

**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 PAUL CALLAHAN
ON BEHALF OF
CHINOOK SOLAR, LLC
OCTOBER 14, 2019**

1 Qualifications of Paul Callahan

2 Q. Please state your name and business address.

3 A. My name is Paul Callahan. My business address is 700 Universe Boulevard, Juno
4 Beach, Florida 33408.

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

6 A. I am employed by NextEra Energy Resources, LLC (“NEER”) as a Director of
7 Project Engineering & Construction.

8 Q. Please describe your responsibilities at NEER, including those that relate to
9 the Chinook Solar Project that is the subject of this docket.

10 A. As a Director of Project Engineering & Construction, I have oversight and
11 management responsibilities for engineering design of utility-scale solar projects. My
12 primary roles include establishing design criteria for solar projects, supporting
13 procurement of major power plant equipment, and contracting with engineering firms for
14 detailed design of solar projects. I am generally responsible for the engineering activities
15 during the development, design, and construction phases of the Chinook Solar Project

1 (“the Project”). As the result of all these activities, I am very familiar with the Project.

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

3 A. I joined NextEra Energy, Inc. (“NextEra”) in 1988 and have held various
4 engineering and project management positions within NextEra. I also have experience
5 with many types of generation including fossil fuel, nuclear, and solar facilities. I have
6 held my current position since 2015. I have also been the Project Manager with design,
7 construction and commissioning responsibility for solar projects. Overall, I have had
8 extensive experience overseeing the engineering, design, or construction of over 3,000
9 megawatts of solar projects developed by NextEra through its subsidiaries.

10 I hold a Bachelor of Science degree in Civil Engineering from Virginia Tech and
11 am a registered Professional Engineer in the State of Florida.

12 **Q. Have you previously testified before this Committee?**

13 A. I have not testified before this Committee.

14 **Purpose of Testimony**

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

16 A. The purpose of my testimony is to demonstrate to the Site Evaluation Committee
17 (“SEC” or “the Committee”) that Chinook Solar, LLC (“Chinook Solar”)—as described
18 in more detail in section I of the Application for Site and Facility (“the Application”) and
19 in the prefiled testimony of Heath Barefoot—will have the technical and managerial
20 capability necessary to construct and operate the Project.

1 **Q. Please describe the experience of NEER in developing renewable energy**
2 **projects.**

3 A. NEER, the indirect parent of Chinook Solar, is the world's largest generator of
4 renewable energy from the wind and the sun. Over the past 10 years, NEER has invested
5 approximately \$83,000,000,000 of capital. In more than 30 years of developing projects,
6 NEER has developed more than 20,000 MW of operating assets, including more than
7 15,000 MW of wind, 2,800 MW of solar, and approximately 150 MW of energy storage
8 across 33 states. Information regarding the executive leadership team involved in the
9 development, construction, and operation of the Project is located in Section I.3.b of the
10 Application. Additional information related to the team of consultants and contractors
11 assembled to support development of the Project is located in Section I.2.b of the
12 Application.

13 **Q. Has an Engineering, Procurement, and Construction ("EPC") contractor**
14 **been hired by Chinook Solar?**

15 A. No. It is anticipated that contractors, including an EPC general contractor, will be
16 selected by the fourth quarter of 2020. Following a thorough selection process, the EPC
17 will be responsible for managing the majority of the construction of the Project and
18 adhering to all permit conditions. The EPC will be closely monitored by the Chinook
19 Solar management team. Section I.3.a of the Application provides additional managerial
20 information related to the construction and operation of the Project.

21 **Q. What is the estimated construction timeline for the Project?**

1 A. Construction will primarily consist of three phases: pre-construction, construction,
2 and post-construction. The final schedule will be determined after consideration of final
3 engineering review, permitting conditions, site conditions, and EPC consultations. It is
4 currently anticipated that the pre-construction phase may begin as early as November
5 2020 contingent upon the approval of a Certificate of Site and Facility (“Certificate”) by
6 the New Hampshire Site Evaluation Committee. The pre-construction phase will begin
7 with tree clearing, which is expected to be complete by March 1, 2021, at which time,
8 pre-construction activities will transition to site preparation and earthwork, environmental
9 conditions permitting. The earthwork will include activities such as grading, access road
10 preparation, and implementation of erosion controls, which will proceed according the
11 plans presented within the Alteration of Terrain Permit application, which is included as
12 Appendix 4 to the Application and further referenced by the testimony of Joseph
13 Persechino. The construction phase will begin as soon as completion of earthwork and
14 will include collection trenching, post installation, racking installation, and module
15 installation. Preparation of substation facilities required for the collection and
16 interconnection of the Project will occur concurrently in similar fashion. Post-
17 construction activities will include testing, commissioning, and energization. Chinook
18 Solar intends to bring the Project into commercial operations on or before November 1,
19 2021. Sections F.6.a and G.10 of the Application provide more details on the
20 construction process, an estimated timeline of which is provided as Appendix 5 to the
21 Application.

