

**THE STATE OF NEW HAMPSHIRE
BEFORE THE
NEW HAMPSHIRE
SITE EVALUATION COMMITTEE**

SEC DOCKET NO. 2019-02

**APPLICATION OF CHINOOK SOLAR, LLC FOR A CERTIFICATE OF SITE
AND FACILITY FOR THE CHINOOK SOLAR PROJECT IN FITZWILLIAM,
NEW HAMPSHIRE**

**PREFILED TESTIMONY OF MICHAEL BUSCHER
ON BEHALF OF
CHINOOK SOLAR, LLC
OCTOBER 14, 2019**

1 Qualifications of Michael Buscher

2 Q. Please state your name and business address.

3 A. My name is Michael Buscher. My business address is T.J. Boyle Associates, 301
4 College Street, Burlington, Vermont 05401.

5 Q. Who is your current employer and what position do you hold?

6 A. I am a professional landscape architect within the state of Vermont and owner of
7 T. J. Boyle Associates, LLC. T.J. Boyle Associates (“T.J. Boyle”) is a company that
8 specializes in landscape architecture, visual resource analysis, and various technical
9 services associated with construction projects.

10 Q. Please describe your responsibilities at T.J. Boyle, including those that relate
11 to the Chinook Solar Project that is the subject of this docket.

12 A. I have a number of different roles at T.J. Boyle. As an owner, I am involved in the
13 management and administrative oversight of the firm. As a professional landscape
14 architect, I work on a variety of technical projects, including visual impact assessments.
15 T.J. Boyle was engaged by Chinook Solar, LLC (“Chinook Solar”) to prepare a visual

1 impact assessment (“VIA”) of the potential visual impacts that would result from the
2 construction of the proposed 30MW Chinook Solar Project in Fitzwilliam, New
3 Hampshire (“the Project”). The VIA determines the degree of change in scenic quality
4 resulting from the construction of the Project. As a result of this assessment, I am very
5 familiar with the proposed Project, including the design for the Project, the potential
6 viewshed of the Project, and how affected stakeholders might be impacted by the Project.
7 The VIA we prepared for the Project has been marked as Appendix 13 to the Application.

8 **Q. What are your background and qualifications?**

9 A. I received my bachelor’s degree in Landscape Architecture from the Department
10 of Landscape Architecture at the Pennsylvania State University in 1998, an accredited
11 five-year degree program. After graduating, I worked as a landscape architect in the
12 greater Washington D.C. metropolitan area. In 2001, I moved to Vermont and joined T. J.
13 Boyle. In 2007, I became the owner of the firm. During my time with T. J. Boyle, I have
14 worked on a variety of projects; many projects that I have worked on and/or managed
15 have included visual resource assessments. More detail on my background and
16 experience is included in my resume, which is included in Attachment A.

17 **Q. Have you previously testified before this Committee and/or any other state**
18 **permitting agencies?**

19 A. Yes, I testified before the New Hampshire Site Evaluation Committee concerning
20 the Antrim Wind Energy project and the Northern Pass Transmission project. Within
21 Vermont, I have testified before local development review boards and planning

1 commissions, Act 250 district environmental commissions, the Environmental Division
2 of Superior Court, as well as the Public Service Board. I have also provided testimony
3 before the New York State Department of Public Service and the Department of
4 Environmental Conservation.

5 **Purpose of Testimony**

6 **Q. What is the purpose of your testimony?**

7 A. The purpose of my testimony is to provide the Committee with an overview of the
8 anticipated visual impacts of the Project, to introduce the VIA that T.J. Boyle prepared,
9 and to share the results of various independent analyses that we conducted to address the
10 requirements of the SEC Rules.

