including impacts on meeting the state's greenhouse gas emission goals;
- reliability, peak load and energy forecasts, system contingencies and existing resource availabilities;
- import limitations and the appropriate reliance on such imports; and
- the impact of the procurement plan on the costs of electric customers.

Connecticut's Energy Advisory Board reviews, modifies and approve the procurement plan and forwards it to the DPUC for its review and approval.

The IRP provides guidance for the state's existing and new procurement programs. In its first IRP decision, the DPUC expressed interest in maximizing the consistency and coordination of standard service, provider of last resort and other procurement efforts with the IRP's needs assessment and procurement plan.

Long-Term Contracts with In-State Resources

Connecticut has authority to approve long-term renewable contracts through a program referred to as Project 150. That program requires Connecticut's electric distribution companies to contract for at least one hundred and fifty (150) MWs of output from renewable generators located in the State of Connecticut. The DPUC has approved contracts to fulfill the 150 MW mandate, however, as a statutory matter, more could be procured assuming the DPUC's concerns, such as consumer price impacts, are satisfied.

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REC Procurement

The DPUC has authorized Connecticut's electric distribution companies to solicit RECs through long-term contracts. Connecticut's electric distribution companies can propose such a solicitation at such time that they determine that a solicitation would be in the best interest of ratepayers to reduce the costs of meeting the RPS.

Standard Service Procurement

The DPUC has authorized its electric distribution companies to investigate the use of long-term contracts to help stabilize and reduce standard service generation rates. This procurement could include renewable generators under bundled energy/capacity/REC contracts. A decision on that question is pending in a DPUC proceeding.

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POWER PROCUREMENT AND CONTRACT SYNCHRONIZATION OPPORTUNITIES

The review of states' authority suggests that sufficient contracting mechanisms and commonality of purpose exist across New England to enable some degree of synchronized procurement.

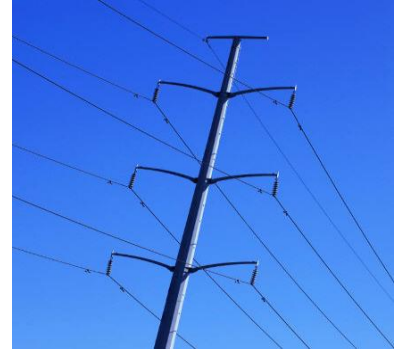
1. Every New England state has current statutory authority to approve long-term contracts for capacity, energy and/or RECs.
2. Across New England, procurement is generally executed through competitive solicitations.
3. Typically, competitive procurement is implemented by electric distribution companies, subject to the review and approval by the states' Public Utility Commissions. In some states, such as Vermont and Maine, state entities are authorized to act on the state's behalf. In all cases, however, the states are the ultimate arbiter of whether and what resources are awarded contracts.
4. The states generally have authority to determine appropriate contract term lengths.
5. State programs designed to promote in-state resources, such as Vermont's SPEED program, Connecticut's Project 150 and Rhode Island's off-shore wind initiative notwithstanding, a majority of the New England States, including New Hampshire, Massachusetts, Maine, Vermont and Connecticut, appear to have significant flexibility with respect to contracting for resources whether located within or out of state.
6. New Hampshire and Connecticut have regularly scheduled opportunities to assess needs and resource options in the context of their integrated resource planning proceedings, which provides flexibility to synchronize with states that may have less flexibility.
7. A common goal reflected in each New England state's authority to approve long-term contracts relates to securing low cost, cost-effective or cost-stabilizing power.

Together, the states' mutual authority, competitive solicitation processes, and universal focus on cost to consumers provides the foundation for a multi-state or regionally synchronized approach to support those renewable resources able to serve New England consumers most cost effectively. Specific means will require detailed review and discussion by and between the states in the coming months, with input from effected participants including, for example, load serving entities that procure power and renewable energy project proponents.

