DIRECT TESTIMONY

OF

JONATHAN H. WINER

MANAGING CONSULTANT, LA CAPRA ASSOCIATES, INC.

BEFORE THE MAINE LAND USE REGULATION COMMISSION

REGARDING REDINGTON WIND FARM ZONING PETITION 702

ON BEHALF OF

NATURAL RESOURCES COUNCIL OF MAINE

SUBMITTED ON JULY 14, 2006

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OF
JONATHAN H. WINER

I. QUALIFICATIONS

Q. Please state your name, position, and business address.

A. My name is Jonathan H. Winer. I am a Managing Consultant at La Capra Associates, Inc. My business address is 20 Winthrop Square, Boston, MA 02110.

Q. Please summarize your professional experience and qualifications.

A. I have worked in the electric energy industry since 1983 with major focal points including power contracts, project analysis, and renewable energy projects and policy. During this time, I have evaluated the financial and legal aspects of many independent power and energy efficiency projects across the United States. This work has included diverse perspectives. From 1983 to 1989, I served as in-house counsel to Green Mountain Power where, among other things, I managed the 1989 installation of the two-turbine wind test site at Equinox Mountain in Manchester, Vermont. From 1989 to 2001, I set up and managed a Green Mountain Power subsidiary that invested in independently owned electric projects including two California wind power projects. From 2001 to 2003, I directed the initiatives of a wind power development company in the eastern U.S. and Canada. I joined La Capra Associates in 2003, where much of my work has focused on renewable energy policy and project analysis, power contract analysis, and utility planning and ratemaking.

I hold a J.D. from the New York University School of Law (1976) and a bachelor's degree from Dartmouth College (1973) where I majored in economics. I am a member of the New York and Vermont bars though I am classified as inactive since I am not currently practicing law.

A copy of my resume is attached as Exhibit JHW-1.

Q. Please summarize La Capra Associates and its business.

A. La Capra Associates provides consulting services in energy planning, market and project analysis, and regulatory policy in the electricity and natural gas industries. We serve a broad range of organizations involved with energy markets, including public and private utilities, project developers, energy producers and traders, financial institutions and investors, consumers, regulatory agencies, and public policy and energy research organizations. Our technical skills include power market forecasting models and methods, economics, project financial analysis, planning, rates and pricing, energy procurement, and contracting.

II. PURPOSE OF TESTIMONY

Q. On whose behalf are you appearing in this proceeding?

A. I am testifying on behalf of the Natural Resources Council of Maine ("NRCM").

Q. What is the purpose of your testimony?

A. NRCM asked La Capra Associates to analyze whether a 54 Megawatt ("MW")[1] project on the Black Nubble Ridge has the potential to be economic given the information provided by the Applicant and our general knowledge of relevant

[1] A Megawatt equals 1,000 kilowatts.

energy markets. In addition, we were asked to (1) discuss the growing demand for renewable energy in the region and (2) comment on how this project might relate to that demand and to regional policies that promote renewable energy generation.

III. ANALYSIS

Q. Please describe the analysis that you performed.

A. We reviewed the project specific information provided by the Applicant in this Petition, including various responses to questions asked by NRCM. That information includes some expected cost and performance details for (1) the proposed 90 MW project (36 MW on Redington Mountain and 54 MW on Black Nubble), and (2) a scaled down 54 MW project that would consist of 18 turbines on Black Nubble only.

We entered that information into our wind project spreadsheet model in order to estimate financial results for each of the two project scenarios over the expected life of the project. In so doing, we think that we have created a model that closely tracks with the Applicant's financials. As part of this process (and as discussed below), we estimated the revenue required to allow each project scenario to achieve typical industry returns on investment.

Q. How accurate is your analysis?

A. The major cost drivers of wind projects are well known and reasonably well understood. In fact, using the available project specific information plus some standard industry information where needed, we can run cost, revenue, and rate of

return scenarios that we believe are extremely close to those that have been run by the Applicant. Accordingly, we are confident that our model provides an accurate view of the proposed project.

Q. Please summarize your findings.

A. As stated by the Applicant, in its response (received by LURC 6/2/06) to questions submitted by LURC and State Agencies, the 90 MW project would have lower costs on a per turbine basis than the 54 MW project, greater energy output, and a lower cost per Megawatt-hour ("MWh")[2] of output. Because of these economies of scale and a better wind resource on Redington Mountain, the 54 MW project would need to achieve higher revenues per MWh than the 90 MW project in order to provide the same return to investors.

