

BEFORE THE STATE OF NEW HAMPSHIRE
ENERGY FACILITY SITE EVALUATION COMMITTEE

Timbertop Wind 1, LLC

Petition for Jurisdiction

Docket No. DW 12-04

TESTIMONY OF LISA LINOWES
ON BEHALF OF THE TOWNS OF
NEW IPSWICH AND TEMPLE, NEW HAMPSHIRE

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Q. Please state your name and address.

A. My name is Lisa Linowes. My address is 286 Parker Hill Rd, Lyman, NH 03585.

Q. What are your professional qualifications and experience related to the siting of Wind Turbines?

A. I serve as Executive Director for the Industrial Wind Action (IWA) Group, a national advocacy group focused on policy issues associated with industrial-scale wind energy development. In this capacity, I have participated in four separate dockets before the Site Evaluation Committee (SEC) related to the siting of wind energy facilities including Lempster Wind, LLC (SEC Docket No. 2006-01), Granite Reliable Power, LLC (SEC Docket No. 2008-04), Brookfield Renewable Power Inc. (SEC Docket No. 2010-03) and Antrim Wind, LLC (SEC Docket No. 2012-01). I also served on the Ad Hoc committee to develop wind siting guidelines for the state of New Hampshire. Since 2006, I have written and spoken extensively on the topic of renewable energy policy and wind energy economics. Invited speaking engagements include: The Midwest and Northeast Chapters of the Energy Bar Association annual meetings (2009, 2010), the ISO-NE Regional System Plan meeting (2011), and the New England Wind Energy Education Project Conference (2011). In April 2012, I testified before Congress on federal subsidies impacting wind project costs. I hold an Masters in Business Administration.

1 **Q. What is the purpose of your testimony today?**

2 A. I offer this testimony to explain why Timbertop Wind 1, LLC's proposed 15 MW
3 wind energy facility is not needed "to assure that the state has an adequate and
4 reliable supply of energy in conformance with sound environmental principles"
5 within the meaning of RSA 162-H:1.

6 **Q. Please explain.**

7 A. Before explaining why Timbertop Wind 1, LLC's project is not needed to assure
8 an adequate and reliable supply of energy, I note that RSA 162-H:1 refers to the
9 need for a "reliable supply of energy" but makes no reference to a need for
10 Renewable Energy Certificates (RECs) under RSA 362-F. The omission of any
11 reference to the RPS in RSA 162-H:1 is noteworthy. The Legislature could have
12 added the need for additional "renewable energy" to the purposes enumerated in
13 RSA 162-H:1 but clearly did not do so.

14 **Q. Do you believe that the Legislature intended that the Committee consider the**
15 **need (or lack of need) for additional renewable energy facilities in**
16 **determining whether a project below the 30 MW threshold requires a**
17 **certificate "consistent with the findings and purposes set forth in RSA 162-**
18 **H:1"?**

19 A. This is a legal question that may need to be decided by the Courts. However, I do
20 not believe that the Legislature intended that the need or lack of need for
21 additional RECs be considered for the following reasons:

- 1 • The Legislature clearly could have included this requirement but did not
2 do so. New Hampshire adopted its RPS program on May 11, 2007.¹ On
3 July 17, 2007, the Legislature added a definition for renewable energy
4 facility and time frames to RSA 162-H.²
- 5 • Class I and other RECs are an abstract creation under State laws in New
6 Hampshire, Massachusetts, Maine, Rhode Island and Connecticut to
7 provide incentives for renewable generation. However, RECs are not
8 ‘needed’ in the sense used in RSA 162-H:1.
- 9 • New Hampshire provides for an Alternative Compliance Payment (ACP)
10 under RSA 362-F:10, II. Even if a shortfall existed due to market
11 conditions in other states, an ACP can be made to New Hampshire’s
12 renewable energy fund to meet the requirements under RSA 362-F.
- 13 • Demand for RPS can also be reduced by the New Hampshire Public
14 Utilities Commission which has the authority to delay implementation of
15 RPS requirements under RSA 362-H:4, V. In fact, the Commission
16 recently delayed implementation of the thermal Class I requirement in
17 Order No. 25,484.
- 18 • RPS markets are typically “lumpy” or “binary”.³ Events such as the
19 changes to the definitions of eligible Class I facilities in other states,
20 changes to the ACP, and availability of renewable resources in New York

¹ See Laws of 2007, Chapter 364, adopted May 11, 2007.

² See Laws of 2007, Chapter 26, adopted on July 17, 2007.

³ NHPUC: 2011 Renewable Energy Portfolio Standard Review.

1 or other markets that can bid into the New England can quickly change the
2 market conditions in New Hampshire.

3 As a result, it appears that the need for additional Class I facilities to serve
4 markets outside of New Hampshire is not a factor that should be considered when
5 determining whether a project is “consistent with the findings and purposes set
6 forth in RSA 162-H:1”.

