Docket No. __________

Petition of Vermont Air National Guard (VTANG) for a Certificate of Public Good authorizing the construction of a 2.1MW solar array at the Vermont Air National Guard Base located at KBTV in South Burlington Vermont.

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DIRECT TESTIMONY OF WITNESS

Adam G. Wright

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June 1, 2011
I. INTRODUCTION

Q. Please state your name, occupation and business address:

A. My name is Adam G. Wright and I am employed by the Vermont Air National Guard (VTANG) as the Base Environmental Manager. My business address is 30 Falcon Street, South Burlington, Vermont, 05403.

Q. Please describe your background and experience.

A. I have been the Base Environmental Manager at the VTANG since December of 2005. From 2001 through 2005, I was the State Environmental Manager at VTANG (a subordinate position to my current job). Prior to that, I worked for nine years at the Massachusetts Department of Environmental Protection as an environmental regulator. I graduated from the University of Massachusetts in 1986 with a bachelor’s degree in Environmental Science.

Q. Have you previously testified before the Public Service Board?

A. No.

Q. What is the purpose of your testimony in this case?

A. My testimony will discuss the project’s relationship to the orderly development of the region, and its possible effects on aesthetics, historic sites, air and water purity, the natural environment, and public health and safety.

Q. Please summarize your testimony.

A. My testimony describes the potential land use and environmental impacts of the project, and how they have been addressed through project design and regulatory review. In addition to the Section 248 criteria specifically addressed herein, the VTANG, a federal facility, must also comply with the
National Environmental Policy Act (NEPA). Some of this testimony is drawn from the environmental analysis conducted for this project under NEPA. (See Exhibit ANG 10 – CATEX and CATEX Support documents, AF Form 813)

My testimony concludes that this project will:

- Not unduly interfere with the orderly development of the region.
- Not have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment and the public health and safety, with due consideration having been given to the criteria specified in 10 V.S.A. § 1424a(d) and § 6086(a)(1) through (8) and (9)(K) as required under 30 V.S.A § 248(b)(5) and the Public Service Board’s Section 8007(b) Order regarding Simplified Procedures for Renewable Energy Plants with a Capacity Between 150 kW and 2.2 MW, dated 8/31/2010.
- 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 consistent with the policy set forth in 30 V.S.A. § 248(b)(8)

II. PROJECT IMPACTS ON THE ORDERLY DEVELOPMENT OF THE REGION

Q. Will construction of the proposed facility interfere with the orderly development of the region.

A. No. The VTANG proposes to install this solar photovoltaic project on
federally controlled property at the Burlington International Airport in South Burlington, Vermont. The project will provide renewable energy to the distribution grid, and will serve as both a demonstration project for the use of solar technology in Vermont and a renewable energy educational tool.

As a federal facility under the jurisdiction of the United States Department of Defense, the VTANG base must comply with the following statutory and policy mandates regarding energy use:

- The Energy Policy Act (EPACT) of 2005
- Executive Orders 13423 and 13514
- The Energy Independence and Security Act (EISA) of 2007
- Department of Defense Instruction 4170.11, dated 11 Dec 2009
- Air Force Policy Directive (AFPD) 90-17 and Air Force Instruction (AFI) 90-
- 1701, both dated 16 July 2009

The installation of this solar array to generate renewable power helps VTANG meet the renewable energy usage, greenhouse gas reduction, and sustainability goals and requirements of these statutory and policy mandates.

The project location is within the boundary of the Burlington International Airport and is incompatible with any residential or commercial development being in the path of cross wind runway 1/19 approach zone. Therefore a ground mounted solar array is a productive use of otherwise vacant
undepveloped airfield space.

III. PROJECT IMPACTS ON AESTHETICS, HISTORICAL SITES, AIR AND WATER PURITY, NATURAL ENVIRONMENT AND PUBLIC HEALTH AND SAFETY

Q. Will construction have any undue adverse impacts on aesthetics, historic sites, air and water purity, natural environment, and public health and safety? More specifically, please address the criteria listed in Title 10, § 6086(a)(1) through (8) and (9)(K) as numbered sequentially below.

A. The project will not have an undue adverse impact on any of these resources. The solar arrays will be located on previously developed land on VTANG property, and will be most visible to passengers flying into and out of the Burlington International Airport, as well as VTANG and airport employees. Air and water purity will not be adversely impacted. There are no streams, shorelands or wetlands on the solar array sites. No known endangered species habitat or necessary wildlife habitat will be impacted by the project. There will be no undue adverse impacts to historic resources at the project site. These items will be addressed in more detail below.