Each project ownership team must decide for itself what financial expectations and risk profile are sufficient to proceed with a project. However, as I discuss in greater detail below, our analysis shows that there is a realistic possibility that a 54 MW project at Black Nubble could attract the financing necessary for the project to be built. If such a project mitigated some of the concerns that have been raised about the full 90 MW project, then the 54 MW configuration would seem to be a constructive compromise that could provide meaningful additional clean power to the New England electrical grid.

Q. Can you elaborate briefly on the basis for your findings?

A. Yes. Our conclusion that a 54 MW project on Black Nubble is financially possible is based on a comparison of the estimated cost of installing and operating

[2] A Megawatt-hour (MWh) equals 1,000 kilowatt-hours.

a project on Black Nubble with the expected revenues from doing so.

Table 1 below shows the expected installed costs of the two projects and the revenues per MWh needed to produce the same level of earnings for the project owners.[3] In our modeling, we used an estimated capacity factor of 32.5% for the 90 MW configuration, and a 30% capacity factor for the 54 MW project. These figures are consistent with the Applicant's statement that the output per average turbine would be about 8% lower if only Black Nubble turbines were used. The installed cost estimates in Table 1 were supplied by the Applicant.

Table 1

Project Size	Capacity Factor	Total Installed Cost ($million)	Revenue Requirement ($/MWh)
90 MW	32.5%	$158	$70
54 MW	30.0%	$105	$88

For the last two years (June 2004 to May 2006), the wholesale, short-term energy prices that have been available at the Bigelow Substation (where we understand the project output will be delivered to the electric grid) averaged $59/MWh ($0.059/kWh), while Massachusetts Renewable Energy Certificates ("RECs") have been above $50/MWh ($0.050/kWh).[4] In other words, the value of a wind project at the Black Nubble site would have totaled more than $100/MWh

[3] In calculating the revenue needs, we assumed that the project would run for 20 years. Required revenues per MWh are calculated based on the annual required revenues divided by annual production of energy using the expected capacity factor.

[4] RECs are rights to renewable energy attributes of qualified resources. RECs are separated from the associated energy in order to derive additional value for resources meeting state renewable energy programs and voluntary green power programs. The price for RECs is typically measured on a per MWh basis.

($0.10/kWh) over the last two years, which is greater than the revenue requirement for the 54 MW project. While we do not think the energy prices and renewable energy premiums will stay at such high levels indefinitely, we do think that current market expectations could support a contract price that will allow the project to be financed.

Q. What does your analysis show in terms of the impact on unit revenue requirements of the 90 MW project vs. a 54 MW project?

A. As shown in Table 1, our model estimates that the revenue per unit of output from the 54 MW project would need to be about 25% higher than for the 90 MW project. The cost calculations shown for both projects take into account taxes and assume that the Applicant will achieve the same after-tax profit margin for either project. For our cost analysis we set the annual after-tax profit to investors at 9% without any debt, a value typical for a wind project financed with 100% equity.

Q. How might this substantial 25% increase in unit costs for the smaller project be addressed?

A. This can be addressed in two general ways: by enhancing the revenue stream and by reducing costs.

There are three sources of revenue for the project: (1) energy (measured in MWh); (2) capacity (measured in MW of potential instantaneous output); and (3) renewable energy certificates ("RECs") (measured in MWh).

The energy market compensates for the amount of electricity delivered over time, hence MWh. As noted above, the wholesale energy prices at the project's

proposed delivery point averaged $59 per MWh over the last two years. If we assume future prices may average in the range of $55 to $65 per MWh, the project would need to obtain about $23-$33 per MWh in other revenue and cost savings.