1 **Q. Will the Project require a laydown area during construction?**

2 A. It is anticipated that a temporary laydown area will be required during
3 construction of the Project. This laydown area will be used for contractor offices, craft
4 parking, and storage of materials and equipment, and is expected to be approximately 5
5 acres in size. Subject to land-use agreement, the location is anticipated to be adjacent to
6 the southern end of the Project as depicted by Appendix 8B of the application and as
7 detailed in Section H.1. The laydown area will not require any tree clearing nor will it
8 result in impacts to natural resources. Stabilization measures shall be implemented as
9 necessary.

10 **Q. How will Chinook Solar mitigate potential impacts from hazardous materials**
11 **during construction and operation of the Project?**

12 A. It is not anticipated that there will be large volumes of hazardous materials on site
13 during construction of the Project. In this phase, there may be varying quantities of
14 diesel fuel, gasoline, hydraulic fluids, and lubricating oils to be used in construction
15 equipment and vehicles. Post construction, there will be no hazardous materials stored
16 onsite. There will be insulating oil in the transformers; however, such oils are not of a
17 hazardous classification. Chinook Solar has attached a draft Spill Prevention, Control,
18 and Countermeasure (“SPCC”) Plan as Appendix 15B to the Application and will revise
19 the SPCC Plan prior to the start of construction as details are finalized.

1 **Q. Will there be any blasting required?**

2 A. Chinook Solar will seek to minimize the need for any blasting during construction
3 of the Project. Mass blasting in the area is not anticipated. In the event any blasting is
4 required to install the solar arrays and underground collection system owing to the
5 presence of shallow bedrock or boulders, it will be conducted under the direct
6 management of the EPC contractor by a licensed subcontractor who possesses experience
7 and complete qualifications and in accordance with all state requirements. Please see
8 Section F.6.a for more detail.

9 **Q. How will the site be accessed?**

10 A. Temporary construction access will occur via Crane Road, located off NH State
11 Route 12. Permanent site access will be located off Fullam Hill Road.

12 **Q. Are there any local road-use restrictions?**

13 A. During construction, all transporters will be responsible for securing any
14 necessary road-use permits and for complying with NH Department of Transportation
15 rules. Chinook Solar anticipates reaching agreement with the Town of Fitzwilliam
16 through a Memorandum of Understanding to address any concerns about local road-use
17 during construction.

18 **Q. Please describe the experience of NEER in operating power generation**
19 **facilities in New England.**

20 A. NEER, through its subsidiaries, operates a substantial portfolio of power
21 generation facilities in New England totaling nearly 2,500 MW gross including solar,

1 battery energy storage, fossil, and nuclear. The Coolidge Solar Project in Ludlow, VT, at
2 20 megawatts, is the largest solar facility to be permitted and constructed in the State of
3 Vermont. Sanford Airport Solar, which is anticipated to reach commercial operations in
4 the fall of 2020, is the largest solar project to be permitted in Maine (49.4 MW). The
5 following table provides a list of NEER facilities operating in New England:

Project Name	Fuel Type	Location	Gross MW	Net Ownership MW
Coolidge Solar	Solar	Ludlow, VT	20	20
Connecticut, Maine, Massachusetts	Small-scale Solar	CT, ME, and MA	21	21
Casco Bay	Energy Storage	Yarmouth, ME	16	16
Minuteman	Energy Storage	North Reading, MA	5	5
Bellingham	Natural Gas	Bellingham, MA	311	155
Seabrook	Nuclear	Seabrook, NH	1,250	1,103
Wyman 1-3 and Cape	Oil	Yarmouth and South Portland, ME	250	250
Wyman 4	Oil	Yarmouth, ME	613	517
Total			2,481	2,069

6 **Q. Describe how operation of the Project will be monitored.**

7 A. Once Chinook Solar has reached commercial operation, it will be monitored by
8 NextEra's Renewable Operation Command Center ("ROCC"), which will be used to
9 optimize performance and control the Project's operations. The ROCC is staffed with
10 North American Electric Reliability Corporation Certified Transmission System
11 Operators 24 hours a day, 365 days per year. The ROCC will monitor real-time
12 performance of the Project and remotely detect any abnormal operating conditions. In

1 addition, regional operations and maintenance staff will provide support, as necessary, for
2 any planned maintenance and/or unplanned outages.

3 **Conclusion**

4 **Q. In your opinion, will Chinook Solar have the requisite technical and**
5 **managerial capability to assure construction and operation of the Project in**
6 **continuing compliance with the terms and conditions of a Certificate of Site and**
7 **Facility?**

8 A. Yes. In my opinion, based on the testimony provided above and based on the
9 information provided in the Application, Appendices and prefiled testimonies, I believe
10 that the Project meets all of the technical and managerial criteria specified under Site
11 301.04(b and c) and RSA 162-H:16,IV(a) that the SEC must consider in deciding
12 whether to grant a Certificate.

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

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