11 **Site Information**

12 **Q. Please describe the location and basic characteristics of the proposed Project**
13 **site.**

14 A. The Project is proposed to be located in Fitzwilliam, New Hampshire.
15 Specifically, the Project footprint is proposed to be located on approximately 110 acres of
16 private lands which are currently under either an option to purchase or an option to lease
17 agreement between Chinook Solar and each of five landowners. The total amount of land
18 subject to these agreements is in excess of 500 acres of land, though as noted above the
19 footprint of the proposed Project and thus the amount of land that will be cleared for the
20 Project is a much smaller portion of the land under agreement. The Project is a 30MW
21 electric generating facility, with the electricity to be generated through the use of solar

1 panels. In general, the Project site is one which has been actively forested for a number
2 of years. The Project includes the interconnection lines and equipment necessary to
3 connect the Project to the National Grid transmission line, which is a short distance from
4 the Project.

5 **T.J. Boyle's Visual Impact Assessment for the Project**

6 **Q. Did you and others with whom you work at T.J. Boyle prepare the VIA for**
7 **this Project?**

8 A. Yes. In conjunction with others at T.J. Boyle, I conducted the visual impact
9 assessment for this Project.

10 **Q. Please describe the VIA that T.J. Boyle conducted for the Project.**

11 A. We conducted a visual impact assessment in accordance with the SEC rules (Site
12 301.05, and Site 301.14). More specifically, first we identified the scenic resources in the
13 surrounding area, as defined in Site 102.45. Then we prepared geographical information
14 systems ("GIS") viewshed analyses to identify areas within the study area with potential
15 visibility of the Project. We first did this analysis based solely on landform without
16 considering vegetation, the "Terrain Viewshed," and then repeated the analysis after
17 factoring in the effect of vegetation, structures, and other obstructions, the "Vegetated
18 Viewshed." Based on the results of the viewshed maps, we conducted field investigations
19 to verify the results of our mapping and to photographically document various points of
20 interest identified in the prior steps. Next, we created visualizations of how the Project
21 would look from certain viewpoints. Finally, we used one of these visualizations to do a

1 user intercept survey on Mount Monadnock to determine the impact of the Project on
2 users' experiences. This involved interviewing 84 hikers on Mount Monadnock about
3 their expectations for the resource and the scenic value of the view, showing them
4 visualizations of the Project to compare with their view from the summit, and asking
5 them about how the Project would impact their expectations, continued use, and
6 enjoyment of Mount Monadnock.

7 **Q. What were the results of the VIA for this Project?**

8 A. We identified 1,277 potential scenic resources within a six-mile radius of the
9 Project. Of those, 542 had a potential view of the Project based on the terrain alone, but
10 only 54 had a potential view of the Project after terrain and other obstructions were
11 considered. More detailed analysis of the potential impact identified that only two
12 resources, the Pinnacle Hiking Trails and Mount Monadnock, would be adversely
13 impacted by the Project. However, our analysis concluded that the Project would not
14 have an unreasonable adverse effect on either resource. In fact, 50% of the hikers
15 surveyed on Mount Monadnock could not identify any difference between the photo
16 simulations with and without the Project, and none could identify that the Project was a
17 solar facility. Moreover, the survey documented that the Project would have no
18 discernible effect on users' expectations using the resource.

19 **Conclusion**

20 **Q. In your opinion, will the Project have an unreasonable adverse effect on the**
21 **aesthetics of the surrounding area?**

1 A. No. Based upon the information set forth in the VIA, I believe that the Project
2 will not have an unreasonable adverse effect on the aesthetics of the surrounding area.

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

4 A. Yes, this concludes my testimony at this time, though I reserve the right to file
5 supplemental testimony in accordance with the Committee's procedural schedule.

ATTACHMENT A



T.J. BOYLE ASSOCIATES

LANDSCAPE ARCHITECTURE & PLANNING

Michael J. Buscher, PLA, ASLA

Principal Landscape Architect | Owner

Education

- 1992-1998 Bachelor of Landscape Architecture, College of Arts and Architecture, The Pennsylvania State University, State College, Pennsylvania.
- Spring 1996 Roman Urban Studies, Penn State Department of Landscape Architecture, Rome, Italy.