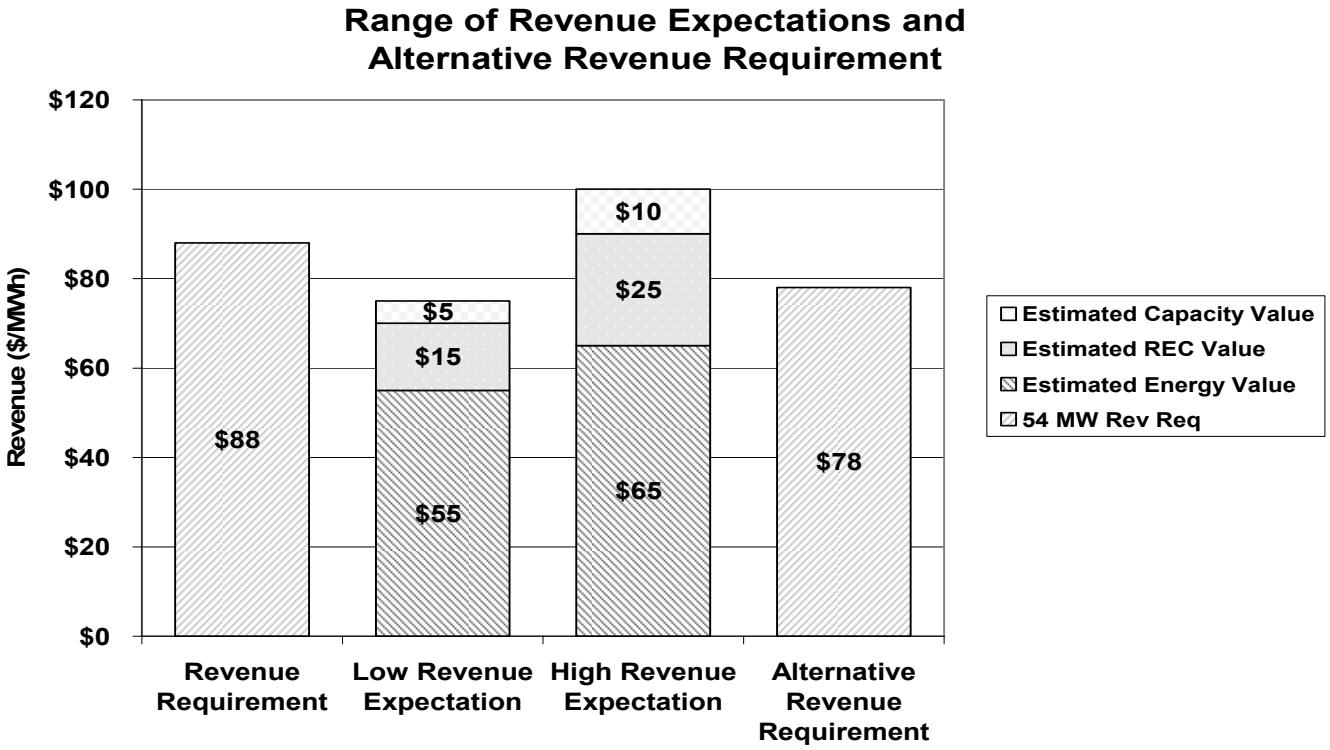
The electric capacity market provides a second source of project revenue. The capacity market compensates generation projects for the amount of electricity that can be delivered at any particular time. In June 2006, the Federal Energy Regulatory Commission approved a market structure that will provide additional revenues to all installed electric generation in New England, including intermittent resources such as wind. That ruling can be expected to add about $5 to $10 per MWh in revenues for the project under consideration.

The third revenue source for the project is REC revenues. These revenues accrue because the project's energy output will qualify to meet the renewable energy requirements in Massachusetts, Connecticut, and Rhode Island. Currently, there is a shortage of renewable energy to meet Massachusetts' requirement, so recent prices for RECs have been above $50/MWh as described above. We do not expect that these recent high levels will persist on a long-term basis, but we do expect that long-term premiums may settle between $15 and $25 per MWh.

Q. Please summarize your observations about revenue for the proposed project.

A. With these three revenue streams, the 54 MW project could have adequate revenues to proceed, especially since the futures market is expecting electric and fuel prices to increase above the two-year average historical prices in the next few years. If future revenues are more aligned with the high revenue expectations case presented in the graph below, the 54 MW project's estimated revenue

requirement would be satisfied.



Q. What does the "Alternative Revenue Requirement" bar represent in the above graph?

A. That bar showing a revenue need of $78/MWh is a reminder that the Applicant may be able to achieve cost savings from its current installed cost estimates for a 54 MW project. These could include further savings in transmission line construction costs, other fixed costs, and developer fees, for example. We also have seen some recent financing announcements that suggest less costly financing packages than we modeled may be available in the capital markets. In our opinion, the Applicant may be able to reduce the revenue requirement to the lower level shown in the graph by economizing on the installed cost and by using a combination of lower-cost debt and equity financing.

