### 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 HEATH BAREFOOT ON BEHALF OF CHINOOK SOLAR, LLC OCTOBER 14, 2019

### 1 Qualifications of Heath Barefoot

2 Q. Please state your name and business address.

- 3 A. My name is Heath Barefoot. My business address is 700 Universe Boulevard,
- 4 Juno 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 Project
- 7 Director.
- 8 Q. Please describe your responsibilities at NEER, including those that relate to

9 the Chinook Solar Project ("Project") that is the subject of this docket.

10 A. As a Project Director of renewables and energy storage development, I have

11 oversight and management responsibilities for several early-stage development projects

- 12 in New England. My primary roles include prospecting for new development projects,
- 13 permitting at the federal, state, and local levels, securing land-use agreements, project-
- 14 specific public outreach efforts, and interconnection coordination. I am generally
- 15 responsible for high-level oversight and approval of all plans related to the Project. As

1 the result of all of these activities, I am very familiar with the Chinook Solar Project.

2

### Q. What are your background and qualifications?

3 A. In addition to my current role, I have been a business manager for NEER power-

4 generating assets in New England. My résumé is attached to this testimony and is labeled

5 Attachment A.

#### 6 **Q**. Have you previously testified before this Committee?

7 A. No, I have not testified before this Committee.

### 8 **Purpose of Testimony**

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

10 A. The purpose of my testimony is to provide the Site Evaluation Committee ("SEC" 11 or "the Committee") with background information about the Applicant, Chinook Solar,

12 LLC ("Chinook Solar") and the proposed Chinook Solar Project, and with an overview of

13 the Project and how it will comply with the requirements of RSA 162-H:16, IV. My

14 testimony covers the following topics that are contained in the Application for a

15 Certificate of Site and Facility ("the Application") and to some degree in other prefiled

16 testimony: a description of the site and facility; alternatives to the Project that were

17 considered; the Project's consistency with the objectives of RSA 162-H and other public

18 policies; the financial, technical, and managerial capability of the Applicant; whether the

- 19 Project will unduly interfere with the orderly development of the region taking into
- 20 consideration the views of municipal and regional planning commissions and municipal
- 21 governing bodies (in particular, the Fitzwilliam Select Board); the Project's effects on

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1	public health and safety, aesthetics, historic sites, air and water quality, and the natural
2	environment; the public benefits of the Project and how it serves the public interest; and a
3	description of the Project's conservation and mitigation efforts. In addition, my
4	testimony is intended to support and sponsor information in the Application to the extent
5	not specifically addressed or supported by other witnesses.
6	Applicant Information
7	Q. Please provide information about the Applicant and the companies with
8	which it is affiliated.
9	A. The Applicant, Chinook Solar, is a Delaware limited liability company formed to
10	develop, build, own, and operate the Project. Chinook Solar is an indirect, wholly owned
11	subsidiary of NEER. NextEra Energy, Inc. ("NextEra"), the parent company of NEER, is
12	a Fortune 500 Company included in the S&P 100 index. NextEra will oversee the
13	development, financing, construction, and operation of the Project. NextEra is the
14	number one generator of wind and solar energy in the world; it owns over 90 solar
15	projects in North America. NextEra has investments in 36 states and Canada, and it has
16	invested more than \$85 billion in energy infrastructure since 2004.
17	Site Information
18	Q. Please describe the location and basic characteristics of the proposed Project
19	site.
20	A. The Project is located in a sparsely settled rural area within the rural zoning
21	district in the eastern portion of the Town of Fitzwilliam. Specifically, the Project is

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1	proposed to be located on and adjacent to Fullam Hill Road and includes approximately
2	513 acres of private lands currently under purchase or lease option by Chinook Solar
3	from five landowners. These lands are located east of NH Route 12, south of NH Route
4	119, and west of Fullam Hill Road. Clearing required for Project construction will be
5	approximately 129 acres, and the Project footprint will be approximately 110 acres.
6	Directly east of the Project and west of Fullam Hill Road are two transmission
7	corridors. One corridor contains two 115-kV lines, both owned by National Grid. The
8	other corridor contains a 345-kV line owned by Eversource. Chinook Solar proposes to
9	interconnect the Project to the grid by building a substation to interconnect to National
10	Grid's 115-kV line known as Line I-135.
11	Development adjacent to the proposed Project consists primarily of rural
12	residential dwellings and their associated outbuildings. The nearest residence is located
13	off Crane Road approximately 290 feet south of the southernmost proposed solar array.
14	The owner of this residence has a leasehold interest with Chinook Solar. The closest
15	structure owned by a party who does not have a purchase or lease option with Chinook
16	Solar is a residence located approximately 560 feet northeast of the northernmost Project
17	limit.
18	In general, the Project site consists of undeveloped forest land in various stages of
19	maturity. The area has been subject to timber harvesting activity in the past several
20	decades. As a result of this logging activity, all of which was unrelated to the Project, the
21	area includes patches of successional forest. For aerial photos of the site see Appendix 1

