# **EXECUTIVE SUMMARY**

Antrim Wind Energy LLC ("AWE") submits this Application to the New Hampshire Site Evaluation Committee ("SEC") for a Certificate of Site and Facility ("Certificate") to construct and operate the Antrim Wind Project ("Project") in Antrim, New Hampshire. The Antrim Wind Project is a planned 28.8 MW electrical generation facility consisting of nine Siemens SWT-3.2-113 direct drive wind turbines and associated civil and electrical infrastructure.

This Application is the culmination of more than six years of development work on the Antrim Project. As further explained in the detailed application materials that follow, the Antrim Project is widely supported in the Town of Antrim among its residents and elected officials and is consistent with and advances a number of important local and regional public policy goals, such as those contained in New Hampshire's renewable portfolio standard ("RPS") law, the Regional Greenhouse Gas Initiative ("RGGI"), the Antrim Master Plan and Antrim Open Space Plan. In addition to providing significant clean energy and fuel diversity benefits to the state, which can stabilize volatile energy costs resulting from overdependence on fossil fuels, the Antrim Project features a unique and extensive conservation benefit package that will permanently conserve over 908 acres of valuable forestland and wildlife habitat on or near the Project site – a process that involved extensive collaboration with local landowners, and many conservation organizations – resulting in significant perpetual benefits that advance many local and regional conservation goals and are consistent with the generation of clean wind energy. As a result of these conservation commitments the Project will permanently conserve over 16.5 times more land than will be initially cleared for construction and over 78 times more land than will be occupied by long term facilities – including more than 313 acres of the highest ranked habitat in the State under New Hampshire's Wildlife Action Plan and over 156 acres of the highest ranked habitat in the region. In addition to the "on-site" conservation lands, AWE has entered into a Land Conservation Funding Agreement with the New England Forestry Foundation ("NEFF"), whereby AWE will fund \$100,000.00 to NEFF to acquire additional conservation lands in the region for the enhancement and maintenance of the region's aesthetic character, wildlife habitat, working landscape, and public use and enjoyment

AWE has executed and maintains several direct agreements with the Town of Antrim, including: (i) a PILOT Agreement, updated in November 2014, which provides significant, stable revenue to the Town for the first 20 years of the Project's life, paying the highest per MW payment of any PILOT agreement for a wind project in New Hampshire; (ii) an Agreement with the Town governing many requirements during preconstruction, construction, operations and decommissioning of the Project; (iii) a letter Agreement in which AWE commits funds to enhance recreational facilities at the Gregg Lake Beach area; and (iv) a letter agreement with the Antrim Trustees of Trust Funds where AWE has committed \$5,000 per year for the life of the Project to the Antrim Scholarship Committee. This amount represents approximately 25% of the Scholarship Committee's total 2014 scholarship awards. AWE has also entered into an Agreement with the Appalachian Mountain Club, satisfying all of their concerns related to the potential aesthetic impacts of the Project, which includes a commitment to employ innovative radar activated FAA light controls once the FAA issues the new guidance approving the use of these systems – a first for any wind project in New Hampshire.

Because the Antrim Wind Project is located directly adjacent to NH Route 9, new road construction for the Antrim Wind Project is very limited, only 3.55 miles, which is fewer new road miles per MW of installed wind capacity of any wind project in the State. Additionally, because the Project is sited directly adjacent to a high voltage transmission line, no new transmission lines will be necessary to deliver the Project's renewable power to the electric grid – eliminating any impacts associated with the construction of new transmission lines.

The Antrim Project features an innovative and biologically appropriate bird and bat conservation strategy ("BBCS") that includes voluntary curtailment to reduce and study potential impacts to bats, and tiered consultation and adaptive management to address unforeseen risks during the Project's operating life. The BBCS was developed by expert biologists on AWE's team in consultation with the US Fish and Wildlife Service ("USFWS") and New Hampshire Fish and Game ("NHFG"). There are no resident rare, threatened or endangered animal species on the site and after two site visits to the Project the New Hampshire Natural Heritage Bureau concluded that "it is unlikely that the proposed wind facility will impact rare plants species or exemplary natural communities."