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IV. OPPORTUNITIES TO COORDINATE SITING OF INTERSTATE TRANSMISSION FACILITIES

A number of potential transmission projects can be identified that would enable development of our renewable resources and the reliable transfer of power from the region's on- and off-shore wind resources to load across New England, and, potentially, to our neighbors. New England is fortunate that developing in-region renewables and accessing renewable energy from our closest neighboring systems is possible with significantly less capital investment for transmission infrastructure than would be required to import an equivalent quantity of power from more remote, out-of-region sources on new, high-voltage transmission lines. Ultimately, whichever renewable resources and associated transmission projects emerge from the market as the most cost-effective option, delivering renewable power to our consumers will require siting new transmission facilities in New England.



In recent years, New England has reviewed, approved and sited significant new transmission facilities. Specifically, Connecticut, Maine, Massachusetts and Vermont have sited about four (4) billion dollars in new transmission facilities. New England also has about five (5) billion dollars in new transmission projects currently on the horizon. These include projects under construction in Vermont, New Hampshire and Rhode Island and under study in Maine and the three southern New England states. On the generation side, New England has seen more than 10,000 MW of new supplies added to the system. New England's recent and considerable experience siting new transmission facilities in a way that respects local concerns will serve the region well in the context of siting new transmission facilities to accommodate new renewable resources.

Coupling this experience with New England's long history of working collaboratively on complex energy and environmental matters will assist the timely development of needed infrastructure. More specifically, a concerted effort to coordinate state siting reviews of interstate transmission facilities in a way that takes advantage of opportunities within the confines of state siting laws can increase efficiency and certainty to transmission project proponents most able to deliver renewable power cost-effectively.

In this process, we remain cognizant that siting is inherently local. In the course of siting new transmission facilities in recent years, including some in New England's most densely populated areas, state siting processes ensured decision-makers were aware of, and responsive to, local concerns. This will not change. Prospective efforts to coordinate review and approval of interstate transmission projects will respect local concerns, such as facility pathways, and statutory requirements, such as hearings in local communities.

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The sections that follows reviews the statutory basis in each state that enables multi-state coordination; identifies areas in state siting processes that present coordination opportunity; and, identifies general means of coordination. The details of coordination for any particular project will necessarily require state-to-state discussions to fully account for the nuances in state laws.

A. THE SIX NEW ENGLAND STATES GENERALLY HAVE THE NECESSARY STATUTORY PREREQUISITES TO ENABLE SITING COORDINATION.

i. Across New England, Transmission Projects Capable of Moving Renewable Power to Load Centers Will Require State Siting Approval.

As a threshold matter, the six New England states have roughly comparable definitions of transmission facilities that require state siting approval. Despite slight statutory variations, the six states' statutory definitions of "facilities" subject to siting review and approval makes clear that a proposed transmission facilities of 345 kilovolts or more would require siting approval in each New England state.

In **Connecticut**, a "facility" means an electric transmission line of a design capacity of 69 kilovolts or more, including associated equipment, but not including a transmission line tap. Conn. Gen. Stat. §16-50i(a)(1).

Massachusetts defines a "facility" subject to siting review to include, among other things, a new electric transmission line having a design rating of 69 kilovolts or more and which is one mile or more in length on a new transmission corridor and a new electric transmission line having a design rating of 115 kilovolts or more which is 10 miles or more in length on an existing transmission corridor except reconductoring or rebuilding of transmission lines at the same voltage. M.G.L.c. 164, §69 G. In the case of an electric company (utility) project, separate authorization that transmission is necessary for the purpose alleged, and will serve the public convenience and is consistent with the public interest is required, applicable to a company's construction and use (or continued use) of a line for the transmission of electricity for distribution in some definite area, or for supplying electricity to itself, another electric company, a municipal lighting plant, or a railroad, street railway or electric railroad. M.G.L.c. 164, §72.

In **Maine**, a utility must receive, a certificate of public convenience and necessity from the Siting Authority⁸ before erecting a transmission line with a capacity of 100 kilovolts or more or rebuilding or relocating a transmission line that has, or will have a capacity of 100 kilovolts or more.

⁸ For ease of review, the entity in each state responsible for siting is referred to as "Siting Authority".

