

**STATE OF VERMONT  
PUBLIC SERVICE BOARD**

Docket No. \_\_\_\_\_

Petition of UPC Vermont Wind, LLC for a Certificate of )  
Public Good pursuant to 30 V.S.A. section 248, )  
authorizing it to construct up to a 52 MW wind electric )  
generation facility, and associated transmission and )  
interconnection facilities, in Sheffield and Sutton, Vermont, )  
and operate the same. )

**PREFILED DIRECT TESTIMONY OF  
THOMAS E. KAVET**

**ON BEHALF OF UPC VERMONT WIND, LLC**

February 21, 2006

Summary:

Mr. Kavet testifies regarding 30 V.S.A. § 248(b)(2) and (b)(4). He reviews the need for new, fixed cost sources of power in the state and the region; the demands for renewable energy in particular; the expected environmental and economic benefits of the Project in terms of displaced air emissions of pollutants; the property tax and tourism impacts.

1 **Q. Please state your name and occupation**

2 Response. My name is Thomas E. Kavet. I am President of the economic  
3 consulting firm, Kavet, Rockler & Associates, LLC.  
4

5 **Q. Please describe your qualifications and experience**

6 Response. I have been a professional economist for the past 27 years. I worked for  
7 11 years at McGraw-Hill/DRI (now Global Insight), the largest economic consulting  
8 and forecasting firm in the nation, where I started the Construction and Real Estate  
9 Information Service and was later Vice President, Development and Product  
10 Operations. I have been an independent economic consultant based in Vermont for  
11 the past 16 years, during which time I have been the Consulting Economist to the  
12 Vermont State Legislature for the past 10 years. My partner, Dr. Nicolas Rockler,  
13 and I have extensive experience building and using regional economic models and  
14 performing economic impact analyses. We currently maintain and manage REMI,  
15 IMPLAN and REDYN economic models for the State of Vermont, on behalf of the  
16 Vermont Legislative Joint Fiscal Office. We have conducted more than 500 regional  
17 economic impact analyses, including analyses associated with wind and other energy  
18 projects in other states.

19 A copy of my current resume is attached as *Exhibit UPC-TK-1*.

20

1 **Q. Have you previously testified before the Public Service Board or in other**  
2 **judicial or administrative proceedings?**

3 Response. I have not previously testified before the Vermont Public Service Board.  
4 I have testified before State legislative committees on hundreds of occasions and at  
5 Act 250 and other public hearings and administrative proceedings such as the  
6 Vermont State Emergency Board.

7  
8 **Q. What is the purpose of your testimony?**

9 Response. The purpose of my testimony is to relate findings and conclusions drawn  
10 from the analyses I performed with respect to the need for the UPC Vermont  
11 Wind's Sheffield Wind Farm and the likely economic impacts associated with the  
12 Project. The objectives of my analyses were to: 1) measure the likely economic  
13 impacts of the Project in Vermont, including the benefits associated with avoided air  
14 emissions; and 2) analyze the need for this particular type of additional electric power  
15 generating capacity in the State. The full results of my analysis are presented in a  
16 report, *Exhibit UPC-TK-2*.

17  
18 **Q. Please summarize the analyses you performed regarding UPC Vermont**  
19 **Wind's proposed project in Sheffield and Sutton.**

20 Response. The work I performed consisted of a comprehensive economic and fiscal  
21 impact analysis, including estimation of all direct, indirect and induced economic  
22 impacts, and a review of the need for the proposed project. As a part of the

1 measurement of net economic impacts, I also reviewed possible effects of avoided  
2 air emissions, property valuation issues, and tourism impacts.

3

4 **Q. Please summarize the analyses you performed and the sources you relied on**  
5 **in coming to your conclusions.**

6 Response. This analysis was based on a review of relevant literature, the use of a  
7 detailed regional input/output and econometric model from Regional Dynamics,  
8 Inc. (REDYN), known project parameters provided by UPC Vermont Wind, and  
9 extensive independent research. The REDYN model was used to estimate State and  
10 local economic impacts.

11

12 **Q. What, if any, economic impacts will the Project have on the local and state**  
13 **economy?**

14 Response. Based on our analysis, it is clear that the Project will have significant  
15 economic and fiscal benefits to the State of Vermont, Caledonia County and the  
16 local host municipalities. These benefits include the creation of new jobs, increased  
17 tax revenue, new lease payments, and numerous other direct and indirect benefits  
18 (including, for example, reduced air emissions).

19

20 With respect to job creation, during the construction and development  
21 phase, the Project will generate total employment gains in the State of approximately  
22 83 jobs, with about a third of these in Caledonia County. In 2008 and beyond,  
operation and maintenance of the wind turbines will generate a total employment

1 impact in the State of about 24 jobs, with about two-thirds of these expected to be in  
2 Caledonia County.

3 In addition to new jobs, our analysis indicates that the Project will generate  
4 gains in total State economic output of about \$25 million during construction and  
5 development, with ongoing annual disposable income gains of more than \$2.5  
6 million per year. The total economic investment associated with this project is  
7 expected to exceed \$90 million, located in one of the more economically distressed  
8 regions of the State. Direct State and local property tax payments are expected to  
9 total more than \$750,000 per year, with additional local land lease payments of about  
10 \$300,000 per year. Via both property taxes and proposed revenue sharing receipts,  
11 the Town of Sheffield is expected to receive more than \$450 per resident per year,  
12 based on estimated 2004 Town population. The Town of Sutton is expected to  
13 receive about \$94 per Town resident per year through the same combination of  
14 revenues. Because the Project will not generate much new demand for state or  
15 municipal services, this increase in tax revenue will likely result in a reduction of  
16 property taxes in the host communities.