AWE sought a Certificate of Site and Facility for a previous wind energy project before the SEC in Docket 2012-01. That previous project proposal consisted of 10 taller turbines. The SEC issued an Order Denying a Certificate of Site and Facility for that project due to concerns related to aesthetic impacts. This application reflects significant revisions to the Antrim Project to specifically address the concerns that were identified in that Docket with respect to aesthetics. AWE has made targeted changes to the Project design to reduce aesthetic impacts, and has increased mitigation to offset any remaining aesthetic impacts. AWE has also conducted a far more comprehensive visual analysis to characterize the Project in the landscape and to assist the Committee in its review of this important component.

Significantly, although the Certificate was ultimately denied in Docket 2012-01, the SEC made numerous findings in support of issuing a Certificate of Site and Facility, including that such project would not have an unreasonable adverse impact on the orderly development of the region, or historic sites, and that with certain conditions imposed, would not have an unreasonable adverse impact on public health and safety, the natural environment or air and water quality. The current Project proposed in this Application is in many respects very similar to the 2012-01 application. All of the impacts associated with the former project are now reduced: sound levels are lower, flicker levels are lower, ground clearing and grading amounts are reduced significantly and no new sensitive ecological resources will be impacted. The only small exception is a very small new wetland that was created by a recent logging operation that will be impacted (986 ft2). The locations of all wind turbine generators ("WTGs") have not changed since the prior application, and WTG #10 has been removed together with all of the civil and electrical infrastructure associated with it, so impacts on the ground have also been reduced.

In the SEC's Order Denying a Certificate in 2012-01 the Committee found that the Applicant possessed adequate technical and managerial capability to construct and operate the project. There was no finding on the applicant's financial capability. The Committee's finding related to technical and managerial capability was based upon the AWE management team's experience together with the turbine supplier in that Docket, Accional

Windpower. Since that time, AWE has changed the turbine, partly to be able to accommodate the other changes in the Project discussed in this Application. AWE's new turbine manufacturer, Siemens Energy Inc., is a larger, more experienced global company with vast experience in the manufacture, installation, commissioning and operation of wind turbines globally and in the United States, including New England. AWE has entered into a binding MOU with Siemens to supply turbines for the Project and to provide services to those turbines. AWE has also selected Reed & Reed Inc. of Woolwich, Maine to construct the Project.

AWE has also come under new ownership since the 2012-01 application was filed. The original developer of the Project, Eolian Renewable Energy, LLC of Portsmouth, New Hampshire has been acquired by Walden Green Energy LLC ("Walden"), out of New York, which now owns 100% of the membership interests in AWE. Walden is in turn majority owned by RWE Principal Investments, the principal investment arm of RWE, one of Europe's five largest electric and gas utilities. As detailed in this Application, AWE now possesses the ability to commit all of the required equity capital to the Project and its ownership team maintains the same high degree of demonstrated experience in project financings.

Issuance of a Certificate of Site and Facility relative to the Project will unquestionably serve the public interest. The New Hampshire legislature has recognized that it is in the public interest to stimulate investment in low emission renewable generation technologies in New Hampshire (RSA 362-F:1). Consistent with the state's renewable energy goals as stated in RSA 362-F, the legislature has also recognized that appropriately sited and conditioned wind energy systems have the potential to assist the state in accomplishing these goals (RSA 162-H:10-a, I.) As explained more fully in this Application, the Project is optimally sited and incorporates conditions already set forth by the SEC and NHDES in Docket 2012-01 to ensure that the Project will not have any unreasonable adverse effect. Furthermore, the Project will provide real and quantifiable benefits to the public on both a local and regional level. As noted above, the Project advances critical legislative and public policy objectives to promote renewable energy technologies and reduce greenhouse gas emissions. Wind energy produces no pollutants or greenhouse gases, and it is well documented that wind generation offsets carbon-based generation and directly reduces climate-altering carbon dioxide emissions. The Project will produce enough clean energy to meet the annual energy consumption needs of approximately 12,300 average New Hampshire homes, and by diversifying the energy mix in New Hampshire and the region it can contribute to reducing the volatility of energy costs. The Project will also promote local and regional conservation goals as it will permanently conserve over 900 acres of forest and wildlife habitat. The public will also experience economic benefits as a result of the Project, which will create both shortterm and long-term jobs in the region and provide a significant long-term benefit to the Town of Antrim through a payment in lieu of taxes ("PILOT") agreement pursuant to which AWE will pay \$11,250 per MW of installed capacity per year, which is more than \$8.3 million over the life of the agreement.