Q. (a)(1). Will the project result in undue water or air pollution?

A. While construction work will cause a temporary increase in air emissions from heavy equipment, this is not anticipated to significantly affect air quality in the region. Airborne dust generation during construction will be minimized by
wetting the work area as needed. An Air Pollution Control Permit from the ANR is not required for this project. Operation of the completed solar array will likely result in a net positive effect on air quality, due to reduced greenhouse gas and criteria pollutant emissions from fossil fuel power generation facilities currently providing power to the regional grid. Noise generation during construction will be limited to heavy equipment operation on the VTANG property and truck traffic on National Guard Avenue. Construction work on site is routinely conducted Monday – Friday from 7:00 a.m. until 5:00 p.m., and will not significantly add to the noise level of the airport. The operating solar arrays and electrical infrastructure will be inaudible to nearby residents.

Q. (A) Headwaters. Is the project located on lands located in headwaters of watersheds; drainage area of 20 square miles or less; above 1,500 foot elevation; watersheds of public water supplies; or areas supplying significant recharge waters to aquifers?

A. No, the project is not located in a headwaters area.

Q. (B) Waste Disposal. Will this project involve disposal of wastes?

A. All top soil and subsurface soil removed to install the solar array will be reused on site for the project or taken by the contractor for reuse at other construction sites. Any trees and stumps to be removed will be chipped and brought to the McNeil wood fired generating facility in Burlington Vermont. This project
does not involve the injection of wastes or toxic substances into ground waters. Any chemicals used during construction of the solar arrays will be managed and all waste disposed properly. Operation of the solar array will not typically require the use of hazardous materials, nor generate hazardous waste. The VTANG spill response plan and/or hazardous waste management plan will be followed in the event of spills and/or hazardous waste generation. Construction and operation of the solar arrays will not have a significant impact on water quality in the area. No wetlands are impacted as a result of the project. An EPA Construction General Permit for stormwater has been obtained, and was assigned EPA Tracking Number VTR10A95F. In accordance with this permit, the VTANG prepared a stormwater pollution prevention plan (SWPPP) for the construction project, and inspections, training, and best management practices have been implemented. (Federal facilities in Vermont are required to obtain the Federal EPA Construction General Permit, instead of the equivalent State of Vermont permit as of this date.) A State of Vermont Stormwater Operation permit (#3105-9015) has been obtained to cover stormwater management at the completed solar array site. In accordance with this state permit, all stormwater from the completed solar array will infiltrate to the subsurface, and will not be discharged directly to any surface water body. Additionally, a State of Vermont Wastewater System and
Potable Water Supply Permit (#WW-4-1873-1) has been obtained for the large solar array site, due to the need to relocate a portion of the base’s main sanitary sewer force main as part of the project. This force main carries sewage from the base’s central lift station to the City of South Burlington’s Airport Parkway Wastewater Treatment Facility. There is no on-site septic system associated with the solar array.

Q. (D) Floodways. Is the project within a floodway, and if so, is it designed so as not to restrict or divert the flow of flood waters?

A. The project is not located in a floodway.

Q. (E) Streams. Is the project located on or adjacent to the banks of a stream, and if so, will it maintain the natural condition of the stream?

A. There are no streams on or adjacent to the project site. There are no streams within 250 feet of the project, and there are no perennial streams or rivers within 100 feet of the project.

Q. (F) Shorelines. Is the project located on a shoreline, and if so, will it retain it in its natural condition, allow continued access to the waters, retain vegetation to screen the project from the waters, and stabilize the bank from erosion as necessary with vegetative cover?

A. The project is not located on a shoreline.

Q. (G) Wetlands. Is the project in compliance with the rules of the Water Resources Board relating to significant wetlands?
A. Yes, the project will not involve any activities within a Class 1, Class 2 or Class 3 wetland, or within a wetland buffer area.

Q. 4. Will the project cause unreasonable soil erosion or reduction in the capacity of the land to hold water so that dangerous or unhealthy conditions may result?

A. No. In accordance with the EPA Construction General Permit obtained for this project as referenced above (EPA Tracking Number VTR10A95F), best management practices have been implemented during construction work. These include installation and maintenance of silt fence down gradient of all ground disturbance or clearing prior to work beginning, installation and maintenance of stabilized construction entrances, stabilization of disturbed areas as soon as possible and within 48 hours of final grading, and other specific practices as set forth in the SWPPP and the project design documents. At a minimum, weekly inspections are conducted by base personnel and the contractor to assure erosion is not occurring at the project site. Once the solar array is completed, all stormwater that falls within the footprint of the project area will infiltrate in accordance with the State of Vermont Stormwater Operation permit (#3105-9015) referenced above. This also complies with a federal mandate that all new construction at federal facilities be designed such that stormwater runoff from the completed project is equal to pre-development conditions whenever feasible.
Q. 5. Will the project cause unreasonable congestion or unsafe conditions with respect to use of the highways, waterways, railways, airports or airways, and other means of transportation existing or proposed?