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New Hampshire defines a facility subject to the jurisdiction of the Site Authority to include:

- transmission lines of 100 kV or more associated with a generating facility over a route not already occupied by an existing transmission line;
- transmission lines of 100 kV or more and greater than 10 miles in length over a route not already occupied by an existing line;
- new transmission lines of greater than 200 kV, and
- any other facility and associated equipment that the Committee determines requires a certificate, either on its own motion or by petition brought to the Committee, pursuant to 162-H:2, XI (c), by 100 or more registered voters in the host community or abutting communities, or by the governing body of the host community or 2 or more governing bodies of selectmen of abutting communities. RSA 162-H:2, VII

In **Rhode Island**, siting of transmission lines of 69Kv or over are under the authority of the Siting Authority.

Vermont has authority over siting of any transmission facility.

ii. The Six New England States Generally Have Exclusive Siting Authority

In New England, state authority over transmission facility siting is generally exclusive, which makes state-level efforts to coordinate of siting review and approvals meaningful.

Connecticut's Siting Council has exclusive jurisdiction over the location and type of facilities and over the location and type of modifications of facilities, considering any location preferences or criteria provided by municipality. Municipalities can regulate and restrict the proposed location of the proposed facility subject to a right of appeal whereby the Siting Council can affirm, modify or revoke any order by a vote of six members. Conn. Gen. Stat. §16-50x

In **Rhode Island**, a licensing decision issued by the Siting Authority constitutes the sole, final, binding, and determinative regulatory decision within the state for the purposes of siting, building, operating, or altering a major energy facility.

Similarly, **Vermont's** Siting Authority is exclusive.

Maine's Siting Authority is exclusive on energy issues; Maine's Department of Environmental Protection and Land Use Regulation Commission reviews under state environmental and land use statutes.

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New Hampshire's Site Authority siting authority is also exclusive. However, the Committee has to incorporate in any certificate such terms and conditions that may be specified ... by any of the other state agencies having jurisdiction, under state or federal law, to regulate any aspect of the construction or operation of the proposed facility. RSA 162-H:16. If any of the other state agencies denies authorization for the proposed activity under its jurisdiction, the Site Evaluation Committee cannot issue a certificate.

Massachusetts' Siting Authority is primarily the jurisdiction of the Massachusetts Department of Public Utilities and the Energy Facilities Siting Board, but such jurisdiction is not entirely exclusive. Municipal and other authority may apply with respect to local and regional permitting and approvals. However, where a permitting decision by a state or local agency would delay or prevent the construction of a proposed energy facility approved under M.G.L. c. 164, § 69J, the state Siting Authority may override that decision to issue a Certificate containing the necessary approval. M.G.L. c. 164, §§ 69K-69O. The Certificate provisions assist the Siting Authority in carrying out its primary mandate, "so as to provide a reliable energy supply for the commonwealth with a minimum impact on the environment at the lowest possible cost." M.G.L. c. 164, § 69H. The override authority extends to "all individual permits, approvals, or authorizations ...necessary for the construction and operation" of a proposed energy facility. M.G.L. c. 164, § 69K.

iii. The New England States Have Sufficient Statutory Flexibility To Coordinate Siting and Several States Have Specific and Broad Coordination Authority.

There appears to be no statutory prohibitions that would prevent the New England states from coordinating certain aspects of their siting review processes. Two states – Massachusetts and Vermont - have specific and broad authority to coordinate with all other states, including the authority to hold joint hearings, to issue joint or concurrent orders, and to enter compacts or agreements with other states. New Hampshire has specific authority to consult with Maine, Vermont and Massachusetts. As discussed further below, this flexibility to coordinate, when coupled with other elements of state siting processes, create opportunity to synchronize siting review and approval processes.

In **Massachusetts**, coordination with other states and joint hearings are specifically authorized. The Massachusetts Siting Authority is authorized to make joint investigations, hold joint hearings in or outside of Massachusetts, and issue joint or concurrent orders in conjunction or concurrence with any official agency of any state or of the federal government. The Massachusetts Siting Authority can function under agreements or compacts between states or under the concurrent power of states to regulate interstate commerce, or as an agency of the federal government. It is further authorized to negotiate and enter into agreements or compacts with agencies of the

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federal government or other states, pursuant to any consent of congress, for cooperative efforts in certifying the construction, operation and maintenance of energy facilities. M.G.L. c. 164, § 69Q.

In **Connecticut, Rhode Island and Maine**, coordination with other states is not prohibited.