17 In addition to these economic benefits, the Project will also contribute  
18 numerous other benefits. For example, the Project will likely result in a reduction in  
19 regional air emissions, which have associated economic, environmental and health  
20 benefits. Although it is impossible to know in advance exactly which power sources  
21 may be displaced by new wind power output, this Project will mostly likely displace:  
22 New England gas and petroleum generating plants, resulting in annual reductions of  
23 about 171,653,400 pounds of carbon dioxide, the primary source of global warming;

1 about 345,800 pounds of sulfur dioxide, which causes acidification in lakes, streams  
2 and soils via acid rain; about 101,200 pounds of nitrogen oxides, which lead to ozone  
3 formation, smog, and human respiratory damage; and related reductions in other  
4 hazardous particulate matter. If coal is included among the displaced New England  
5 generating facilities, the annual CO<sub>2</sub> reductions would increase by about 18% to  
6 more than 200 million pounds, the annual SO<sub>2</sub> reductions would jump 66% to nearly  
7 575,000 pounds, and NO<sub>x</sub> emissions would be more than 60% higher, totaling more  
8 than 163,300 pounds. The monetized value of these reductions in air emissions could  
9 exceed \$1.2 million per year, based on previously-accepted valuations by the  
10 Vermont Public Service Board for avoided air emissions.

11 We also considered the potential impacts on property valuations and tourism  
12 in our modeling of state benefits. There is no indication that the Project will reduce  
13 aggregate property values in the area. With respect to tourism, there is considerable  
14 evidence that wind farms in a number of U.S. and international sites, including the  
15 Green Mountain Power facility in Searsburg, have become tourism draws. If there  
16 were formal plans to attract visitors to the proposed UPC facility, including the  
17 development of a visitor center, guided tours, tower viewing platforms and related  
18 promotional activities, it is possible the development could represent a measurable  
19 tourism enhancement to the area. On balance however, without formal plans to  
20 develop the Project as a tourist destination, there is no indication that the Project will  
21 have any measurable impact – either positive or negative – on aggregate tourism  
22 visitation or expenditures in the region.

23

1 **Q. You mentioned that you also analyzed the need for the Project. What if any**  
2 **needs did you identify, and how does the Project meet those needs?**

3 Response. The needs for the Project are at least three-fold. First, the regional  
4 sources of power Vermont relies on are among the most expensive in the U.S., and  
5 are prone to disruption and price increases. Vermont currently relies on major  
6 contracts with Hydro-Quebec and Vermont Yankee for approximately 2/3rds of its  
7 electricity. These contracts are due to expire within the next decade. According to  
8 the 20-year electricity plan, one of the state's major energy priorities is to "ensure  
9 that Vermont's overall energy portfolio is sufficient diverse, especially in light of the  
10 potential loss of major generating supplies." The Project will meet this need by  
11 increasing the diversity of the power generation sources in Vermont, and by  
12 providing a local, cost-competitive source of stable, clean, and reliable power.

13 In addition, general demand in the state and region for power is increasing.  
14 Over the past fifteen years, electricity demand in Vermont has increased steadily at  
15 an annual rate of 1.5%, the same rate at which the regional New England ISO  
16 expects overall demand to grow in New England through 2014. Energy efficiency  
17 and conservation alone are not sufficient to meet this increasing demand – there is a  
18 gap that must be met with new sources of power. This Project will help meet that  
19 need for new power generation. The effective output of the facility is expected to be  
20 about 147,600 MWh per year, supplying enough energy to power more than 20,000  
21 Vermont homes.

22 Finally, demand for Renewable Energy Credits (RECs) is increasing as New  
23 England states develop and implement Renewable Portfolio Standards (RPS) to

1 encourage renewable energy generation. Here in Vermont, Act 61 has established the  
2 state's commitment to renewable energy generation, and established a goal of  
3 meeting statewide incremental load growth between Jan.1, 2005 and Jan. 1, 2012  
4 with renewable resources. If utilities are unable to meet this incremental demand  
5 with renewables, mandatory provisions will kick in requiring development of  
6 additional renewable resources. This Project meets this need by addressing the  
7 present and future demand for competitively-priced electric energy, and clean,  
8 renewable power in the State, as mandated by Act 61 of the 2005 Vermont General  
9 Assembly.

10  
11

12 **Q. Have you relied on the work of any other experts concerning this Project?**

13 Response. I relied on technical economic model discussions with my partner, Dr.  
14 Nicolas Rockler, and REDYN model architect, Dr. Thomas Tanner.

15

16 **Q. What is your overall conclusion from this analysis?**

17 Response. The proposed UPC Vermont Wind Facility in Sheffield and Sutton will  
18 have significant economic and fiscal benefits to the State of Vermont, Caledonia  
19 County and the local host municipalities. This Project is an important component in  
20 meeting the present and future demand for competitively-priced electric energy and  
21 clean, renewable power in the State, as mandated by Act 61 of the 2005 Vermont  
22 General Assembly.

23

24 The Project will emit no greenhouse gasses or other environmental  
pollutants and will displace existing generating facilities that do. It will be a renewable

1 energy source with fixed production costs over very long periods of time, enabling  
2 price stability at competitive rates. And, it will be a sustainable resource that  
3 generates not just electricity, but permanent jobs, income, tax revenues and wealth  
4 for Vermonters. Wind power from projects such as the proposed UPC Vermont  
5 Wind facility is a critical part of meeting Vermont and New England energy needs.  
6

7 **Q. Does this conclude your testimony at this time?**

8 Response: Yes, it does.  
9