In summary – this Application represents the best components of the 2012-01 project while containing significant improvements in areas where concerns were identified. This Project is an excellent opportunity for New Hampshire to gain many significant energy, economic and

conservation benefits through the construction of a well-sited and widely supported new wind facility.

# B.3.The name and address of the applicant's parent company, association or corporation if the applicant is a subsidiary

Antrim Wind Energy, LLC ("AWE") is a Delaware limited liability company formed in 2009 as a special purpose entity to develop, build, own and operate the Antrim Wind Energy Project (the "Project" or "Facility"). All of the membership interests in AWE are owned by Walden Green Energy-Northeast Wind, LLC ("Walden-NE-Wind"), which is in turn 100% owned and controlled by Walden Green Energy LLC ("Waldenthrough two wholly owned subsidiaries, Walden Green Energy Northeast Wind LLC ("Walden NE Wind") and Walden Antrim LLC ("Walden Antrim")"). Walden Antrim, Walden NE Wind and Walden are registered Delaware limited liability companies.. AWE operates from the New Hampshire offices of Walden, located at 155 Fleet Street, Portsmouth, NH 03801. The names and addresses of its parent companies are listed below.

Walden Green Energy Northeast Wind LLC<u>, Walden Antrim LLC</u> and Walden Green Energy LLC 40 Worth Street, 10<sup>th</sup> Floor New York, NY 10013

Telephone: 646-527-7288

Email: henry.weitzner@waldengreenenergy.com

### B.4. If the applicant is a corporation

### B.4.a. The state of incorporation

See application Section B. 3.

### B.4.b. The corporation's principal place of business

See application Section B.3.

### B.4.c. The names and addresses of its directors, officers and stockholders;

The following is a list of owners, officers, and managers of: Antrim Wind Energy, LLC and Walden Green Energy Northeast Wind, LLC.

## Antrim Wind Energy, LLC: Delaware limited liability company

#### Members

Walden Green Energy Northeast Wind, LLC Walden Antrim, LLC

#### Officers

Henry D. Weitzner, Executive Officer Sarah Valdovinos, Executive Officer George Manahilov, Executive Officer John B. Kenworthy, Executive Officer

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John M. Soininen, Executive Officer

# H.5.A description in detail of the applicant's financial, technical and managerial capability to construct and operate the proposed facility

Antrim Wind Energy, LLC, through its member-owners, has a demonstrated track record of success in the electric power industry.

## **AWE Ownership Structure**

Antrim Wind Energy LLC ("AWE") is a Delaware limited liability company formed to develop, build, own and operate the Antrim Wind Project. AWE has two members, Walden Green Energy Northeast Wind and Walden Antrim LLC and these two entities own 100% of the membership interests in AWE. Walden Green Energy LLC ("Walden") in turn owns 100% of the membership interests in both Walden Green Energy Northeast Wind and Walden Antrim LLC. Therefore Walden Green Energy LLC owns 100% of the membership interests in Antrim Wind Energy LLC through its two wholly owned subsidiaries.

Walden was formed by its 3 founding principals – Henry Weitzner, George Manahilov and Sarah Valdovinos (the "Walden Founders"). RWE AG, through its wholly owned subsidiary RWE Supply & Trading ("RWEST") is the majority outside investor in Walden. RWE AG and RWEST are collectively referred to in this application as "RWE". RWE is one of Europe's top electric and gas companies and Germany's second largest utility. RWEST is a leading European energy trading house and the interface between RWE's operating companies and global wholesale markets for energy and energy-related raw materials.

Eolian Renewable Energy LLC ("Eolian"), a Delaware limited liability company headquartered in Portsmouth, New Hampshire, was formed in 2009 to manage the development, construction, and operation of utility scale wind energy facilities in New England and was the original developer of the Antrim Project. In February 2015, Eolian and Walden entered into a Limited Liability Company Agreement to advance the Antrim Wind Project through development, financing, construction and operation. In March 2016, Walden acquired Eolian through an asset purchase agreement, which included all of Eolian's membership interests in AWE. Walden purchased Eolian's membership interests through Walden Antrim LLC, a wholly owned subsidiary of Walden Green Energy LLC, which now owns 100% of the membership interests in AWE. Eolian's two senior founding principals, Jack Kenworthy and John Soininen have joined the Walden team and remain as executive officers of AWE.