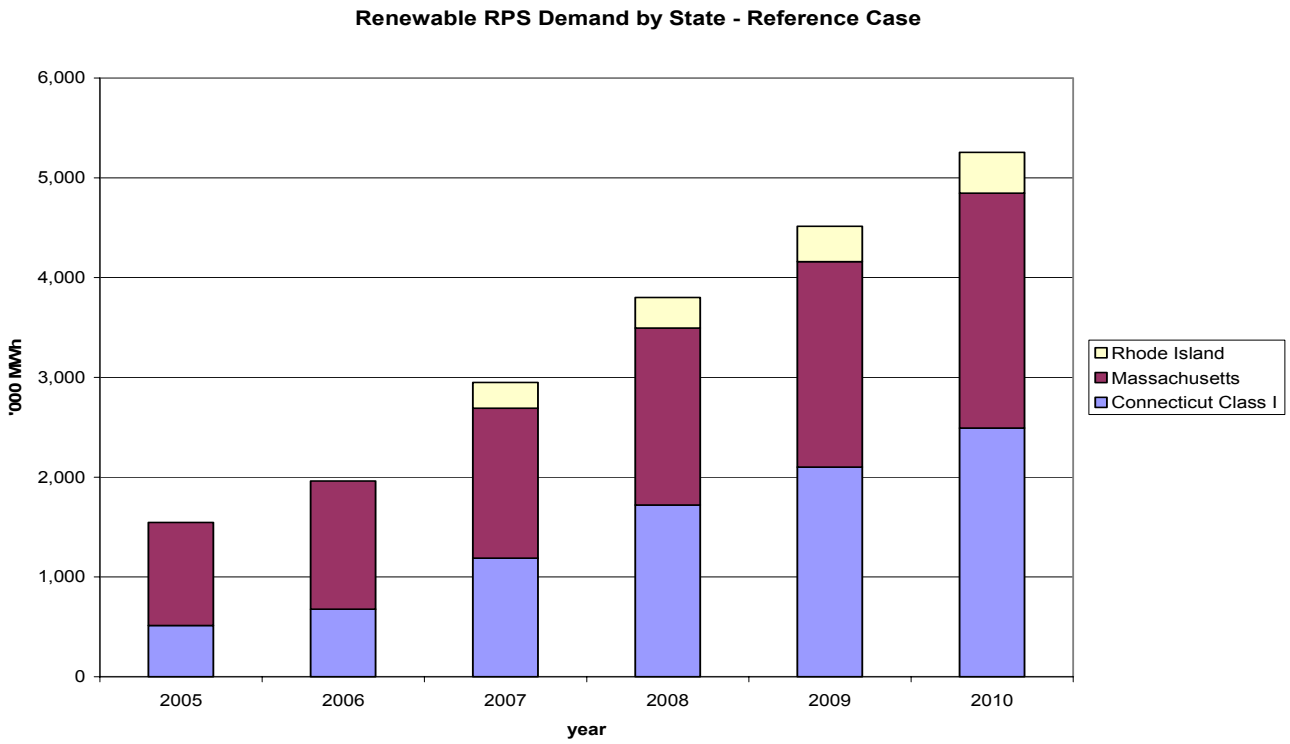
Q. What is your overall observation about the financial viability of a 54 MW project?

A. Most likely, a combination of revenue enhancements and cost savings would be required for the 54 MW project to be built in a fashion that provides the investor with an acceptable level of profit. This seems to be a real possibility.

Q. Please explain your statements concerning various state requirements for renewable energy.

A. All of the states in New England except for New Hampshire have some form of a Renewable Portfolio Standard ("RPS"). RECs from eligible facilities can be generated anywhere within the New England Power Pool to meet each state's RPS. While Maine was the first state to implement an RPS, the goals set were insufficient to stimulate additional renewable generation. However, Massachusetts, Connecticut, and Rhode Island have more stringent requirements and their combined demand will grow in the manner depicted in the graph below. Thus there should be a continued demand for RECs going forward.

The graph below shows how the demand for renewable energy in New England will grow dramatically over the next few years. The future of REC supply is uncertain as a number of projects have been proposed in the region in the last few years, but few have been built or are under-construction thus far. This continued uncertainty and supply shortage have been the cause of the high REC prices. RECs from new wind projects qualify in all states and can be used to meet any of the states' RPS requirements.



Q. Please summarize your conclusions with respect to the proposal.

A. From the above findings, we reach the following conclusions:

1) The economics for a 54 MW project, while not as favorable as the proposed 90 MW project, could be acceptable.

2) Specifically, we think that a 54 MW project at Black Nubble may be able to attract the capital, financing, and power purchase agreements necessary for it to be a viable project.