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1	of the Application. Consultation with the New Hampshire Natural Heritage Bureau
2	concluded that no significant natural communities exist within the Project area, and the
3	Project area is unlikely to support any rare plants. In addition, the joint prefiled
4	testimony of Dana Valleau and Kara Moody provides further detail regarding the effects
5	of the Project on the natural environment, including wildlife and wildlife habitats.
6	More information about the location and characteristics of the Project site and
7	surrounding area is contained in Sections C.1 through C.5 of the Application. In
8	addition, Section J.3 of the Application provides information about the natural and other
9	resources at the Project site, and Section K.1 provides information about local land use.
10	Facility Information
11	Q. Please provide information about the basic design and configuration of the
12	proposed Project.
13	A. The Project consists of solar panels, skid-mounted transformers and inverters,
14	belowground and aboveground collection lines, a Project substation and utility
15	switchyard (collectively, the "Substation"), and other necessary infrastructure, such as
16	access roads and security fencing. More information detailing the components and
17	design of the facility is provided in Section H.1 of the Application and in the prefiled
18	testimony of Joseph Persechino.

19 The entire Project's configuration within the area for which the Project has either20 an option to purchase or to lease the premises is approximately 110 acres.

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1	Approximately 2 <sup>1</sup> / <sub>4</sub> miles of new gravel surface road will be built for access,
2	construction and maintenance of the Project. There is approximately 1,500 feet of
3	existing road on the site.
4	The Substation will contain electrical equipment necessary for the interconnection
5	of the Project, such as a power transformer, bus supports, circuit breakers, and disconnect
6	switches. There will also be an equipment enclosure of approximately 392 square feet as
7	well as a control building that is expected to be approximately 1,400 square feet in size.
8	The Substation will be located directly southwest of the existing transmission line
9	corridor and approximately 0.2 mile west of Fullam Hill Road. The final design of the
10	utility switchyard will be to National Grid standards and will be located within the
11	footprint shown on civil design plans in Appendix 8A of the Application and will be
12	contained within the permitted footprint and elevations contained in the Application. The
13	proposed Substation layout is illustrated on Figure G.1 of the Application and Substation
14	design drawings may be found in Appendix 6 of the Application.
15	In this Application, Chinook Solar is seeking approval, not just of the solar power
16	facility, but also of the necessary interconnection with the transmission grid.
17	Q. Please explain how the power produced by the Project will be delivered to
18	the electricity grid.
19	A. The Project plans to deliver electricity to the grid by interconnecting to the
20	existing National Grid I-135 electric transmission line, which lies in a transmission
21	corridor running adjacent to the northeast boundary of the Project. This interconnection

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1 will be accomplished via a utility switchyard to be built on property that will be 2 purchased by the Project and subdivided with real property interests of the land on which 3 the switchyard lies, and the interconnecting facilities will be transferred to National Grid 4 as required by their standards. In order to connect with the National Grid transmission 5 line, the interconnector line will have to cross the right of way owned by Eversource 6 which is located between the Project and the National Grid transmission line. In addition, 7 NextEra Energy Resources (an affiliate of Chinook Solar) is contractually obligated to 8 transfer the land interests under which the Project's collection substation is located to a 9 third party entity (although Chinook Solar will own the improvements to be installed on 10 such lands) and the remaining portion of the lands (that are not transferred) will be 11 retained by Chinook Solar for use with the Project. No new electric transmission lines, 12 other than Project electrical collection system lines and short underground conductors 13 required to loop in the existing National Grid 115-kV transmission line, are currently 14 anticipated to be required.

A pair of 115-kV three-phase conductor lines will be constructed from the utility
 switchyard, under the Eversource right-of-way, to the National Grid transmission line.

