STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

PETITION NO. 983 - BNE Energy Inc. Declaratory Ruling that no Certificate of Environmental Compatibility and Public Need is required for the construction, maintenance, and operation of a 4.8 MW Wind Renewable Generating facility located on Flagg Hill Road, Colebrook Connecticut. Development and Management Plan.

BNE ENERGY INC.'S DEVELOPMENT AND MANAGEMENT (D&M) PLAN MODIFICATION NOVEMBER 5, 2013

BNE Energy Inc. ("BNE") hereby respectfully requests approval of the Development and Management (D&M) Plan modification for the construction, operation and maintenance of three GE Energy ("GE") 2.85-megawatt ("MW") wind turbines with 98.3 meter hub heights and 103 meter diameter blades to be located at 29 Flagg Hill Road and 17 Flagg Hill Road in Colebrook, Connecticut. The requested modification would not constitute a significant change or alteration in the general physical characteristics of the facility. A copy of the GE 2.85 MW wind turbine brochure is attached hereto as Exhibit A.

In its Petition dated December 6, 2010, BNE proposed utilizing three 1.6 MW wind turbines with 82.5 m diameter blades and 100 m hub heights. However, as discussed in greater detail below, BNE requested approval for blade lengths of up to 50 meters and 100 meter hub heights to account for potential technological upgrades resulting in a maximum tip height of 492 feet and all of the studies including visual impacts, shadow flicker and ice throw were done using these dimensions. It has been nearly three years since the filing of BNE's Petition and the GE 1.6-82.5 wind turbines at 100 meter hub heights are no longer available due to changes in its product line. Fortunately, GE continues to make significant improvements and modifications to its wind turbine technology which has resulted in the newly available 2.85 MW wind turbines. Building on the exceptional turbine performance of its predecessors, the 2.85 wind turbines are designed for high performance, reliability and availability. GE's 2.85-103 wind turbines provide increased nameplate rating and annual electricity production and are also designed to meet or exceed the high availability and reliability of previous wind turbine models.

The 2.85 wind turbines offer significant benefits as compared to the 1.6 wind turbines in terms of renewable electricity production and will also result in lower environmental impacts as follows:

- 78% increase in nameplate capacity from 4.8 MW to 8.55 MW resulting in a substantial increase in renewable electricity production;
- Substantially increase the amount of Class I renewable energy credits produced by the project which will further help the State meet its RPS requirements;
- Slightly lower maximum tip height;
- Reduced sound levels; and
- No other material effects including visual impacts, ice throw and shadow flicker.

The State of Connecticut recognized the benefits of local renewable energy development and implemented renewable portfolio standards ("RPS") to encourage the development of renewable energy resources not only to lessen the country's dependence on foreign oil but also to reduce the environmental impacts associated with fossil fuel sources. The RPS require that 17 percent of electric generation in the State is produced via renewable sources for 2013. By 2020, the State RPS requirements will increase to 27 percent, a minimum of 20 percent of which must derive from Class I renewable energy sources, including wind. Further, many of the State's cities and towns have pledged to obtain 20 percent of their electricity from renewable sources by 2020. Colebrook South will play an important role in meeting the State's renewable energy goals, and the 2.85 wind turbines will substantially increase the production of Class I renewable energy credits produced by the project which will further contribute to the overall RPS standards set by the State of Connecticut.

The rotor blades of the 1.6-82.5 wind turbines are 40.3 meters in length, but in its Petition for Wind Colebrook South BNE requested approval for blade lengths of up to 50 meters to account for potential technological upgrades.

> "While BNE is committed to using GE turbines, BNE has not signed a contract to purchase these specific turbines. GE has approved the proposed Project layout and has been kept apprised of the regulatory approval process of Wind Colebrook South. Due to ever-evolving technological advances, a longer blade length of up to 50 meters may be employed. Therefore, the visual resources evaluation utilizes a 50 meter blade length to account for potential technological upgrades." Petition at 8.