Connecticut law references a regional view in several ways. With respect to its Siting Authority, it requires "...annual forecasts of the demand for electric power, together with identification and advance planning of the facilities needed to supply that demand and to facilitate local, regional, state-wide and interstate planning to implement the foregoing purposes." Conn. Gen. Stat. Sec. 16-50g. Connecticut also authorizes the Department of Public Utility Control to enter into compacts with the states of New York, Vermont, Massachusetts, Rhode Island, New Jersey and Pennsylvania, or any one or more of those states, for the purpose of establishing joint regulation and control of rates for electricity and gas transmitted between such states. Any such compact requires approval by the Connecticut General Assembly and the Congress of the United States. Conn. Gen. Stat. Sec. 16-48.

Vermont has specific authority to make joint investigations, hold joint hearings within or without the state of Vermont, and issue joint or concurrent orders in conjunction or concurrence with any official, board, commission, or agency of any state or of the United States. In holding such investigations or hearings or in making of such orders, Vermont may function under agreements or compacts between states or under the concurrent power of states to regulate interstate commerce, or as an agency of the federal government, or otherwise. Title 30, Section 33.

New Hampshire has authority to coordinate siting with other states. By statute, New Hampshire's Siting Authority "may consult with interested regional agencies and agencies of border states" in the consideration of siting certificates. RSA 162-H:16, III.

B. NEW ENGLAND STATES' SITING PROCESS TIMEFRAMES, GENERAL APPLICATION CONTENT REQUIREMENTS AND REQUIRED COMMON FINDINGS PRESENT OPPORTUNITIES FOR COORDINATION.

i. The New England States' Siting Review Process Timelines are Sufficiently Similar to Enable Some Degree of Simultaneous Review.

The typical timeframe in which New England Siting Authorities must act on applications from transmission project proponents is about one (1) year. Maine has the most aggressive schedule contemplated by statute, six months, although that can be extended under certain circumstances. Roughly similar timeframes present an opportunity for concurrent multi-state review of some aspects of interstate transmission projects.

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In **Massachusetts**, the Siting Authority's review of a facility proposal typically is completed within a year; however, the length of the review varies with the type and complexity of the facility proposal.

In **New Hampshire**, the state Siting Authority must accept or reject an application within 60 days of receipt. RSA 162-H:7, VI. If the application is "administratively incomplete," as determined by the State, the applicant may cure the defects within 10 days. RSA 162-H:7, VI. New Hampshire's Siting Authority must issue or deny certification for a proposed energy facility within nine (9) months of acceptance of an application. RSA 162-H:7, VI-d.

In **Rhode Island**, the Siting Authority has thirty (30) days to notify an applicant that the filing is complete and to docket the matter. When deficiencies are found, the applicant has 15 days to resubmit. Within 60 days of docketing, the Siting Authority must convene a preliminary hearing on the application to determine issues and to designate the state and other agencies which shall render advisory opinions. The Siting Authority has thirty (30) days following conclusion of the preliminary hearing to issue this decision. Each agency of the state or political subdivisions designated by the Siting Authority to render an advisory opinion has not more than six (6) months to submit its report. Final hearings are to be convened within forty-five (45) days after the final date for submission of advisory opinions. They shall be concluded within sixty (60) days. The Siting Authority has to issue its final decision within sixty (60) days of the conclusion of final hearings.

Connecticut's Siting Authority has to issue a decision not later than twelve (12) months after the deadline for filing an application following another agency's request for proposal (RFP) process to seek alternative solutions to the need that will be addressed by the proposed facility. Conn. Gen. Stat. §16-50p(a)(2)(A)

Maine's Siting Authority must issue an order within six (6) months after a petition for approval of a transmission line is filed. However, this period can be extended either by agreement of all the parties or by the Maine Siting Authority upon its determination that the party seeking the extension had to that time prosecuted its case in good faith and with due diligence, was seeking the extension because of circumstances beyond that party's control for which it had no reasonable substitute, and would be unreasonably disadvantaged unless the extension were granted. Chapter 330. Environmental review by the Maine Department of Environmental Protection is subject to a similar 185 day period; all five transmission projects submitted in the last six years were approved by the Maine Department of Environmental Protection within this timeframe. Depending on the facility location, the Land Use Regulation Commission is the reviewing authority for transmission lines and has similar requirements and timeframes

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Vermont: Vermont does not have a statutory deadline for siting approvals as it does for other significant matters, such as rate cases. The state's last major project's siting process took approximately eighteen (18) months.

ii. The New England States' Siting Applications Are Comprehensive, Distinct, and Generally Reflect Information Required to Support the Findings Each State Siting Authority is Required to Make, However, Some Common Elements of the Applications Present Coordination Opportunity.