Walden is a Delaware limited liability company based in New York, NY. Walden was founded in 2011 to develop, own and operate renewable energy projects globally. Walden's three founding principals have over 45 years of collective experience in commodities trading, project financing and energy capital markets, gained over their tenure at JP Morgan, Goldman Sachs and Barclays Capital. During their respective careers the Walden team has raised billions of dollars in debt, equity, and inventory monetizations, covering numerous commodity and energy related markets.

### **Applicant's Financial Capability**

### **Corporate Structure**

AWE, a Delaware limited liability company, was incorporated in 2009 to develop, construct, own and operate the Antrim Wind Project (the "Project"). Following Walden's acquisition of Eolian in March 2016, AWE is now 100% owned and controlled by Walden Green Energy LLC, a Delaware limited liability company through its wholly owned subsidiaries Walden Green Energy Northeast Wind LLC and Walden Antrim LLC, both of which are also Delaware limited liability companies.

Walden is jointly controlled by the Walden Founders and RWEST. RWE's Principal Investments team ("RWE PI") resides within RWEST and manages RWEST's investment in Walden.

Walden and RWE are referred to in this section as the Project sponsors (the "Sponsors" or "Project Sponsors")

Walden Founders

Minority ownership

Walden Green Energy LLC

100%

Walden Antrim LLC

Walden Green Energy
Northeast Wind LLC

Minority

Majority

Antrim Wind Energy LLC

Figure I.5.a – AWE Ownership Chart

## **Background of Antrim Wind Sponsors**

Walden Green Energy: Walden is a privately held global developer, owner and operator of renewable energy projects. Walden has significant experience in the financing of energy projects, from large utility-scale projects to smaller-scale distributed generation projects. Walden has developed, financed, constructed and either currently operates, or sold upon completion, over 10 MW of renewable generation assets in Massachusetts and Vermont, and is currently developing over 200 MW of wind, solar and hydro generation assets, including the Project, in the United States, Latin America and Central Eastern Europe. With the acquisition of Eolian Renewable Energy, LLC and its senior founding members, Jack Kenworthy and John Soininen in 2016, Walden also now

possesses all of the historical knowledge and experience that Eolian brought through over 6 years of development on the Antrim Project.

The Walden management team has a combined 45 years of experience in structuring power purchase agreements ("PPAs") and hedging strategies for energy clients globally, and has successfully financed more than \$5 billion of power generation and oil and gas energy infrastructure assets. The Walden Founders have worked together for many years at leading financial institutions including Barclays, Goldman Sachs and JP Morgan. Members of the Walden management team have structured, led and executed a number of prominent hedging, off-take and financing transactions for utilities, independent power generators, and energy producers, and is intimately familiar with the requirements for a successful financing of a wind project such as Antrim Wind. Some of the transactions led and executed by the Walden management team include:

- Customized Hedge Facility for oil and gas producer Chesapeake Energy (Energy Risk Magazine Deal of the Year 2010) – the facility enabled Chesapeake Energy to enter into natural gas and oil hedge contracts and provided the company more than \$10 billion of mark-to-marketbased hedging capacity, or approximately 400,000 contracts, representing nearly 4 years of the company's anticipated production
- Thirty (30) year agreement with University of Massachusetts the agreement supplied University of Massachusetts with net metering credits (equivalent to a PPA contract) from 2 solar projects in Massachusetts and was awarded in a competitive RFP process
- LNG off-take and services agreement to manage supply of natural gas for Excelerate's Northeast Gateway Deep Water port – the agreement provided Excelerate with transportation services and asset management, allowing the company to optimize pricing for natural gas buyers and marketers in the US Northeast
- Financing for Chesapeake Energy the transaction monetized \$1.15
   billion of producing wells in the Barnett Shale for Chesapeake Energy via a five-year structured financing called volumetric production payment

RWE: AWE will benefit from RWE's extensive track record in developing, financing and successfully bringing wind projects into operation. Founded in 1898 in Essen, Germany, RWE has a market capitalization of \$12.9 billion, assets of \$104.4 billion (as of December 31, 2014), and 2014 operating revenues of \$63.3 billion. RWE and its affiliates have 49,064 MW of electric generation capacity throughout Europe, and have developed, financed, constructed and operate 3,112 MW of renewable generation assets, including 2,530 MW of onshore and offshore wind assets.