A. No. Road traffic on National Guard Avenue will not be significantly impacted during construction. National Guard Avenue is not a heavily travelled road, and construction vehicles will have two access points to the site (a construction entrance from National Guard Avenue, and access from within the VTANG base). Construction vehicles can be staged on the VTANG base, and will not routinely be stopped on National Guard Road. Road traffic after construction is completed will not be impacted by the solar array, as access to the array will be from within the VTANG base, and no additional full time personnel will be required to operate and maintain the array.

Burlington International Airport and FAA personnel were consulted as to the location and construction of the solar arrays, and these parties agreed that the location and design of the arrays complies with applicable requirements and regulations. (See Exhibit ANG-11 – FAA review letter)

Q. 7. Will the project cause an unreasonable burden on the ability of the local government to provide municipal or governmental services?

A. This project will not require any additional municipal or governmental services.

Q. 8. Will the project have an undue adverse effect on the scenic or natural
beauty of the area, aesthetics, historic sites or rare and irreplaceable natural areas?

A. The Public Service Board cites the “Quechee Test” as appropriate to analyze the aesthetic impacts of proposed projects. The first step is to determine if the project will have an adverse impact on aesthetics. A project’s impact is adverse if its design is out of context or not in harmony with the area in which it is located. If it is found that the impact would be adverse, it is then necessary to determine that such an impact would be undue.

The solar array installation at VTANG will not have an adverse impact on aesthetics or natural beauty. The VTANG base, the Burlington International Airport, and much of the immediate surrounding area are developed commercial and industrial properties. The solar array is an orderly design of parallel rows of solar panels over a crushed stone bed, surrounded by a service road and lawns maintained in accordance with VTANG and airport standards. Existing areas of trees will remain around the northern boundary of the solar array. The array will not be easily seen from National Guard Avenue itself, but will be clearly visible from the air by aircraft passengers and pilots. It will be somewhat visible from parts of the Burlington International Airport main terminal and parking garage. The array is lower in height than most of the buildings on the airfield, and the panels are a non-reflective type that will not cause excessive glare or reflections that would be detrimental to aviators.
Many of the buildings on the VTANG base are of a modern design, and the solar array will fit well within the existing context of the base. The associated transformer pad and electrical infrastructure is similar to other such structures on base and in context with the general commercial/industrial atmosphere.

The project will not impact historic or cultural resource sites. A cultural resources survey was conducted on base, and test pits were excavated within areas of this project. No significant architectural or archaeological resources were found in the project areas for the solar arrays. A formal comment request was submitted to Scott Dillon of the Vermont Division for Historic Preservation, and is attached for reference. (See Exhibit ANG-10 – Letter to VTDHP)

There are no rare or irreplaceable natural areas in the project area.

Q. 8(A). Will the project destroy or significantly imperil necessary wildlife habitat or any endangered species?

A. No. There are no known areas of necessary wildlife habitat or endangered species habitat in the project area. The US Fish and Wildlife Service and the Vermont Department of Fish and Wildlife have provided opinions as recently as 2008 that no threatened or endangered species are known to occur on base property. Correspondence from these agencies as well as an excerpt from the August 2010 Environmental Impact Statement for another project on base is attached. (See
Q. 9(K). Will the project unnecessarily or unreasonably endanger any public or quasi-public investment in the facility, service, or lands, or materially jeopardize or interfere with the function, efficiency, or safety of, or the public’s use or enjoyment of or access to the facility, service or lands?

A. No. The function, efficiency and safety of the Burlington International Airport, the Vermont Air National Guard base, and the public use of National Guard Avenue will not be jeopardized by the installation of this solar energy project at VTANG. Representatives from the Federal Aviation Agency (FAA) and the Burlington International Airport have reviewed the project design, and have authorized the installation of the array. (See Exhibit ANG-11).

This renewable energy project is being conducted with federal funding, and is therefore a public investment in the VTANG base and regional energy grid. The VTANG Fire Department provides first response to the airport, and mutual aid to nearby areas of South Burlington and Colchester. The services provided by the VTANG Fire Department will not be impacted by the project.

All work on the project will be conducted in accordance with the National Electric Code. The project is designed and will be constructed with proper safety and security measures in place to assure that no undue adverse effect on the public health and safety is created during construction and operation of the solar array.
Q. Could you discuss the project’s impacts relative to 10 V.S.A § 1424a(d)?

A. The project is not located on or near any Outstanding Resource Waters as identified by the Vermont Water Resources Panel.

Q. Does this conclude your testimony?

A. Yes.