Each New England state has detailed comprehensive content requirements with which siting applicants must comply. In general, the application content requirements reflect the information a state needs to make specific findings required by law. Despite these variances, most New England states have some common applications requirements, either explicitly or implicitly to support required findings, such as:

- a description of the proposed facility and maps (RI, CT, NH, ME, MA, VT)
- analysis of the need for the facility (RI, CT, ME, MA, VT)
- the facility's impact on system operation and/or reliability (CT, ME, MA, VT)
- costs (RI, CT, ME, MA, VT)

Such mutual requirements present an opportunity for the states to request that applicants provide a uniform component to state siting applications across state boundaries.

In addition, most New England states require transmission project proponents to submit some type of analysis demonstrating that they examined alternatives:

In **Massachusetts**, a non-transmission alternative analysis is generally presented as part of an applicant's petition. The application has to include, among other items, a description of the alternatives to the facility, such as other methods of transmitting or storing energy, other site locations, other sources of electrical power, or a reduction of requirements through load management. In addition, project proponents must submit a "No Build Alternative." M.G.L. c. 164, § 69J.

In **Connecticut**, a state agency has to issue a Request for Proposals (RFP) for alternative solutions to the need that will be addressed by a proposed transmission facility fifteen (15) days after a petitioner files a project for approval with the Siting Authority. The RFP is to solicit proposals that include distributed generation or energy efficiency measures. Conn. Gen. Stat. §16a-7c. A transmission project can be exempt from such RFP for alternatives if the agency that conducts them finds good cause for such exemption, which may include, among other items, whether the petitioner seeking approval of a transmission project performed non-transmission alternative analysis.

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In **New Hampshire**, as a general matter, the Siting Authority must make its findings after having considered available alternatives. RSA 162-H:16, IV. The Siting Authority does not, however, have an express requirement to analyze non-transmission alternatives.

Maine requires that petitioners seeking siting approval to state whether alternatives, including conservation, distributed generation or load management to the proposed transmission line project were investigated. If the petitioner has investigated alternatives, the petition has to include all studies, reports, or other data relied upon in the investigation of such alternatives and state the process by which petitioner decided upon the proposed construction, rebuilding, or relocation project. The petitioner also has to state the purposes and benefits of the proposed project, such as the promotion of reliability and line loss reduction, and whether cost-benefit analyses have been performed. Chapter 330.

Rhode Island requires siting applications to include a study of alternatives to the proposed facility, including alternatives as to energy sources, methods of energy production, and sites for the facility, together with reasons for the applicant's rejection of these alternatives. The study has to include estimates of facility cost and unit energy costs of alternatives considered. Section 42-98-8.

Vermont's statutory scheme includes least cost integrated planning, a component of which requires owners of transmission facilities to file transmission system plans at least every three years, and more often if requested by the state, that looks forward for a period of at least ten (10) years. The objective of the plan is to identify the potential need for transmission system improvements as early as possible, in order to allow sufficient time to plan and implement more cost-effective non-transmission alternatives to meet reliability needs wherever feasible. Section 218c.

iii. While Each New England State Siting Authority Must Make Unique Findings to Approve a Transmission Facility, Most States Have the Common Obligation to Make a Finding of Need for the Proposed Project.

In each state, the Siting Authorities have to make specific findings based the evidence presented in connection with a proposed transmission facility in order to grant siting approval. The findings required and associated criteria are varied. They range from environmental considerations to cost evaluations to conformance to local development policies. A common and central required finding relates to the need for the proposed facility, which presents coordination opportunity.