Professional Registration

2011 – Present Licensed Landscape Architect, Vermont No. 81719

Professional Experience

- 2007-present Partner / Landscape Architect, T.J. Boyle Associates, LLC, Burlington, Vermont
- 2001- 2007 Senior Landscape Architect, T.J. Boyle and Associates, Burlington, Vermont.
- 1998-2001 Landscape Architect, Greenhorne & O'Mara Engineers & Planners, Inc., Germantown, Maryland

Related Project Experience

NextEra Energy: Winslow Solar Project – Managed the visual analysis for a 20-MW solar electric generation facility in Clinton, ME. T.J. Boyle Associates was a subconsultant to TetraTech Inc. to address Maine's regulatory requirements concerning scenic impacts.

NextEra Energy: Hinckley Solar Project – Managed the visual analysis for a 20-MW solar electric generation facility in Hinckley, ME. T.J. Boyle Associates was a subconsultant to TetraTech Inc. to address Maine's regulatory requirements concerning scenic impacts.

Northern Pass Transmission: NH Counsel for the Public – Manager for the review of the visual impact assessment on behalf of the New Hampshire Office of the Attorney General. Responsibilities included critical review of applicants VIA, facilitation of public engagement, and providing expert testimony in review of a 180 mile proposed 300 HVDC transmission line in New Hampshire.

Northern Pass Transmission: Environmental Impact Statement – Co-manager for the visual impact assessment portion of the EIS for a 180 mile proposed 300 HVDC transmission line in New Hampshire. T. J. Boyle is a sub-consultant to SE Group to provide EIS services for the U.S. Department of Energy and the White Mountain National Forest.

Coolidge Solar I, LLC – Managed the visual analysis for a 20-MW solar electric generation facility in Ludlow, Vermont. When constructed, this project will be approximately four times larger than the next largest solar project in the state of Vermont. The Project received a Certificate of Public Good from the Vermont Public Service Board in 2017 and construction is anticipated for 2018.

Encore Renewable Energy – Managed the visual analysis for the development of multiple solar electric generation facilities t, ranging in size from 500 kW to 5 MW, totaling in the development of over 17 MW of renewable electric generation. The most recent will be a 5-MW solar project located on top of a closed landfill in Brattleboro, Vermont.

301 College Street
Burlington, VT 05401
tel 802.658.3555

www.tjboyle.com

New England Clean Power Link – Manager for the visual impact assessment portion of a 1,000 MW (300 to 320 kV) HVDC transmission line and converter station. The VIA will address aesthetic impact requirements for permitting within the state of Vermont and for the EIS. The NECPL received is certificate from public good from the Vermont Public Service Board in 2016. Construction is anticipated for 2019-2020.

Green Lantern Capital Solar Development – Manager for the visual analysis for the development of over 10-MW or solar electric generation facilities, broken into 500 to 1,000 kW net metered Projects. Many of these projects will be co-owned by the towns in which they are located.

Technology Drive Solar Project – Managed the visual analysis for a 2.2-MW solar electric generation facility in Brattleboro, Vermont. The Project received a Certificate of Public Good from the Vermont Public Service Board in 2013 and completed construction in 2015.

Whitcomb Solar Project – Managed the visual analysis for a 2.2-MW solar electric generation facility in Essex Junction, Vermont. The Project received a Certificate of Public Good from the Vermont Public Service Board in 2013 and completed construction in 2014.

Claire Solar Project – Managed the visual analysis for a 2.2-MW solar electric generation facility in South Burlington, Vermont. The Project received a Certificate of Public Good from the Vermont Public Service Board in 2013 and completed construction in 2015.

Chester Solar Project – Managed the visual analysis for a 2.2-MW solar electric generation facility in Chester, Vermont. The Project received a Certificate of Public Good from the Vermont Public Service Board in 2013 and is currently under construction.