BNE also requested approval for 100 meter hub heights resulting in a maximum tip height of 492 feet which represents the total height of the tower plus the blade in its highest vertical position. The 2.85 wind turbines have a rotor blade length of 50.2 meters and a hub height of 98.3 meters resulting in a maximum tip height of 491.34feet slightly lower than the maximum tip height that BNE requested approval for in its Petition. See copy of the Confidential GE 2.85 MW Technical Documentation attached hereto as Exhibit B filed pursuant to the Protective Order approved in this docket.

On June 2, 2011, the Siting Council issued its Opinion, Decision and Order approving Wind Colebrook South. In the Opinion, the Siting Council found that "the visibility of the proposed turbines does not have a substantial adverse effect." Opinion p. 5. The Siting Council also stated that, "Having looked at evidence regarding both the 82.5m and 100m rotor diameters proposed by BNE for this site, the Council is of the opinion that the visual impact is not significantly different." Id at 6. The finding was based on the visibility study which was conducted utilizing 50 meter blade lengths, 100 meter hub heights, and a maximum tip height of 492 feet for the turbines. The dimensions of the 2.85 wind turbines are virtually identical with 50.2 meter rotor blade lengths, 98.3 meter hub heights, and a maximum tip height of just under 492 feet. Therefore, the visibility of the proposed 2.85 wind turbines does not have a substantial adverse effect. Similarly, the shadow flicker and ice throw studies were also calculated using 100 meter hub heights and 100 meter diameter blades with a maximum tip height of 492 feet so that the effects from shadow flicker and ice throw utilizing the 2.85 wind turbines with a maximum tip height of just under 492 feet would not change. In addition, the Ice Safety

Management Plan approved by the Siting Council will continue to be in effect and will not change as a result of utilizing the 2.85 wind turbines.

The 2.85-103 wind turbines are also quieter than the 1.6 turbines. GE's new, Low Noise Trailing Edge serrations are employed on this turbine as an acoustic enhancement that enables improved turbine acoustics and ultra-quiet power production. In the Opinion, the Council found that the project would meet Connecticut DEP allowable limits:

> "On balance, the Council is satisfied that noise emitted by the project would meet Connecticut DEP allowable limits at the nearest residential receptors, and that the DEP regulations are protective of the public health." Opinion at 5.

The maximum daytime and nighttime sound levels of the 1.6 wind turbines of 106 dBA were used in the Noise Evaluation report to conduct the worst-case noise impact for the project. The maximum daytime and nighttime sound levels of the 2.85 wind turbines are only 105 dBA, which are lower and would therefore also meet Connecticut DEP allowable limits for noise and result in a lower environmental impact as compared to the 1.6 wind turbines. See copy of the Confidential GE 2.85 MW Product Acoustic Specifications attached hereto as Exhibit C filed pursuant to the Protective Order approved in this docket.

Given the changes in GE's wind turbine lineup and the benefits of the 2.85-103 wind turbines, BNE requested that GE conduct a Mechanical Loads Analysis (MLA) for the 2.85 turbines utilizing the turbine locations previously approved by the Siting Council on February 13, 2013 as a modification to Wind Colebrook South's D&M Plan. The MLA concluded that three 2.85-103 wind turbines with 98.3 m hub heights are suitable for the Wind Colebrook South site. As such, BNE is not requesting any changes to the turbine locations. See copy of the Confidential GE Mechanical Loads Analysis for the 2.85 wind turbines attached hereto as Exhibit D filed pursuant to the Protective Order approved in this docket.

Although GE currently makes the 2.85 wind turbines with either 100 meter or 103 meter diameter blades, BNE is requesting approval for the 103 meter diameter blades for several reasons. First, even though the blade lengths of the 2.85-103s are only slightly longer than the 2.85-100 turbines (50.2 meters versus 48.7 meters, respectively), the swept area is 6% greater which captures more energy and results in a 3% increase in the amount of Class I renewable electricity produced relative to the 2.85-100 turbines. Additionally, as demonstrated above, the 2.85-103 turbines offer substantial benefits relative to the 1.6 turbines while also resulting in lower environmental impacts. Finally, BNE is concerned that the 2.85-100 turbines will be phased out and no longer available as they are replaced by the more efficient 2.85-103 wind turbines as was the case with the 1.6-82.5 turbines at 100 meter hub heights. Based on the foregoing, BNE respectfully requests Siting Council approval of the D&M Plan modification for the construction, operation and maintenance of three GE 2.85 MW wind turbines with 103 meter diameter blades and 98.3 meter hub heights to be located at Wind Colebrook South.