In **Massachusetts**, the Siting Authority must approve construction of proposed facilities if:

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- all information...is substantially accurate and complete;
- projections of the demand for electric power...and of the capacities of existing and proposed facilities are based on substantially accurate historical information and reasonable statistical projection methods and include an adequate consideration of conservation and load management;
- projections relating to service area, facility use and pooling or sharing arrangements are consistent with...forecasts...projections...of other companies in the New England area;
- plans for expansion and construction...are consistent with current health, environmental protection and resource use and development policies as adopted by the Commonwealth;
and such plans are consistent with the policy...to provide a necessary energy supply with a minimum impact on the environment at the lowest possible cost. M.G.L. c. 164, § 69J.

In the case of an electric company (utility) project, the Massachusetts Siting Authority separately authorize construction, use or continued use of a transmission line, if it determines that the facility ***is necessary for the purpose alleged, and will serve the public convenience and is consistent with the public interest.*** M.G.L. c. 164, § 72. (Emphasis added.)

As basis for authorizing construction, use or continued use of a transmission line, the Massachusetts Siting Authority may determine that the facility is necessary for the purpose alleged, and will serve the public convenience and is consistent with the public interest. (Emphasis added.)

In **Maine**, the Siting Authority must make a specific finding with regard to the ***need*** for the proposed transmission line in its order deciding whether to issue a certificate of public convenience and necessity. ***If a public need for the proposed transmission line exists, it will issue a certificate of public convenience and necessity for the transmission line.*** 35-A M.R.S.A. § 3132(6). (Emphasis added.)

In Maine, public need is defined in statute. The Siting Authority establishes public need by determining that ratepayers will benefit by the proposed transmission line. Benefits are determined based upon the electrical need for the line, taking into account economics, safety and reliability. The proposed transmission line must be reasonable compared to the other alternatives. Cost is an important consideration, but public need can be established for a proposed transmission line that is not the least cost alternative because aesthetic, environmental or other factors justify a reasonable cost increase. Public need of a transmission line proposed by a non-utility, and for which a certificate of public convenience and necessity is required, is determined in the same manner that the state determines public need for a transmission line proposed by a transmission and distribution utility.

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Connecticut requires its Siting Authority to find the following prior to granting a certificate to a proposed transmission project:

- ***A public need for the facility and the basis of the need;*** (Emphasis Added.)
- The nature of the probable environmental impact of the facility alone and cumulatively with other existing facilities;
- Why any adverse environmental effects are not sufficient reason to deny the application;
- For an electric transmission line:
 - What part, if any, should be located overhead;
 - That the facility conforms to a long-range plan for expansion of the electric power grid;
 - That the overhead portions, if any, are cost effective and the most appropriate alternative based on a life cycle cost analysis and underground alternatives
- The location of the line will not pose an undue hazard to persons or property along the area traversed by the line;
- For an application an application heard under a consolidated hearing process with other applications that were common to a request for proposal, that the facility proposed in the subject application presents the most appropriate alternative among such applications.

Connecticut's Siting Authority must also comply with statutory requirements concerning transmission facilities proposed to be underground, underwater and/or overhead. Conn. Gen. Stat. §16-50p.

In **Rhode Island**, the Siting Authority grants a license to an applicant only if the applicant can show that:

- ***Construction of the proposed facility is necessary to meet the needs of the state and/or region for energy of the type to be produced by the proposed facility.*** (Emphasis added.)
- The proposed facility is cost-justified, and can be expected to produce energy at the lowest reasonable cost to the consumer consistent with the objective of ensuring that the construction and operation of the proposed facility will be accomplished in compliance with all of the requirements of the laws, rules, regulations, and ordinances, under which, absent this chapter, a permit, license, variance, or assent would be required, or that consideration of the public health, safety, welfare, security and need for the proposed facility justifies a waiver of some part of the requirements when compliance cannot be assured.
- The proposed facility will not cause unacceptable harm to the environment and will enhance the socio-economic fabric of the state.