7 **Q. How then have you evaluated whether Timbertop Wind 1, LLC’s project**
8 **requires a certificate in order to “to assure that the state has an adequate and**
9 **reliable supply of energy”?**

10 A. In evaluating whether the Timbertop proposal should be certificated by the state, I
11 first looked at whether the facility was necessary to assure an adequate and
12 reliable supply of energy and second I looked at whether it was needed to assure
13 an adequate and reliable supply of Class I RECs.

14 To the first point, New Hampshire represents approximately 9% of the total
15 energy demand in New England but has 13% of its generation capacity. New
16 Hampshire has long been an exporter of electricity. This coupled with reduced
17 demand growth since 2008 for the entire region has clearly lowered the need to
18 build new capacity. Energy generated by the Timbertop project is not necessary to
19 ensure an adequate supply of generation for the state.

20 The question of whether the Timbertop project is needed to assure an adequate
21 and reliable supply of Class I RECs requires an examination of the New
22 Hampshire's REC market.

1 New Hampshire's energy policy requires that 24.8% of our energy load be met
 2 with renewable energy resources by the year 2025. Of this percentage, 12.4%⁴
 3 represents the Class I REC requirement which includes wind energy. Assuming a
 4 total RPS obligation of nearly 3-million megawatt hours by 2025⁵, the state of
 5 New Hampshire already has sufficient existing in-state resources to meet the
 6 state's 2025 compliance for Class I RECs (see TABLE 1). While many of these
 7 RECs are sold out of state, the New England REC market is rapidly changing as
 8 policies are amended and as new, existing, and imported resources are approved
 9 under the various state RPS policies.

10 **TABLE 1 - New Hampshire Class I Resources**

| Unit | Project | MWh per year |
|--|-------------------------------|------------------|
| 1 | Lempster Wind (24 MW) | 63,072 |
| 2 | Granite Reliable Wind (99 MW) | 260,172 |
| 3 | Groton Wind (48 MW) | 126,144 |
| 4 | Shiller Station #5 (50 MW) | 320,000 |
| 5 | Alexandria Indeck (16.4 MW) | 105,120 |
| 6 | Berlin BioPower (68 MW) | 542,070 |
| Total (305.4 MW) | | 1,416,578 |
| <i>Notes: Production numbers are estimates and assume projects are in service and operate without curtailment.</i> | | |

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12 **Q. Please explain your assertion that 'many of these RECs are sold out of state'.**

13 A. Total quantities and percentages of NH Class I RECs must be understood in the
 14 context of a regional market. NH Class I RECs can be used for RPS compliance

⁴ Class I thermal is a subset of Class I. The thermal requirements are subsumed in the Class I requirement but can only be satisfied using thermal renewable energy.

⁵ NH Public Utilities Commission, *2011 Renewable Energy Portfolio Standard Review*, <http://www.puc.nh.gov/Sustainable%20Energy/RPS/RPS%20Review%202011.pdf> (page 7).

1 in several New England states. Thus, many more RECs are actually created in NH
2 than are reflected in the state's RPS compliance figures. Of the six projects listed
3 above, Lempster, Alexandria Indeck and Berlin BioPower⁶ are likely the only
4 facilities selling their RECS to in-state service and energy providers. In contrast,
5 Granite Reliable Wind has two long-term power purchase agreements (15-20
6 years) with Vermont utilities⁷ to sell up to 82% of its energy, capacity and RECs.
7 Groton Wind has a signed agreement with Massachusetts utility, NSTAR, to sell
8 all of its energy, capacity and RECs for a term of 15 years. When New Hampshire
9 elected to lower its Class I alternative compliance payment (ACP) to \$55
10 beginning in 2013, Class I qualified projects not under contract were incentivized
11 to sell their RECs in states offering higher ACPs.

12 The ACP for Class I RECs in Rhode Island and Massachusetts is currently
13 \$65.27. As long as these states have a deficit of Class I REC's , their REC
14 markets will prove more attractive for NH project owners. According to the
15 *Massachusetts RPS & APS Annual Compliance Report for 2011* (published April
16 9, 2013), 89.2% of Massachusetts' 2011 RPS Class I compliance was satisfied by
17 out-of-state resources. Of that, 12.6% or 331,996 MWh were produced by New
18 Hampshire projects⁸.

19 Looking further out, there are currently several substantial requirements for New
20 England distribution utilities in MA, RI, and CT to add significant amounts of

⁶ Berlin BioPower is expected to be in service by October 2013. A long-term (20 year) power purchase agreement signed with Public Service of New Hampshire was approved by the NH PUC in April 2011.

⁷ Amended PPAs were approved by the Vermont Public Service Board with Central Vermont Public Service (<http://psb.vermont.gov/sites/psb/files/orders/2010/7589AmendedOrder.pdf>) and Green Mountain Power. (<http://psb.vermont.gov/sites/psb/files/orders/2011/7590AmendedOrder.pdf>)

⁸ <http://www.mass.gov/eea/docs/doer/rps-aps/rps-aps-2011-annual-compliance-report.pdf> at 32.