In Conclusion, GE's 1.6-82.5 wind turbines at 100 meter hub heights are no longer available given the evolution of its wind turbine product line. Fortunately, GE continues to make improvements and technological advancements which have resulted in the newly available 2.85-

103 MW wind turbines with 98.3 meter hub heights. The requested modification would not constitute a significant change or alteration in the general physical characteristics of the facility. Additionally, the 2.85 wind turbines offer substantial benefits in terms of renewable energy production as compared to the 1.6 wind turbines and result in even lower environmental impacts. The 2.85 wind turbines increase the total nameplate capacity of the project by 78% from 4.8 MW to 8.55 MW resulting in significantly more Class I renewable electricity production further helping the State meet its RPS standards. The 2.85 wind turbines also have a maximum tip height below 492 feet and produce lower maximum sound levels than the 1.6 wind turbines resulting in lower environmental impacts. Further, utilizing the 2.85 MW wind turbines do not have any other material effects on the project. GE also conducted a MLA analysis which concluded that three 2.85-103 wind turbines at 98.3 hub heights are suitable for the Wind Colebrook South site.

Accordingly, BNE Energy respectfully requests that the Siting Council approve the D&M Plan modification for the construction, operation and maintenance of three GE 2.85 MW wind turbines with 103 meter diameter blades and 98.3 meter hub heights to be located at 29 Flagg Hill Road and 17 Flagg Hill Road in Colebrook, Connecticut.

Respectfully Submitted,

BNE ENERGY INC.

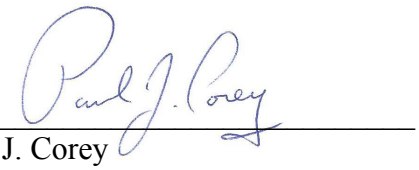
By: 

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EXHIBIT A

GE 2.85 WIND TURBINE BROCHURE

GE Power & Water
Renewable Energy

Introducing GE's 2.85 MW Wind Turbines

2.85-100
2.85-103

Increased customer value...
through product evolution

ecomagination

imagination at work

Product evolution. It's one of the things GE does best. Especially when it comes to the next generation of wind turbines. Building on a strong power generation heritage spanning more than a century, our onshore wind turbines deliver proven performance, availability and reliability—creating more value for our customers.

As one of the world's leading wind turbine suppliers, GE's current product portfolio includes wind turbines with rated capacities ranging from 1.5 MW–4.1 MW and support services extending from development assistance to operation and maintenance.

GE's 2.85-100 Wind Turbine

GE's 2.85-100 wind turbine offers a 3% increase in Annual Energy Production (AEP) at 8.5 m/s when compared to the 2.75-100 wind turbine. This nameplate rating increase allows greater energy capture and improved project economics for wind developers. GE's proprietary 48.7 meter blade uses the same proven aerodynamic shape found on the 2.75-100.

GE's 2.85-103 Wind Turbine

GE's 2.85-103 wind turbine offers a 6% increase in swept area and a 3% increase in AEP at 8.5 m/s when compared to the 2.85-100. This increase in blade swept area allows greater energy capture and improved project economics for wind developers. GE's proprietary 50.2 meter blade uses the same proven aerodynamic shape as the 48.7 meter blades found on the 2.85-100. Our new, Low Noise Trailing Edge serrations are employed on this turbine to enable siting in sound sensitive areas at full rated power. Testing has shown this design for the blade enables improved turbine acoustics. Low Noise Trailing Edge technology allows increased tip speed tolerance to capture more energy.

GE's 2.85-100 and 2.85-103 wind turbines are available with 75 (50 Hz only), 85, and 98.3 meter hub heights that provide flexible options for Class II and III wind sites, allowing customers to capture the most free fuel in the wind.

GE's stringent design procedures result in a turbine designed for high performance, reliability and availability. Building on the exceptional turbine performance of its predecessors, coupled with selected minimal electrical component modifications, GE's 2.85-100 and 2.85-103 wind turbines provide increased nameplate rating and AEP, with the same reliable performance as the 2.5-100 turbine.