# 17 Q. Please describe the Project's anticipated capacity to produce electricity.

A. This Project will be designed with a capacity of 30MW. Accounting for all
losses, Chinook Solar estimates that the Project will have an average annual net capacity
factor of approximately 20%. Based on this projected capacity factor, the Project is
expected to produce approximately 52,000 megawatt hours of electricity per year. This is

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1	the equivalent of the amount of electricity needed to serve approximately 7,000 average
2	New Hampshire homes annually. This estimate is based on data from a Q2 2018 through
3	Q1 2019 Customer Migration Data Reports provided to the New Hampshire Public
4	Utilities Commission by Eversource, which indicate that electricity usage per year for the
5	average New Hampshire home is 7,408 kilowatt hours.
6	Consideration of Available Alternatives
7	Q. Did Chinook Solar consider any other available alternatives to the proposed
8	site for this Project? If so, please describe those alternatives and explain why they
9	were not selected.
10	A. The criteria used by Chinook Solar to select the site for this Project and the
11	alternatives considered are described in Section H.2 of the Application. In addition to the
12	site of the Project, Chinook Solar considered possible alternative locations in Fitzwilliam.
13	These alternatives were ruled out for several reasons, including the presence of extensive
14	wetland resources.
15	Within the parcels of land under purchase or lease option by Chinook Solar for
16	the Project, numerous alternative layouts or designs were considered. The Project's
17	current design is preferred to all other alternatives that were considered because it
18	provides for the most efficient and economic use of resources with the fewest
19	environmental impacts.
20	The Project's Consistency with the Objectives of RSA 162-H and Other Public
21	Policies

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1	Q.	What is your understanding of the objectives of RSA 162-H?
2	А.	My understanding of the objectives of RSA 162-H is informed by the language in
3	the pu	rpose section of the statute found at RSA 162-H:1. There, the Legislature
4	recog	nized "that the selection of sites for energy facilities may have significant impacts
5	on and	d benefits tothe welfare of the population, private property, the location and
6	growt	h of industry, the overall economic growth of the state, the environment of the state,
7	histor	ic sites, aesthetics, air and water quality, the use of natural resources, and public
8	health	and safety." Based upon that recognition:
0		the logislature finds that it is in the public interest to maintain a
9 10		halance among those potential significant impacts and benefits in
11		decisions about the siting construction and operation of energy
12		facilities in New Hampshire: that undue delay in the construction of
13		new energy facilities be avoided: that full and timely consideration of
14		environmental consequences be provided: that all entities planning to
15		construct facilities in the state be required to provide full and complete
16		disclosure to the public of such plans: and that the state ensure that the
17		construction and operation of energy facilities is treated as a
18		significant aspect of land-use planning in which all environmental,
19		economic, and technical issues are resolved in an integrated fashion. In
20		furtherance of these objectives, the legislature hereby establishes a
21		procedure for the review, approval, monitoring, and enforcement of
22		compliance in the planning, siting, construction, and operation of
23		energy facilities.

23 24

#### 25 Q. Do you believe that the objectives of RSA 162-H would be best served by the

- 26 issuance of a certificate of site and facility for this Project?
- Yes. Granting a certificate of site and facility to this Project will further the 27 A.
- objectives of RSA 162-H by enabling a new renewable energy facility with low 28
- 29 environmental, health and safety, aesthetic and historic site impacts, and significant