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In **New Hampshire**, the Siting Authority has to incorporate in any certificate it issues the “terms and conditions as may be specified to the committee by any of the other state agencies having jurisdiction, under state or federal law, to regulate any aspect of the construction or operation of the proposed facility.” RSA 162-H:16. If any of the other state agencies denies authorization for the proposed activity over which it has jurisdiction, the New Hampshire Siting Authority may not issue a certificate. The Siting Authority has to make certain findings after considering available alternatives and fully reviewing the environmental impact of the site or route and other relevant factors. RSA 162-H:16. They include the following:

- applicant has adequate financial, technical, and managerial capability to assure construction and operation of the facility in continuing compliance with the terms and conditions of the certificate;
- the site and facility will not unduly interfere with the orderly development of the region with due consideration having been given to the views of municipal and regional planning commissions and municipal governing bodies; and
- the site and facility will not have an unreasonable adverse effect on aesthetics, historic sites, air and water quality, the natural environment, and public health and safety.

Vermont's Siting Authority has to make the following findings before issuing a certificate of public good:

- with respect to an in-state facility, will not unduly interfere with the orderly development of the region with due consideration having been given to the recommendations of the municipal and regional planning commissions, the recommendations of the municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality.;
- ***is required to meet the need for present and future demand for service which could not otherwise be provided in a more cost effective manner*** through energy conservation programs and measures and energy-efficiency and load management measures... (Emphasis added);
- will not adversely affect system stability and reliability;
- will result in an economic benefit to the state and its residents;
- with respect to an in-state facility, will not have an undue adverse effect on esthetics, historic sites, air and water purity, the natural environment and the public health and safety;
- with respect to purchases, investments, or construction by a company, is consistent with the principles for resource selection expressed in that company's approved least cost integrated plan;
- except as to a natural gas facility that is not part of or incidental to an electric generating facility, is in compliance with the electric energy plan ... or that there exists good cause to permit the proposed action;

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- does not involve a facility affecting or located on any segment of the waters of the state that has been designated as outstanding resource waters by the water resources board, except that with respect to a natural gas or electric transmission facility, the facility does not have an undue adverse effect on those outstanding resource waters;
- except as to a natural gas facility that is not part of or incidental to an electric generating facility, can be served economically by existing or planned transmission facilities without undue adverse effect on Vermont utilities or customers.

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INTERSTATE TRANSMISSION FACILITY SITING COORDINATION OPPORTUNITIES

The states' distinct substantive and procedural statutory siting requirements prescribe in large part the way in which siting review processes must proceed in each state. However, the same laws, to varying degrees, present opportunity for interstate coordination. To the extent siting approvals can be coordinated within the bounds of state law, interstate transmission projects that emerge as the most cost-effective way to deliver renewable power to our consumers could be sited more quickly than would otherwise occur.

As noted, the precise type and extent of coordination will depend, in part, on the states in which the proposed project will be located. For example, a transmission project located in New Hampshire and Massachusetts presents a high degree of coordination opportunities, given Massachusetts' specific authority to hold joint hearings out of state and to issue concurrent orders and New Hampshire's specific authority to consult with neighboring states in the course of siting facilities. A facility located in Rhode Island and Connecticut might require a slightly different degree of coordination. Going forward, states in which interstate transmission projects are proposed can develop specific coordination paths that reflect nuances in state law.

In general, however, New England could facilitate siting of certain interstate transmission facilities by:

1. Conducting approximately concurrent state siting reviews.
2. Requesting from interstate transmission project applicants a common component of the application (including project description, maps, information on the facility's system impact, costs, and related items) as well as common testimony on the need the facility is intended to meet and the alternatives considered.
3. Issuing coordinated discovery on the overall project to ensure the states possess uniform information, presented consistently, and to streamline applicants' responses to state requests for information.
4. Conducting a joint hearing on specific issues, where authorized, in connection with the common findings states must make, such as need. A joint hearing on a narrow set of common issues would not displace local hearings as required by law or regulation that allow examination of state-specific criteria in support of state-specific findings.
5. Considering adopting joint, concurrent or similar orders on common required findings.

