

**STATE OF VERMONT
PUBLIC SERVICE BOARD**

Docket No. 7250

**Petition of Deerfield Wind, LLC for a Certificate of Public Good)
authorizing it to construct up to 45 MW wind generation facility,)
and associated transmission and interconnection facilities,)
comprised of between 15 and 24 wind turbines on approximately 80)
acres in the Green Mountain National Forest, located in Searsburg)
and Readsboro, with turbines to be placed both on the east side of)
Route 8 on the same ridgeline as the existing GMP Searsburg wind)
facility (Eastern Project Area), and along the ridgeline to the west of)
Route 8 in a northwesterly orientation (Western Project Area))
Petition of EMDC, LLC d/b/a/ Deerfield Wind Farm)**

**CONSERVATION LAW FOUNDATION’S
PROPOSED FINDINGS OF FACT AND BRIEF**

Conservation Law Foundation (CLF), by and through its attorney, Sandra Levine, submits the following proposed findings of fact and brief in the above captioned proceeding.

I. Introduction

Conservation Law Foundation (CLF) offered testimony on the avoided emissions benefits of the proposed Deerfield Wind project. Pursuant to 30 V.S.A. § 248(a)(2), the Public Service Board (Board) must determine that the proposed project “will promote the general good of the state” in order for a certificate of public good to be issued. CLF’s testimony demonstrated that the proposed project will reduce air emissions in the region and provide benefits to Vermont in terms of avoided air pollution, including avoided

greenhouse gas emissions. These benefits are quantifiable and real and demonstrate positive benefits of the project's impact on air purity and the natural environment under 30 V.S.A. § 248(b)(5), economic benefit to the state and its residents under 30 V.S.A. § 248(b)(4), and that the project can satisfy a portion of Vermont's energy demand in a least cost manner as required by 30 V.S.A. § 248(b)(2).

CLF has a broad interest in ensuring electric energy is provided to Vermont and the region in a manner that is cost effective and environmentally sound. Projects approved by the Board must demonstrate that the environmental and economic benefits outweigh the costs of the project. In determining benefits and costs, the Board should look broadly at the impacts of a project. Here, the avoided air pollution and climate change pollution that will result from the operation of this project provides significant benefits to Vermont and the region. CLF's testimony demonstrated that these benefits are significant and quantifiable and therefore merit the Board determining that the project meets these criteria for being awarded a certificate of public good under 30 V.S.A. § 248.

II. Air Emissions and Climate Change Benefits

Findings of Fact:

A. Wind Projects

1. Vermont and New England are experiencing the effects of anthropogenic-induced climate change principally as a result of the emission of greenhouse gases. (C. High pf. at 3).
2. The effects of climate change will have important adverse health and economic effects on the people and businesses of Vermont. (CLF-CH-3 at 5).

3. Wind power produces no direct air emission of greenhouse gases and can reduce current air emissions. (CLF-CH-3 at 2).
4. Wind power plays an important role in achieving the greenhouse gas reduction targets established by Vermont Executive Order 07-05 and recommended by the Governors Climate Change Commission. (CLF-CH-3 at 7).
5. Power from wind projects will displace generation at high operating cost fossil-fueled units. (CLF-CH-3 at 8).
6. Power from wind projects is unlikely to displace power from hydroelectric, nuclear or other renewable facilities, as these units generally have low operating costs. (CLF-CH-3 at 8).
7. Displacing energy produced by fossil fueled plants with wind provides air emissions benefits as the emissions from the fossil fueled plants will be avoided. (CLF-CH-3 at 2).
8. A calculation of the emissions avoided by a wind facility can be reasonably estimated based on the operating characteristics of the marginal generating resources that meet the variable demand in the region. In New England, these are principally fossil fueled sources. (CLF-CH-3 at 8).

B. Deerfield Wind Project

9. An analysis of the avoided emissions for the Deerfield Wind project was conducted by Resource Systems Group using an approach consistent with that used by numerous experts in previous studies throughout the nation. (CLF-CH-4 at 1).