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I	economic development benefits, to meet the growing demand for electricity in the region.
2	The Project will maintain an appropriate balance between the environment and the need
3	for new renewable energy facilities. It can also be constructed relatively quickly, without
4	undue delay, and will help to diversify the state's energy supply and to ensure that the
5	energy supply is adequate, reliable and conforms to sound environmental principles.
6	Chinook Solar has been providing information, reports and studies related to this Project
7	to the Town and members of the public prior to the submission of the Application. In
8	addition, through the SEC process, there will be complete and full disclosure to the public
9	of the Project's impacts and benefits. Thus, all the objectives of RSA 162-H will be met
10	if the Project is certificated.
11	Q. Is the Project consistent with public policies relating to renewable energy and
11 12	Q. Is the Project consistent with public policies relating to renewable energy and climate change?
11 12 13	<ul><li>Q. Is the Project consistent with public policies relating to renewable energy and climate change?</li><li>A. Yes. The Project is consistent with and promotes several public policy goals such</li></ul>
11 12 13 14	<ul> <li>Q. Is the Project consistent with public policies relating to renewable energy and climate change?</li> <li>A. Yes. The Project is consistent with and promotes several public policy goals such as those reflected in RSA 362-F, New Hampshire's renewable portfolio standard ("RPS")</li> </ul>
11 12 13 14 15	<ul> <li>Q. Is the Project consistent with public policies relating to renewable energy and climate change?</li> <li>A. Yes. The Project is consistent with and promotes several public policy goals such as those reflected in RSA 362-F, New Hampshire's renewable portfolio standard ("RPS") law. Solar energy is considered to be a Class II eligible renewable energy resource under</li> </ul>
11 12 13 14 15 16	<ul> <li>Q. Is the Project consistent with public policies relating to renewable energy and climate change?</li> <li>A. Yes. The Project is consistent with and promotes several public policy goals such as those reflected in RSA 362-F, New Hampshire's renewable portfolio standard ("RPS") law. Solar energy is considered to be a Class II eligible renewable energy resource under the RPS law. RSA 362-F:4, II. The Project is consistent with the purpose of the RPS</li> </ul>
11 12 13 14 15 16 17	<ul> <li>Q. Is the Project consistent with public policies relating to renewable energy and climate change?</li> <li>A. Yes. The Project is consistent with and promotes several public policy goals such as those reflected in RSA 362-F, New Hampshire's renewable portfolio standard ("RPS") law. Solar energy is considered to be a Class II eligible renewable energy resource under the RPS law. RSA 362-F:4, II. The Project is consistent with the purpose of the RPS statute articulated in RSA 362-F:1: it provides fuel diversity to the state and the region's</li> </ul>
11 12 13 14 15 16 17 18	<ul> <li>Q. Is the Project consistent with public policies relating to renewable energy and climate change?</li> <li>A. Yes. The Project is consistent with and promotes several public policy goals such as those reflected in RSA 362-F, New Hampshire's renewable portfolio standard ("RPS") law. Solar energy is considered to be a Class II eligible renewable energy resource under the RPS law. RSA 362-F:4, II. The Project is consistent with the purpose of the RPS statute articulated in RSA 362-F:1: it provides fuel diversity to the state and the region's generation supply through the use of a local renewable resource that is completely</li> </ul>
11 12 13 14 15 16 17 18 19	<ul> <li>Q. Is the Project consistent with public policies relating to renewable energy and climate change?</li> <li>A. Yes. The Project is consistent with and promotes several public policy goals such as those reflected in RSA 362-F, New Hampshire's renewable portfolio standard ("RPS") law. Solar energy is considered to be a Class II eligible renewable energy resource under the RPS law. RSA 362-F:4, II. The Project is consistent with the purpose of the RPS statute articulated in RSA 362-F:1: it provides fuel diversity to the state and the region's generation supply through the use of a local renewable resource that is completely emission-free and which can displace and lower regional dependence on fossil fuels; the</li> </ul>
<ol> <li>11</li> <li>12</li> <li>13</li> <li>14</li> <li>15</li> <li>16</li> <li>17</li> <li>18</li> <li>19</li> <li>20</li> </ol>	<ul> <li>Q. Is the Project consistent with public policies relating to renewable energy and climate change?</li> <li>A. Yes. The Project is consistent with and promotes several public policy goals such as those reflected in RSA 362-F, New Hampshire's renewable portfolio standard ("RPS") law. Solar energy is considered to be a Class II eligible renewable energy resource under the RPS law. RSA 362-F:4, II. The Project is consistent with the purpose of the RPS statute articulated in RSA 362-F:1: it provides fuel diversity to the state and the region's generation supply through the use of a local renewable resource that is completely emission-free and which can displace and lower regional dependence on fossil fuels; the Project will aid the local and state economy as indicated in the prefiled testimony of</li> </ul>

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1	Project will reduce the amount of greenhouse gases generated in the state, thereby
2	improving air quality, public health, and mitigating against the risks of climate change.
3	Because the Project will produce electricity without producing greenhouse gases,
4	it is consistent with the state's Regional Greenhouse Gas Initiative ("RGGI") set forth in
5	RSA 125-O:19 et seq., which is aimed at reducing greenhouse gas emissions from energy
6	use in New Hampshire and the region. The Legislature has determined that global
7	climate change is a significant environmental problem and can be addressed through
8	reducing greenhouse gases such as carbon dioxide, which is produced by electric power
9	plants that combust fossil fuels. By generating electricity without using fossil fuels, the
10	Project will assist in addressing the issue of climate change.
11	Lastly, the Project is consistent with policies embodied in state planning and
12	zoning laws that encourage support of renewable energy projects, prohibit unreasonable
13	limitations by use of municipal zoning powers or by the unreasonable interpretation of
14	such powers, and require that planning regulations and zoning ordinances be designed to
15	encourage the installation and use of renewable forms of energy, including specifically
16	solar energy. See RSAs 672:1, III-a and 674:17, I(j).
17	Financial, Technical and Managerial Capability

Q. Will Chinook Solar have adequate financial capability to assure construction
and operation of the Project in continuing compliance with the terms and conditions
that the SEC may impose?