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V. STATE-FEDERAL PARTNERSHIP OPPORTUNITIES TO FACILITATE DELIVERY OF COST-EFFECTIVE POWER TO NEW ENGLAND CONSUMERS

A critical element to bringing new renewable resources to market is a constructive partnership between state and federal governments. A state-federal partnership through which New England and federal officials work together to serve customers with low-carbon, secure, cost-effective sources of electricity elevates the probability of success in advancing state policy objectives and the nation's interest in reducing carbon emissions, stabilizing and diversifying energy supply, and reducing reliance on foreign fossil fuel.



A platform for a state-federal partnership exists in the form of the Department of Energy's (DOE) *Assessment and Interconnection Level Transmission Analysis and Planning*.⁹ In announcing funding to facilitate this planning activity, DOE stated that “[r]obust transmission and distribution networks are essential to enable the development, integration, and delivery of new renewable and other low-carbon resources, and the use of low-carbon electricity to displace petroleum-based fuels from the transportation sector.”¹⁰

The RDSA and the Blueprint will be a valuable input to this national planning dialogue, and can facilitate consideration of policy objectives, modeling scenarios, and regional and national renewable resource potential in interregional analyses.

In our view, consumers would be best served by coordination between interconnection wide planning analyses and regional planning. The New England states further believe that to achieve our mutual policy objectives, any federal financial assistance - direct or indirect - for renewable power development and/or transmission upgrades must also be in the first instance linked to regional planning and scenario analysis.

Accordingly, the federal government should:

- Respect regional system planning processes and consider the results of regional transmission system plans and renewable resource scenario analysis as guidance in connection with interconnection wide analyses and any federal financial support for renewable energy infrastructure development.

⁹ Recovery Act-Resource Assessment and Interconnection-Level Transmission Analysis and Planning Funding Opportunity Number DE-FOA0000068, dated June 15, 2009, at pages 5 and 6.

¹⁰ *Id.*, at page 5.

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- Support New England's plan to encourage development of renewable resources in the context of competitive market mechanisms or solicitations for the benefit of consumers. To the extent federal financial assistance is directed to renewable resource development, direct such assistance to resources that emerge in the market, or through competitive processes, and support those that would serve customers most cost-effectively.
- Give priority to renewable resources identified in regional processes as the most cost effective means to serve customers when some or all of the following occur:
 - The associated facilities are offered and supplied through existing regional wholesale market mechanisms, or through state or regional procurement processes that result in acquisition of the lowest-cost resources.
 - New federal funds are made available for the development of renewable resources and associated infrastructure.
 - The Department of Interior, Minerals Management Service prioritizes permitting applications for off-shore wind projects located in *federal* waters to expedite approvals. Formal coordination by and between state and federal permitting processes, such as, for example, a rebuttable presumption of the validity of certain facts and findings developed in state proceedings, could expedite approvals without compromising the purpose of the review and approval process.
 - The federal resource agencies prioritize permitting applications for off-shore wind projects located in *state* waters that require federal permits to expedite review and approval. Again, formal coordination by and between state and federal permitting processes, such as, for example, a rebuttable presumption of the validity of certain application requirements, pre-construction studies, facts and findings developed in state proceedings, could expedite approvals without compromising the purpose of the review and approval process.

VI. CONCLUSION

New England has a vast quantity of commercial-scale and advanced untapped renewable resources in and around the New England region. Even if developed at conservative levels, there are ample resources to enable New England to meet its renewable energy goals and to reduce reliance on carbon-emitting generation. More aggressive development would enable New England to export renewable power to neighboring regions. The RDSA demonstrates that New England has choices about the level of renewable resource development to meet various objectives; these choices can be substantially informed by cost

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considerations given the differences in transmission infrastructure costs needed to accommodate incremental levels of renewable resources.

New England also has the essential elements in place to help bring cost-effective, secure, low-carbon resources to market. Among them are a long history of collaborative working relationships among the states and our Canadian neighbors on complex energy and environmental matters; considerable recent experience successfully siting significant transmission facilities; and, substantial authority associated with competitive solicitations and contracts for generating resources.

Bringing together our collaborative experience with opportunities to coordinate transmission facility siting and power procurement will strengthen the region's ability to help bring new renewable resources to market within the current market structure. A state-federal government partnership in this effort will reinforce New England's ability to advance our clean energy goals and the nation's interest in reducing carbon emissions, diversifying energy supply and reducing reliance on foreign fossil fuel.