3) The addition of more wind energy to New England's resource mix would provide benefits to electric customers. The project would help satisfy the significant demand for renewable energy created by renewable portfolio standards in New England and growing consumer demand for this type of

electrical power. The resource has the potential to offset fuel usage and local emissions on a cost-effective basis over time.

Q. The Applicant has stated that a smaller project will not work for a number of reasons including the potential loss of its place in the interconnection queue and the fact that it has a commitment to acquire 30 turbines not 18. Would you please comment on those topics?

A. We do not think that the Applicant would lose its place in the interconnection queue if it were to reconfigure the project to 54 MW instead of 90 MW. Based on a conversation with the Independent System Operator-New England in which I did not identify any specific project, I was informed that a reduction in project size would not cause a loss in the queue position. While a smaller project may cause changes to the interconnection design, it should not cause a problem.

Regarding the turbine contract, we note that, at the present time, the supply of turbines is not keeping pace with demand. Given this shortage of turbines, the Applicant may be able to utilize the remaining 12 turbines in another project, or it could transfer the turbines to another developer. From various wind industry information, I am aware that turbine transfers between developers are taking place.

IV. RECOMMENDATIONS.

Q. Please summarize your testimony.

A. Based on our analysis, we support NRCM's position that the Commission, the Applicant and the other parties should seriously consider a 54 MW Black Nubble

project option. While the output from a 54 MW project will cost more than the proposed 90 MW project, the use of Black Nubble only would address concerns expressed by various parties to this case, would help New England meet its renewable energy goals, and has the potential to be feasible financially.

Q. Does this conclude your testimony at this time?

A. Yes, it does.

Jonathan Winer

Managing Consultant

La Capra Associates, Inc.

Jonathan Winer joined La Capra in 2003, bringing 20 years' experience in electric energy including serving as in-house counsel to an electric utility, founding and managing a company that invested in independently owned electric projects, and directing the regional initiatives of a wind power development company. His recent work at La Capra has focused on renewable energy policy and project analysis, power contract analysis, and utility planning and ratemaking. Mr. Winer is a member of the New York and Vermont bars. His experience includes long-term avoided cost issues, power purchases and sales, rate-setting proceedings including cost of service and rate design issues, energy efficiency matters, and integrated resource planning. He has evaluated the financial and legal aspects of many independent power and energy efficiency projects across the United States.

RELEVANT EXPERIENCE

- Led analysis of proposed utility construction of 120 MW wind project in Oklahoma on behalf of Oklahoma Attorney General and Oklahoma Corporation Commission Staff. 2006
- Member of team advising New York State Energy Research and Development Authority (NYSERDA) on various implementation issues resulting from New York's adoption of a renewable portfolio standard. 2004-2006.
- Assisted in development of testimony concerning cost allocation and ratemaking policy in Connecticut and Wisconsin rate filings. 2005.
- Member of La Capra team providing energy planning support to the Connecticut Energy Advisory Board. 2005-2006.
- Co-leader of team that developed renewable energy demand, supply and cost information for the northeast states and eastern Canada for use in the Regional Greenhouse Gas Initiative models. 2004-2005.
- Leads team evaluating financial and market aspects of community wind projects for Massachusetts Technology Collaborative. 2004-2006.
- Assisted Washington Electric Cooperative in its assessment of wind energy options, including project assessment, due diligence and negotiation of project investment and power purchase. 2004-2005.
- Provided guidance to and testimony on behalf of Connecticut Clean Energy Fund on procurement of renewable energy and long-term contract issues. 2004.
- Led team evaluating New York energy market for wind developer. 2004.
- Provided on-going guidance to Massachusetts Technology Collaborative concerning long-term contracts, REC purchases and project finance issues. 2003-2004.
- Assisted in analysis of avoided cost for Oklahoma independent power projects on behalf of the Oklahoma Attorney General. 2003-2004.
- Led analysis of peak-power premium for California Energy Commission study. 2004.