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1 A. As an indirect, wholly owned subsidiary of NEER, the parent company of which 2 is NextEra, Chinook Solar will have access to the financial capability of NextEra and its 3 affiliated entities. As noted above, NextEra owns over 90 solar projects in North 4 America. More detailed information about the Applicant, the companies with which it is 5 affiliated, and persons associated with the Applicant is found in Section B of the 6 Application. In addition, the prefiled testimony of Joseph M. Balzano provides further 7 details concerning Chinook Solar's capabilities to finance the Chinook Solar Project. For 8 a further description of the financial capability of Chinook Solar, see section I.1 of the 9 Application. NextEra, through its affiliate Florida Power & Light Company, is a 10 company which the New Hampshire Public Utilities Commission has recognized as 11 having the financial, technical and managerial capability to own and operate energy 12 facilities in New Hampshire. See 87 NH PUC 621 (2002); 89 NH PUC 267 (2004). 13 Q. Will Chinook Solar have adequate technical and managerial capability to 14 assure construction and operation of the Project in continuing compliance with the 15 terms and conditions that the SEC may impose? 16 A. As an indirect, wholly owned subsidiary of NEER, the parent company of which 17 is NextEra, Chinook Solar will have access to the technical and managerial capability of 18 NextEra and its affiliated entities. As noted above, NextEra owns over 90 solar projects 19 in North America. More detailed information about the Applicant, the companies with

20 which it is affiliated, and persons associated with the Applicant is found in Section B of

21 the Application and in the prefiled testimony of Paul Callahan. Chinook Solar plans to

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1	hire a qualified and experienced contractor to build the Project. NextEra will also have a
2	significant on-site presence, including having NextEra personnel heavily involved in the
3	oversight and management of the construction process and interfacing with the contractor
4	and subcontractors. This is a process familiar to NextEra personnel. When it comes to
5	management of the Project once it is constructed, again, NextEra has significant
6	experience with managing solar projects. Moreover, as noted in the Application, the
7	Project will be connected to the operations center in Juno Beach, Florida, where all of the
8	generating facilities owned and operated by NextEra are monitored 24-hours a day.
9	Chinook Solar plans to hire local personnel to be available to assist with any on-site
10	operational issues. For a further description of the technical and managerial capability of
11	Chinook Solar see sections I.2 and I.3 of the Application.
12	Orderly Development of the Region and Consideration of the Views of Municipal
13	and Regional Planning Commissions and Municipal Governing Bodies
14	Q. Please describe steps that Chinook Solar has taken to consider the views of
15	municipal and regional planning commissions and municipal governing bodies to
16	ensure that the Project is consistent with the orderly development of the region.
17	A. Development of the Project was initiated in 2016 by a company known as Ranger
18	Solar. Initial outreach with the Town of Fitzwilliam was performed by Ranger Solar
19	beginning in April of 2016. NEER acquired the Project in early 2017 and has worked
20	with the Town of Fitzwilliam and all necessary agencies to design, site, and permit the
21	Project. Chinook Solar has attended and presented (and responded to inquiries) at several

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1	different public, noticed meetings in Fitzwilliam, including meetings before the Planning
2	Board, Select Board, and Conservation Commission. Chinook Solar has also coordinated
3	with the Fitzwilliam Town Administrator and Land Use Administrator and has
4	communicated with the Fitzwilliam Historic District Commission and Fire Department.
5	Outside of the Town of Fitzwilliam, the Project has consulted and/or met with the
6	following officials and organizations: New Hampshire Site Evaluation Committee, New
7	Hampshire Department of Environmental Services, New Hampshire Fish and Game
8	Department, New Hampshire Division of Historical Resources, New Hampshire
9	Department of Transportation, United States Army Corps of Engineers, The Nature
10	Conservancy, Society for the Protection of New Hampshire Forests, New Hampshire
11	Audubon, Southwest Region Planning Commission, Clean Energy NH, the Monadnock
12	Energy Hub, and Greater Peterborough Chamber of Commerce.
13	In addition to its personal interactions with the Fitzwilliam Planning Board and
14	Board of Selectmen to solicit their views on the Project, Chinook Solar has considered
15	the views of the Town of Fitzwilliam as expressed in its Master Plan. The Fitzwilliam
16	Master Plan, updated in 2012, supports the need for renewable energy development. The
17	Master Plan addresses climate change, energy efficiency, and renewable energy. One of
18	the goals outlined in the Master Plan is to "support and encourage energy conservation,"
19	and the Master Plan also includes a section specific to energy conservation. The Project's
20	consistency with the Master Plan is described in Section K of the Application, including
21	the web address of the Master Plan available online.