Environmental Assessment for Wind Resources Offshore Georgia – Provided project management for the visual impact assessment portion of the Draft and Final EA to install meteorological measurement towers and buoys on the outer continental shelf, near Tybee Island, GA. This project will be used to assess the potential for offshore wind development in the area.

Harbor View Solar Project – Evaluated potential visual impacts for a proposed 2.2-MW solar electric generation facility in St. Albans, Vermont. The Project received a Certificate of Public Good from the Vermont Public Service Board in November 2012 and completed construction in 2015.

Visualization Study for Offshore North Carolina – Managed the creation of multiple high-quality visualizations including: 234 single-frame photographic simulations, 21 panoramic simulations, 48 animated videos and six simulated movies for potential offshore wind development. The visualizations were used by the **Bureau of Ocean Energy Management** to assess aesthetic impacts and finalize the federal offshore lease program for renewable energy projects on the Outer Continental Shelf.

VELCO: Bennington Substation – Managed the visual analysis of a proposed electrical transmission substation located in Bennington, Vermont including coordination of public outreach efforts and investigation of several alternatives with VELCO to gain support from local officials. The analysis included the preparation of testimony, a report, and exhibits including photo simulations of several different design alternatives. The Project received a Certificate of Public Good from the Vermont Public Service Board in August of 2012 and completed construction in 2014.

Lamoille County Sheriff Public Safety Project – Provided aesthetic assessment services, including review under the Quechee Analysis, for the replacement of an existing wireless communication tower in the town of Hyde Park. Several emergency service communication networks will be collocated on the new tower. The project received its Certification of Public Good in 2011 under Section 248a of the Vermont State Statutes

VELCO: Ascutney Substation – Managed all aspects for the visual analysis of a proposed electrical substation located in Weathersfield, Vermont. Responsibilities included preparation of testimony and report, and oversight of exhibit preparation including photo simulations, for inclusion with the Section 248 petition to the Vermont Public Service Board. The Project received a Certificate of Public Good in April of 2012 and completed construction in 2013.

“SunGen Sharon I” Solar Farm Project – VT Department of Public Service – Reviewed the applicant’s petition for a Certificate of Public Good and performed an evaluation of potential aesthetic impacts on behalf of the Vermont Department of Public Service. Responsibilities included preparation of testimony, an aesthetic analysis report, and exhibits for inclusion with the Section 248 filings to the Vermont Public Service Board. This project received a Certificate of Public Good in 2011 and completed construction in 2012.

VELCO: Jay Substation – Evaluated potential visual impacts that would result from a proposed electrical transmission substation in Jay, Vermont. Responsibilities included preparation of testimony, report, and exhibits for inclusion with the Section 248 petition to the Vermont Public Service Board. This project received a Certificate of Public Good in 2011 and construction was completed in 2012.

Williamstown Solar Farm – Evaluated potential visual impacts for a proposed 2.0-MW solar electric generation facility in Williamstown, Vermont. The Project received a Certificate of Public Good from the Vermont Public Service Board in November 2010 and went on line in December 2012.

FairPoint Communications Wireless Broadband – Provided aesthetic assessment services for the permitting of multiple wireless towers throughout the State of Vermont. An initial three-tower project, including coordination of archaeological and historic resources was approved. Studies for several other sites were completed, but FairPoint discontinued the project.

Vermont Community Wind – Conducted a visual resource study in preparation of filing testimony and exhibits to the Vermont Public Service Board for a proposed 85 MW industrial wind turbine project in Ira, Vermont. Responsibilities included assessment of 60 potential turbine locations, coordination and quality control of GIS data for multiple consultants, coordination on public outreach events and the creation of project visualizations. This project is currently on hold.