- Provided advice to Hawaii Division of Consumer Advocacy concerning standard contract terms for independent energy projects. 2003-2004.
- Led team in evaluation of renewable energy projects proposing to produce Renewable Energy Certificates in response to Massachusetts Technology Collaborative RFP. 2003, 2005.
- Analyzed market and assisted on sales of Renewable Energy Certificates for Washington Electric Cooperative. 2003-2006.
- Member of team evaluating power plant purchase decision for Hawaii Division of Consumer Advocacy. 2003.
- Member of team reviewing Nevada utilities' resource procurement decisions and proposed Integrated Resource Plan. 2003.
- Member of team that developed cost estimates regarding proposed New York Renewable Portfolio Standard. Principal responsibilities were to estimate capital costs for all resources and to assess magnitude and total cost of potential wind resources. Also addressed various implementation issues. 2003-2004.
- Led due diligence on and assisted Massachusetts Technology Collaborative in negotiation of potential financing for wind project. 2003.
- Provided contract and financial analysis to Washington Electric Cooperative in connection with its potential development of landfill gas to energy project. 2003.
- Directed and implemented development strategy for wind power company new to eastern U.S. 2001-2003.
- Developed investment criteria for and directed due diligence review of more than 100 potential investments in independent energy projects. Purchased and sold more than a dozen energy projects. Obtained and structured necessary financing. 1989-2001.
- Analyzed federal and state tax matters on energy transactions and directed compliance at partnership and corporate levels. 1989-2001.
- Co-wrote business plan for energy investment company, obtained board approval for plan and implemented it. 1988-1989.
- Served as lead counsel for Green Mountain Power in Vermont PSB proceedings concerning integrated least cost planning. 1988-1989.
- Lead counsel on various cost-of-service and rate design issues in retail rate cases before the Vermont PSB. 1983-1989.
- Lead counsel on qualifying facility rulemaking and rate setting cases for Green Mountain Power before Vermont PSB. 1983-1989.
- Lead counsel on various short-term and long-term power purchases and sales for Green Mountain Power from 1984-1989.

RECENT PRESENTATIONS and TESTIMONY

- Utility Ownership of Renewable Energy Projects: A Consumer Perspective, National Association of State Utility Consumer Advocates, Mid-Year Meeting, June 2006.
- Testimony before the Oklahoma Corporation Commission on behalf of the Oklahoma Attorney General and the Staff of the Corporation Commission concerning proposed 120 MW wind project, April 2006.

- Implications of EPAct 2005 for Wind, Northeast Energy and Commerce Association, November 2005.
- Renewable Portfolio Standards, Canadian Wind Energy Association, October 2005.
- A Brief Overview of U.S. Studies on the Local Economic Development Impacts of Wind Energy, Canadian Wind Energy Association, October 2005.
- Ratepayer Attribute Cost: The Relationship to Contract Duration, NYSERDA RPS Workshop, June 2005.
- Procurement and Project Viability: Issues and Options Overview, NYSERDA RPS Workshop, June 2005.
- Renewable Portfolio Standard Implementation in the Northeast, American Wind Energy Association Annual Conference, May 2005.
- Long-term State Commitments for Renewables: Approaches to Facilitate Project Financing, New England Sustainable Energy Association Conference, March 2005.
- Testimony before the Connecticut DPUC on behalf of the Connecticut Clean Energy Fund concerning RPS Implementation Issues, August 2004.
- Emerging Issues in New England: Producing Financeable Energy Projects, Edison Electric Institute Seminar, November 2003.
- Successful Implementation of Renewable Portfolio Standards, New England Council of Public Utility Commissioners, Annual Meeting, June 2003.

EMPLOYMENT HISTORY

La Capra Associates, Inc. — Boston, MA
Managing Consultant — *2003- present*

enXco, Inc. — South Burlington, VT
Director East Coast Development — *2001-2003*

Mountain Energy, Inc. — South Burlington, VT
President — *1997-2001*
Vice President and COO — *1989-1997*

Green Mountain Power Corporation — South Burlington, VT
Assistant General Counsel — *1988-1989*
Senior Attorney — *1985-1988*
Corporate Attorney — *1983-1985*

Nixon, Hargrave, Devans & Doyle *(now Nixon Peabody)* — Rochester, NY
Associate — *1976-1983*

EDUCATION

New York University — New York, NY
J.D. — *1976*

Dartmouth College — Hanover NH
A.B., majoring in Economics — *1973*

STATE OF MAINE
LAND USE REGULATION COMMISSION

Application for Development of	)
Maine Mountain Power LLC	)
Redington Wind Farm Application	)
Rezoning Application ZP 702	)

I, Jonathan Winer, upon oath, do depose and say:

My prefiled testimony in this proceeding was prepared by me, and the statements therein are true, to the best of my knowledge, information and belief.

Dated: July 12, 2006

Jonathan H Winer

Subscribed and sworn to before me this 12th day of July, 2006.

Mary S. Barker

Notary Public Mary S. Barker
My Commission expires: December 10, 2010