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1	The Project has considered the Southwest Region Planning Commission's goals
2	which, among other things, state that the "current lack of local, renewable energy
3	alternatives" to conventional energy sources presents a substantial risk to future growth in
4	the region. Relevant excerpts from the Southwest Region Planning Commission
5	document titled Monadnock Region Future: A Plan for Southwest New Hampshire are
6	contained in Appendix 17C to the Application. Chapter 3 (Energy Resources) of the
7	Southwest Region Planning Commission's Southwest New Hampshire Natural Resources
8	Plan is provided in Appendix 17D to the Application. Taking these views into
9	consideration, as well as those of the Fitzwilliam governing and planning bodies, as
10	expressed in the Master Plan and ordinances, I submit that the Project is consistent with
11	these views as they relate to the orderly development of the region. A complete list of
12	outreach and contacts is included as Table K-1 in the Application.
13	Q. Please describe whether the Project will unduly interfere with the orderly
14	development of the region.
15	A. Admin. Rules Site 301.09 and 301.15 describe the information that must be
16	contained in the Application relative to effects on the orderly development of the region
17	and the elements the SEC must use in evaluating these particular criteria. The
18	Application contains information regarding the land use in the region, the economy of the
19	region, employment in the region, and the effects the facility will have on each of these
20	elements. In addition, Matthew Magnusson has submitted prefiled testimony, as well as
21	an economic impact analysis, which is included as Appendix 18 to the Application. As a

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1 result of his analysis, he concludes that the Project will not unduly interfere with the 2 orderly development of the region, that it will have a positive impact on the local and 3 state economy and employment, and that it will not adversely affect local or regional 4 property values, tourism and recreation. 5 **Public Health and Safety Issues** 6 Q. What steps will be taken to ensure that the Project will not have an 7 unreasonable adverse effect on public health and safety? 8 A. Chinook Solar is committed to constructing and operating the Project with the 9 utmost concern for public health and safety. At the outset, it should be noted that the 10 Project is located in an undeveloped area. The Project has been designed such that its' 11 setbacks from residences, roads, and utilities will protect the public's health and safety by 12 allowing adequate space for safe construction and operation of the Project. The Project 13 and associated equipment have been designed to protect public safety, including any 14 adverse effects from noise, fire, and stray voltages. The nearest non-participating 15 landowner's residence is approximately 560 feet away from the Project, and the facilities 16 will be located at distances from abutting property lines to avoid any of the problems 17 associated with the issues identified above. In addition, to prevent public access to the 18 Project, the only access road into the facility will be gated and locked. Chinook Solar has conducted a sound impact study which is included as Appendix 16B to the Application. 19 20 The prefiled testimony of Marc C. Wallace describes in more detail how the sound study

21 was conducted and the results of that study, which show that the Project will conform to

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1	local and state sound requirements. See Admin. Rule 301.08(d)(1) and Town of
2	Fitzwilliam Noise Ordinance. Mr. Wallace's testimony also addresses how the
3	transformer associated with the Project compares with the Eversource transformer which
4	is located in Fitzwilliam and which has been the source of sound complaints from local
5	residents.
6	Q. Are there any other steps that Chinook Solar proposes to address potential
7	public health and safety issues?
8	A. Yes. Chinook Solar has offered to enter into an agreement with the Town of
9	Fitzwilliam that would address many public health and safety issues. The proposed
10	agreement is substantially similar to agreements between other Towns and developers
11	that have been the subject of proceedings before the SEC and approved by the Committee
12	and included as conditions to the Certificates granted to these projects.
13	Chinook Solar proposes to enter into an agreement with the Town of Fitzwilliam
14	that would address the following issues: warning signs; Town access to Project site;
15	communications and complaints; incident and other periodic reports to the Town;
16	emergency response; road usage, other construction-related issues such as scheduling,
17	debris disposal, and vehicle usage; operating period requirements; noise restrictions;
18	decommissioning responsibilities; environmental compliance; and avoidance of historic
19	resource impact commitments.
20	Q. How will staff at the Project site respond to an emergency?

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1 A. The precise manner in which Project-related staff and emergency responders will 2 respond to an emergency is detailed in the Emergency Response and Fire Safety Plan for 3 the Project contained in Appendix 16D to the Application. Information on emergency 4 response is also provided in Section J.4.d of the Application. The Project will cooperate 5 with the Town's emergency services providers to develop and coordinate the 6 implementation of the Emergency Response and Fire Safety Plan for the Project. 7 Chinook Solar will also work with the Fitzwilliam Fire Department to notify them of 8 construction plans, provide site visits to review access to Project facilities and emergency 9 response procedures, and will provide necessary and appropriate training to emergency 10 responders.