Building Upon the Proven 1.5 MW and 2.5 MW Platforms

The evolution of GE's multi-megawatt turbine design began with the 2.5s turbine introduced in 2004. The 88-meter rotor diameter turbine was soon increased to 100 meters for the 2.5xl turbine, introduced in 2006. GE's 2.5-100 and 2.75-103 built upon the maturity of their predecessors, and the 2.85-100 and 2.85-103 wind turbines leverage power conversion technology from GE's proven 1.x product line to take the next evolutionary step. These changes help ensure increased capacity factor and availability.

Designed with high reliability to ensure continued operation in the field, GE's 2.85-100 and 2.85-103 can provide greater return on investment.

Technical Description

GE's 2.85-100 and 2.85-103 are three-blade, upwind, horizontal-axis wind turbines with 100-meter and 103-meter rotor diameters, respectively. The turbine rotor and nacelle are mounted on top of a tubular steel tower providing hub heights of 75 (50 Hz only), 85, and 98.3 meters. The machine uses active yaw control to keep the rotor facing into the wind. The new 2.85 wind turbine is designed to operate at variable speed and utilizes a double fed induction generator partial power conversion system. The Transformer, Switch Gear and Auxiliary Equipment can be supplied internal to the base of the tower, or mounted in external housing.

Specifications

2.85-100 Wind Turbine:

- Designed to IEC 61400-1
  - TC S: 8.5 m/s average wind speed; B-turbulence for 85 meter tower
  - TC S: 8.5 m/s average wind speed; B-turbulence for 98.3 meter tower
- Standard and cold weather extreme (60 Hz only) options
- Tower corrosion protection, standard C2 internal and C3 external with optional C4 internal and C5 external available
- Rotational direction: Clockwise viewed from an upwind location
- Speed regulation: Electric drive pitch control with battery backup
- Aerodynamic brake: Full feathering

2.85-103 Wind Turbine:

- Same as the 2.85-100 with the following changes
- Low Noise Trailing Edge serrations for ultra-quiet power production
- Larger 103 meter rotor to capture more energy

Enhanced Controls Technology

The 2.85-100 and 2.85-103 wind turbines employ two enhanced control features:

- GE's patented Advanced Loads Control reduces loads on turbine components by measuring stresses and individually adjusting blade pitch
- Controls developed by GE Global Research minimize loads including at near rated wind speeds to improve Annual Energy Production (AEP)

Construction

Towers: tubular steel sections provide hub heights of 75 (50 Hz only), 85 or 98.3 meters.

Blades: GE's propriety 48.7 and 50.2 meter blades provide high energy capture without sacrificing acoustic performance.

Drivetrain components: GE's 2.85-100/2.85-103 use proven design gearboxes, mainshaft and generators to enable the uprate from 2.75 MW to 2.85 MW.

Condition Monitoring System

GE's Condition Monitoring System (CMS) and SCADA Anomaly Detection Services, a complementary suite of advanced condition monitoring solutions, proactively detect impending drive train and whole-turbine issues enabling increased availability and decreased maintenance expenses. Built upon half-a-century of power generation drivetrain and data anomaly monitoring experience, this service solution is available as an option on new GE Units and as an upgrade.

Features and Benefits

- Higher AEP compared to 2.75 MW predecessors
- Designed to meet or exceed the 1.5 MW platform's historic high availability
- Grid friendly options are available
  — Enhanced Reactive Power, Voltage Ride Thru, Power Factor Control
- Wind Farm Control System; WindSCADA*
- Sharing of components within GE's product family
- GE proprietary 50.2 and 48.7 meter blades
- Ultra-quiet power production Low Noise Trailing Edge serrations as an acoustic enhancement for the 2.85-103
- Available in both 50 Hz and 60 Hz versions for global suitability
- Noise Reduced Operation (NRO)
- Whisper package addresses sound where it occurs
- WindBOOST and WindReserve optimize energy output on wind farm