10. This method provides a reasonable basis for estimating the emissions reductions from a wind facility. (CLF-CH-3 at 8-9 and CLF-CH-4 at 1).
11. This analysis demonstrates that emissions reductions occur, are substantial, and provide significant public health, economic and environmental benefits. (CLF-CH-3 at 8 and C. High pf. at 3).
12. As proposed at the time of the filing of testimony, the Deerfield Wind project was likely to result in the following avoided air emissions:

Table 1. Avoided Air Emissions of the Deerfield Wind Project Based on Analysis of the ISO New England Power Market Area and EPA Emissions Data from 2004

Major	Pollutants	Average Emissions Rate (lb/MWh)	Annual Avoided Emissions (At 34 MW in tons)	Annual Avoided Emissions (At 34 MW in tons)
	NO _x	0.72	36	
	SO ₂	3.1	155	
	CO	1,149	57,336	

- (CLF-CH-3 at 8).
13. The subsequent proposed reduction in the size and output of the Deerfield Wind project would proportionately reduce the overall avoided emissions, but the economic and environmental benefits of the avoided emissions would continue to be significant. (Testimony of C. High December 9, 2008).
14. The avoided emissions from the Deerfield project will improve air quality in Vermont and New England, including avoided emissions of fine particulate matter, volatile organic compounds and other toxic air pollutants. (CLF-CH-3 at 9).
15. The existing cap and trade regulations for nitrogen oxides and sulfur dioxide emissions and future cap and trade regulations for carbon dioxide emissions do

not alter the actual avoided air emissions from the Deerfield Wind project. (C. High pf. at 4; CLF-CH-3 at 10-11; Testimony of C. High December 9, 2008).

Discussion

The Deerfield wind project will provide measurable and significant air quality benefits to Vermont and the region. These are benefits that must be considered in evaluating whether the project “will promote the general good of the state” as required by 30 V.S.A. § 248(a)(2).

In considering the East Haven Wind Project, the Board determined that the “Project would produce air quality benefits to Vermont by displacing other generation sources that produce emissions, and would not have an undue adverse impact on air quality.” *Petition of EMDC, East Haven Wind Farm*, Final Decision and Order at 34, PSB Docket No. 6911 (July 17, 2006). There are similar benefits from the Deerfield Wind project. Here, the project will displace other sources of power in the region, most significantly, power generated from fossil fuels, which contributes to air pollution and global warming. The amount of avoided emissions from this project is significant and can be reasonably estimated based on the operating characteristics of the generating resources this project will displace. These avoided air emissions will benefit the air quality in Vermont and the region.

The benefits to air quality from this project based on its avoided emissions provide a positive benefit to Vermont and demonstrate that the project “will promote the general good of the state.” 30 V.S.A. § 248(a)(2).

First, the avoided emissions demonstrate the project will help satisfy a portion of Vermont's energy demand in a least cost manner as required by 30 V.S.A. § 248(b)(2). The environmental benefits and reduced pollution are factors that are considered in this analysis and factors that weigh in favor of the benefits of this project.

Second, the avoided emissions demonstrate an economic benefit to the state and its residents under 30 V.S.A. § 248(b)(4). Reduced air pollution provides a healthier environment and helps Vermont remain in attainment of federal Clean Air Act requirements. 42 U.S.C. § 7470 et seq. This helps economic development in Vermont as non-attainment limits allowed activities and construction in the state. 42 U.S.C. § 7477.

Third, the avoided emissions demonstrate the project will have positive benefits on air purity and the natural environment under 30 V.S.A. § 248(b)(5). The avoided emissions are benefits to air quality that are positive impacts of this project. Just as negative impacts to air quality and the environment must be considered, the positive benefits of a project on these resources must also be considered and valued in the course of determining whether a project will promote the general good of the state in the section 248 process.

Here, the avoided air emissions that will result from the operation of this project clearly demonstrate that this project has significant and measurable positive air quality and climate change impacts. These will benefit the people, resources and economy of Vermont and demonstrate that the project as proposed will promote the general good of the state by avoiding air pollution and greenhouse gas emissions.

III. Conclusion

For the forgoing reasons, the Board should determine that the avoided emissions as a result of the operation of the Deerfield Wind project will promote the general good of the state and provide significant benefits to the people, economy and environment of Vermont.

Dated at Montpelier, Vermont, this 22nd day of January, 2009.

CONSERVATION LAW FOUNDATION

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