### 11 Q. Has Chinook prepared a decommissioning plan?

12 A. Yes. As required by SEC rules, Site 301.08(d)(2) and 301.15(b), Chinook Solar 13 has prepared a decommissioning plan. A copy of the plan is included in the Application 14 as Appendix 16C. The decommissioning plan is described in more detail in the prefiled 15 testimony of Joseph Persechino. As he also indicates, Chinook Solar is seeking a waiver 16 from the SEC requirement that underground infrastructure be removed to depths of four 17 feet, asking instead that it only be required to remove underground infrastructure to a 18 depth of 36 inches. Chinook Solar is also requesting a waiver from having to remove 19 piles shallower than three feet that have been concreted into rock, and is instead 20 proposing that these piles be cut off at the interface to the concrete in lieu of removing 21 the pile to a depth of three feet, in order to avoid even greater disturbance to the terrain

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1 that would be caused by having to drill or possibly dynamite rocks with piles in them at

2 shallower depths.

3 Q. In your opinion, will the Project have an unreasonable adverse effect on

4 public health and safety?

5 A. No. Based upon the information contained in Section J.4 of the Application, as 6 well as the information set forth in my testimony above and that of others, I believe that 7 the Project will not have an unreasonable adverse effect upon health and safety.

# 8 Effect on Aesthetics, Historic Sites, Air and Water Quality, and the Natural

### 9 <u>Environment</u>

10 Q. What steps will be taken to ensure that the Project will not have an

11 unreasonable adverse effect on Aesthetics, Historic Sites, Air and Water Quality

### 12 and the Natural Environment?

13 A. Chinook Solar is committed to constructing and operating the Project with the 14 highest concern for effects on aesthetics, historic sites, air and water quality, and the 15 natural environment. We have studied the aesthetic and historic site impacts for the 16 Project. See Appendices 13, 14A, 14C, 14F, and 14H of the Application. The prefiled 17 testimonies of Stephen A. Olausen and Michael Buscher address historic site and 18 aesthetic effects, respectively. The conclusions of those studies are that the Project will 19 have little or no effect on historic sites and aesthetics. Because there are no emissions 20 from a solar generating facility there will be no air impacts. As Appendix 4 and the 21 prefiled testimony of Joseph Persechino show, the effect on water quality will also be

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1	minimal. The prefiled testimony of Dana Valleau and Kara Moody address Project
2	effects on the natural environment, including wildlife, natural communities, wetlands,
3	waterbodies and vernal pools, and steps that will be taken to address them. The Project
4	has been located and designed so that the effects on water quality and the natural
5	environment will be minimal.
6	Q. In your opinion, will the Project have an unreasonable adverse effect on
7	aesthetics, historic sites, air and water quality, and the natural environment?
8	A. No. Based upon the information contained in Sections J.1, J.2 and J.3 of the
9	Application, as well as the information set forth in my testimony above and that of others,
10	I believe that the Project will not have an unreasonable adverse effect on aesthetics,
11	historic sites, air and water quality, or the natural environment.
12	Public Benefits/Serving the Public Interest
13	Q. What are the public benefits of the Project and how will it serve the public
14	interest?
15	A. As a solar generating facility, this Project will address the need for power in a
16	manner that will also benefit the environment. The Project will provide financial
17	compensation to landowners who are either selling or leasing land to Chinook Solar. By
18	contributing power to the grid through renewable energy the Project will benefit the
19	welfare of the population. The Project will enhance the economic growth of the region
20	and state as detailed in the prefiled testimony and economic report of Matt Magnusson.
21	See Appendix 18. The Project will be constructed and operated in a manner that will have

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1	minimal environmental impact, and by providing power through solar energy and
2	displacing other forms of power, particularly non-renewable, fossil-fueled power, the
3	Project will enhance the environment in ways detailed in Lise Laurin's prefiled
4	testimony. There will be little or no impact on historic sites and aesthetics and there will
5	be virtually no adverse impacts on public health and safety. For all of these reasons and
6	ones discussed in more detail in the Application and other prefiled testimony, when the
7	Project is evaluated according to the public interest criteria spelled out in Admin. Rule
8	Site 301.16, it is clear that the Project will serve the public interest.
9	Conservation and Mitigation Efforts
10	Q. Are there any other steps that Chinook Solar is willing to take to mitigate
11	effects of the Project?
12	A. Yes. In addition to conservation and mitigation efforts described in the
13	Application and the other prefiled testimonies, Chinook Solar is willing to look at other
14	reasonable and appropriate opportunities to enhance conservation or mitigate effects from
15	the Project. For example, there are going to be approximately 350 acres under the control
16	of Chinook Solar that are not going to be developed for the Project. Chinook Solar is
17	
	willing to explore with the Town what to do with the remaining non-developed acres,
18	willing to explore with the Town what to do with the remaining non-developed acres, whether we allow it to regrow, for example. We are open to discussing how best to use

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### 1 Conclusion

2 Q. Do you have an opinion as to whether this Project as proposed will meet the 3 criteria of RSA 162-H:16, IV?

- A. Yes. In my opinion, based on the testimony provided above and based on the
  information provided in the Application, Appendices, and prefiled testimonies, I believe
  that the Project meets all the criteria that the SEC must consider in deciding whether to
  grant a Certificate.
- 8 Q. Does this conclude your testimony?
- 9 A. Yes, this concludes my testimony at this time, though I reserve the right to file
- 10 supplemental testimony in accordance with the Committee's procedural schedule.