Southern Loop Project – Evaluated potential visual impacts as the result of proposed transmission upgrades including the addition of a second 345 kV transmission line within an existing corridor, new and expanded substations and a new 345 kV loop. Responsibilities included preparation of testimony, reports, and exhibits for inclusion with the 248 petition to the Vermont Public Service Board. This project received a Certificate of Public Good in February 2009 and construction was completed in 2011.

East Avenue Loop Project – Managed all aspects of the visual analysis for a proposed 115 kV transmission line upgrade between Williston and Burlington, Vermont, including preparation of a visual analysis report, exhibits, and testimony. This project involved the creation of a highly detailed 3-D model that was presented at several key stakeholder meetings and public open house sessions to help inform the public of the visual characteristics of the proposed upgrades. The Certificate of Public Good for this project was issued in May, 2008. Construction was completed 2009.

Deerfield Wind Project – Co-authored a report, created exhibits, prepared joint pre-filed testimony and testified at a technical hearing before the Vermont Public Service Board to evaluate aesthetic impacts of a seventeen 2.0-MW wind turbine project within the Green Mountain National Forest in southern Vermont. This project has received a Certificate of Public Good and is awaiting construction. Co-authored separate report for the EIS.

Beekmantown Wind Project – Conducted a visual resource assessment for a proposed thirteen-turbine industrial wind farm in Beekmantown, NY. Findings were presented in a Visual Impact Assessment Report, along with maps, photo simulations, sections and other exhibits, and filed as attachment D of the Full Environmental Impact Assessment.

Middlebury Spur Environmental Impact Statement – Prepared a visual assessment for inclusion with an Environment Impact Statement of proposed alternates of a railroad spur and loading facilities in Middlebury, VT. Several photo simulations were prepared in order to evaluate alternate proposals, including at-grade and grade-separated crossings of public roads.

East Haven Windfarm – Completed a report summarizing the visual analysis of a four-turbine industrial wind project in East Haven, Vermont, and provided testimony to the Vermont Public Service Board. This project was denied a Certificate of Public Good due to inadequate avian impact studies.

Independent Wireless One – Pritchard Mt. Telecommunication Facility Expansion – Prepared exhibits, including several photographic simulations, in support of testimony submitted to Act 250 District Commission #4 for approval of substantial changes to a pre-existing telecommunication tower.

Northwest Vermont Reliability Project – Prepared exhibits in support of testimony submitted to the Vermont Public Service Board for approval of electrical transmission line upgrades from West Rutland to South Burlington to ensure the reliability of Vermont's transmission system. Construction of this project was completed in 2009.

Rensselaer Greens – Provided aesthetic assessment in opposition to a 550-MW cogeneration facility and a recycled newsprint facility, and testified before a joint hearing of the New York State DEC and DPS.

Memberships and Affiliations

1998-present	Member, American Society of Landscape Architects
2002-present	Member, Vermont Chapter of the American Society of Landscape Architects
2003-2010	Member, Vermont Landscape Architecture Licensure Committee
2003-2011	Treasurer, Vermont Chapter of the American Society of Landscape Architects
2007-2010	Member, Outdoor Lighting Advisory Board – State of Vermont
2010-present	Advisory Board Member, Vermont Technical College – Architectural and Building Engineering Technology Department
2010-present	Member, Village Steering Committee, Town of Hinesburg

Awards and Recognition

- 2013 Vermont Chapter ASLA – Honor Award: Visualization Study of Offshore North Carolina
- 2011 Vermont Chapter ASLA – President's Award
- 2009 VPA Plan of the Year Award: Neshobe Farm Planned Unit Development
- 2009 Vermont Chapter ASLA - Honor Award: Neshobe Farm Planned Unit Development
- 2007 Vermont Public Space Awards - Honorable Mention: Lake & College Project
- Spring 1999, Greenhorne & O'Mara Award of Merit
- Grant recipient, City of Gary, Indiana, for nomination of the Lincoln Street Historic Neighborhood to National Register of Historic Places - 1998
- 1st Place, 1996 ASLA Undergraduate Team Research Award