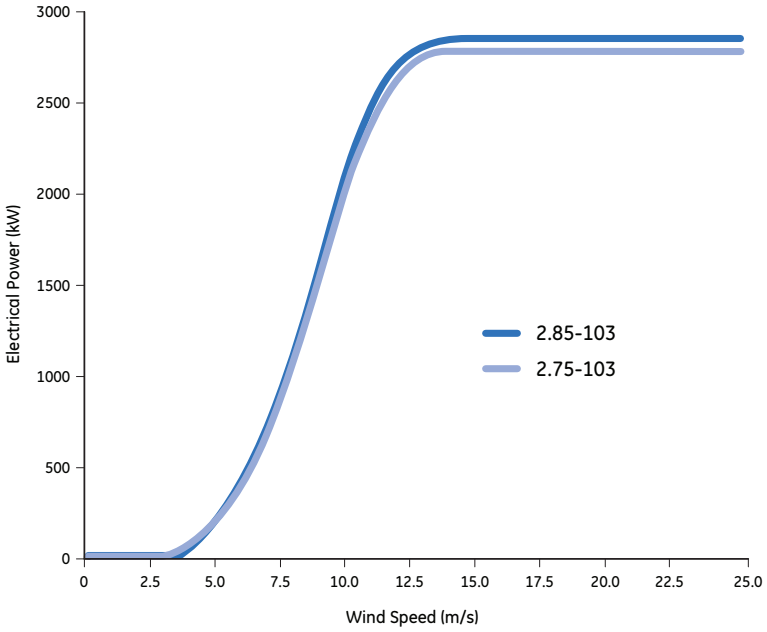
GE's 2.85 MW Turbines

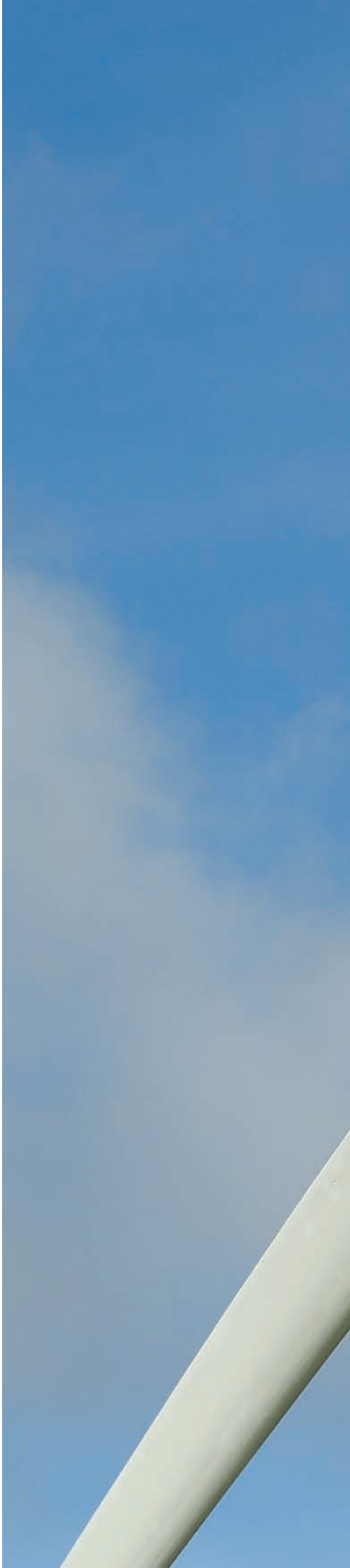
- **Continual investment.** Focused on increasing customer value
- **Evolutionary development strategy.** Built on the world's best running fleet
- **Portfolio flexibility.** Value where you need it, even in sound sensitive locations

Higher Efficiency

The 2.85 MW wind turbine is equipped with a double fed induction generator that enables higher efficiency. Leveraging this power conversion technology from GE's proven 1.x model has reduced the electrical losses in both converter cable systems, improving power generation performance.

Performance





Powering the world...responsibly.

For more information please visit www.ge-energy.com/wind.

GEA30475 (04/2013)

EXHIBIT B

GE 2.85 MW TECHNICAL DOCUMENTATION

CONFIDENTIAL

EXHIBIT C

GE 2.85 MW PRODUCT ACOUSTIC SPECIFICATIONS

CONFIDENTIAL

EXHIBIT D

GE 2.85-103 MECHANICAL LOADS ANALYSIS

CONFIDENTIAL