# ATTACHMENT A

# **HEATH E. BAREFOOT**

address: 700 Universe Blvd, Juno Beach, FL 33408 email: heath.barefoot@nee.com office: 561 304-6078

### WORK EXPERIENCE

### NEXTERA ENERGY, Juno Beach, Florida

Project Director – NextEra Energy Resources, Development (Nov 2018 - Present)

Project director managing early and late-stage renewable and energy storage development projects in New England with a primary focus on federal, state, and local permitting. Responsibilities include prospecting for new development projects, securing land-use agreements, providing project-specific oversight and engaging with the public through outreach.

Manager - NextEra Energy Resources, Business Management North Region (Jan 2015 - Nov 2018)

Asset manager responsible for a portfolio of power generating assets consisting of fossil, wind, and battery storage technologies spanning ISO-NE and PJM. Central to maximizing asset value through forward capacity market participation and managing hedging strategies for energy, basis, emissions, and fuel procurement. Negotiated key agreements including property tax and fuel supply. Active in asset onboarding and divestitures. Responsible for forecasting and budgeting of fossil asset gross margin.

Originator - NextEra Energy Marketing, Oil & Gas (Feb 2014 - Jan 2015)

Supported the launch of the Oil & Gas financial-flow trading desk, which provides structured risk management for commercial and industrial companies with price exposure to crude oil, crack spreads, natural gas, and petrochemical products.

Senior Analyst - NextEra Energy Marketing, Full Requirements (Oct 2012 - Jan 2014) Analyzed, prepared vetting documents, and submitted bids for wholesale electrical power procurements by public utilities in NEPOOL and PJM for full requirements supply. Managed a portfolio of load deals.

### MF GLOBAL, New York, New York

Head of Equity Derivatives Strategy – U.S. Equity Derivatives

Initiated and managed the equity derivatives strategy team. Responsible for publishing volatility research, generating directional and delta-neutral trade ideas on single-stocks and indices, and presenting strategies that leveraged MF Global's Washington Policy Research. Published within two weeks from start date.

### **MORGAN STANLEY SMITH BARNEY**, New York, New York

Financial Advisor - Global Wealth Management

Member of a top wire-house wealth management team as ranked by assets. Primarily focused on managing client portfolios. Efforts also consisted of (1) supporting client discovery process, (2) third-party asset manager research and profiling, (3) designing, implementing, and monitoring estate planning and wealth transfer strategies, and (4) business development.

### J.P. MORGAN SECURITIES, New York, New York

Associate – Equity Derivatives Strategy

Strategist responsible for analyzing single stock & index equity options and thematic research. Customized strategies for directional market exposure and hedging in accordance to institutional investor risk constraints and forecasts. Author of the US Equity Rollover Outlook which assessed the relative valuation of the equity futures calendar-spread trade and contributing author to the Equity Derivative Markets Weekly. Designed and presented teach-ins for Delta One products.

### CREDIT SUISSE, New York, New York

Associate - Quantitative Equity Research (Feb 2004 - Jun 2007)

Analyst on an Institutional Investor and Greenwich Survey ranked quantitative equity research team. Responsible for idea generation, factor-model backtesting, report writing, and providing custom solutions for clients. Reports ranged from macro-based analysis to bottom-up factor models involving corporate earnings, stock-price momentum and equity valuation.

### Automation Specialist – IT Department (Mar 1999 - Jan 2004)

Developed custom tools used to assess functionality and scalability of mission-critical trading applications. Worked under tight deadlines owing to the high frequency of application releases.

### **EDUCATION**

**DUKE UNIVERSITY**, Durham, North Carolina

Bachelor of Arts in Economics, 1996

### LICENSES & CERTIFICATIONS

Former FINRA Registrations: Series 3, 4, 7, 55, 63, 86 and 87; Completed Levels I & II of the CFA Examinations

# JUN 2009 – FEB 2011

JUN 2007 – SEP 2008

### MAR 1999 – JUN 2007

# **OCT 2012 – PRESENT**

FEB 2011 – NOV 2011