1 new generation in the next few years using long-term contracts. The
2 Massachusetts Green Communities Act currently requires 7% of RPS compliance
3 using contracts. Recent proposed changes in the Connecticut RPS, if signed into
4 law, will require 4% of the state's RPS load to be satisfied with contacts. Rhode
5 Island mandates 90 megawatts be under contract representing a significant portion
6 of the state's RPS requirement. Both Antrim Wind, LLC and Timbertop Wind,
7 LLC reported they were shortlisted for RFPs issued by Rhode Island utilities.
8 Such legislative mandates in other New England states would continue to pull
9 Class I RECs away from New Hampshire, particularly wind energy RECs. Other
10 changes in the RPS laws in Massachusetts and Connecticut seek to lower or
11 phase-out wood biomass in the next few years. If fully realized, Class I biomass
12 RECs will likely return to New Hampshire (and/or migrate to Rhode Island),
13 however, wind energy projects proposed to be built in New Hampshire are
14 expected to satisfy RPS laws out-of-state.

15 **TABLE 2 - RPS Class I REC Production and Requirement by Project/Year**

| Project | 2013 Production | 2014 Production | 2015 Production | 2016 Production | 2017 Production | 2018 Production |
|--------------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| Lempster Wind (24 MW) | 63,072 | 63,072 | 63,072 | 63,072 | 63,072 | 63,072 |
| Alexandria Indeck (16.4 MW) | 105,120 | 105,120 | 105,120 | 105,120 | 105,120 | 105,120 |
| Berlin BioPower (68 MW) | 0 | 542,070 | 542,070 | 542,070 | 542,070 | 542,070 |
| Shiller Station #5 (50 MW) | 0 | 0 | 0 | 320,000 | 320,000 | 320,000 |
| Total Production | 168,192 | 710,262 | 710,262 | 1,030,262 | 1,030,262 | 1,030,262 |
| RPS Class I Requirement | 399,000 | 489,038 | 581,264 | 664,820 | 750,375 | 837,965 |

16
17 Table 2 estimates the number of RECs produced by New Hampshire facilities and
18 matches the production to the RPS Class I requirement for the period from 2013-
19 2018. By 2014, Berlin BioPower alone, will supply New Hampshire's Class I

1 REC requirement. Barring mitigating changes to the Massachusetts RPS policies
2 for biomass, Shiller will return to New Hampshire beginning in 2016 and further
3 add to the state's supply⁹.

4 **Q. If proposed renewable energy projects including Timbertop are not**
5 **permitted in New Hampshire, how will the state achieve its RPS obligations?**

6 As mentioned, it is important to evaluate the NH RPS in the context of the larger
7 regional market. The policies in other New England states and adjacent control
8 areas, as well as New Hampshire's own policies, directly impact the question of
9 need. Two examples, already cited, resulted in NH Class I RECs leaving the state:

- 10 • Massachusetts and other New England states mandating that a percentage of
11 their Class I obligation be secured using long-term contracts;
- 12 • New Hampshire's decision to lower its Class I ACP.

13 However, with REC's trading at, or near the ACP, there is significant incentive for
14 existing renewable resources within the ISO-NE control area to qualify under one
15 or more of the states' RPS programs. In addition, large numbers of behind-the-
16 meter generators have also become qualified as renewable resources. These
17 include biomass boilers at paper and pulp mills. In 2011, behind-the-meter
18 resources produced nearly 750 thousand MWh. Finally, New York and Canada
19 continue to build renewable resources which qualify under New England RPS
20 policies. In 2011, 40% of the supply¹⁰ of Massachusetts Class I RECs came from
21 imported resources located in New York and Canada. Beginning in 2015-16, New

⁹ Berlin BioPower will create a surplus of NH Class I RECs driving prices below the ACP. If this happens, the economics of other Class I facilities without long-term contracts could be impacted.

¹⁰ See Supra 8

1 York wind will likely enter New England as NYSERDA contracts expire. New
2 York renewable resources include over 1,600 MW¹¹ of installed wind which
3 could substantially increase the supply of Class I RECs throughout New England.

4 **Q. Is there anything else you would like to say?**

5 Yes. Given the fact that New Hampshire already has sufficient renewable
6 resources in-state to meet its 2025 RPS Class I obligation and given the
7 anticipated market activity regarding existing, behind-the-meter and imported
8 resources, it appears New Hampshire has ample opportunity to meet and exceed its
9 Class I mandate through to 2025. Simply recognizing how regional RPS policies
10 impact New Hampshire's ability to achieve compliance will go a long way toward
11 resolving the state's REC deficits. Unlike energy markets, the need for RECs is a
12 regulatory fiction that cannot be compared to a need for energy. It is evident that
13 a shortage of RECS could be satisfied without setting aside community land use
14 codes that apply to projects below 30 MW.

15 **Q. Does this conclude your testimony?**

16 A. Yes.

¹¹ NYSERDA has 2.8 million MWhs of wind energy currently under contract.
<http://www.nyserda.ny.gov/Publications/Program-Planning-Status-and-Evaluation-Reports/Renewable-Portfolio-Standard-Reports.aspx>