RWE PI resides within RWEST and manages the investment in Walden. RWE PI invests RWE's capital by providing equity to energy companies and investing in energy assets,

with its geographical focus spanning North America, Latin America, Western/Eastern Europe and Asia. RWE PI focuses on investments where RWE has deep knowledge of the underlying commodity and where it brings physical trading capabilities to manage commodity risk for the investment. In 2014 RWE invested \$4.2 billion in property, plant and equipment, of which \$929 million was allocated to renewable assets.

Illustrative range of relevant transactions for RWE include:

- Investment in Conergy, a global solar company Conergy is one of the
  world's largest downstream solar companies, specializing in the design,
  finance, build and operation of high performance solar systems. RWE
  invested in the company as part of a larger equity funding round led by
  Kawa Capital Management and owns a minority stake in Conergy
- Investment in a UK solar facility "Kencot Hill Solar Farm" RWE acquired the 37 MW ground-mounted solar PV project, which will be one of the largest in the UK and is located on a disused airfield in Oxfordshire. RWE provided essential financial capital and technical support to enable the project's commercial operation
- Investment in U.S. wood pellet producer RWE invested and brought to commercial operation the world's largest plant for the production of pellets from green wood, located in the state of Georgia. The wood pellets produced in this plant will be shipped from Georgia to Europe, and by replacing fossil fuels with biomass, RWE will save around 1 million tons of CO2 per year
- Investment in a UK coal-fired power station with option to convert to biomass – RWE invested in Tilbury B power station in the UK, converting it from a coal-fired power station to run on 100% biomass fuel, using sustainably-sourced renewable wood pellets. Operation of the plant on biomass rather than coal will result in greenhouse gas savings in excess of 70%.

In its investments RWE PI leverages RWE's broader organizational engineering, operations and power market expertise as well as its track record of successfully managing its large power generation portfolio. RWE PI is run by Eric Shaw, brief background provided below:

- Global Head, Principal Investments, RWE Supply & Trading July 2009 to present
- Citigroup, Head of Commodity Principal Strategies 2007 2009
- Barclays Capital, Director in Commodities 2002 2006
- Enron Europe, Head, Continental European Origination 1994 2002

### **Project Financing Plan**

To fund the construction of the Project the Sponsors will use a traditional project finance approach, which is currently the market standard in the United States' wind industry. Project financing will be accomplished in two phases:

- Construction Financing Phase: This consists of a combination of a construction loan and construction equity to complete the turnkey construction process, and;
- Permanent Financing Phase: Upon placing the Project in operation, a tax equity investor will replace part of the construction loan, which will convert to a "term loan".

The funding strategy outlined above and more fully described below is the most commonly used structure for funding wind projects in the United States with over \$60 billion of financings completed in the past 5 years. In 2015 alone, \$17 billion of bank construction loans and \$6.4 billion of tax equity was deployed in 40 wind projects in the U.S. As the majority owner and controlling shareholder of the Project, Walden, with the backing of RWE, will provide the equity to construct and operate the Project.

In explaining the funding structure the following definitions will be used:

- Net Capacity Factor ("NCF") -- a standard industry term that represents the ratio of the amount of actual annual generation, divided by the maximum amount of annual generation if the project were generating at 100% of its rated nameplate capacity all of the time. NCF for the Antrim Project is approximately 37%. Expected annual energy production ("AEP") of the Project is calculated by multiplying the total plant capacity, the number of hours in the year and the net capacity factor. [Plant Capacity (MW) \* 8,760 (hours) \* NCF (%) = Total Production (MWh): 28.8MW \* 8,760hours \* 37% = 93,346.56 MWh]
- "P50 production" -- shorthand for 50th percentile, in wind finance refers to the level of AEP, usually expressed in terms of NCF, for a wind project that is forecasted to be exceeded 50% of the time. The P50 production for Antrim is approximately 93,347 MWh per annum, equivalent to a 37.0% NCF. Because P50 production is forecasted to be exceeded 50% of the time, it is a lender's base case scenario, typically used to "size" the appropriate debt quantum for a project.
- "P99 production" -- shorthand for 99th percentile, in wind finance refers to the level of AEP, usually expressed in terms of NCF, for a wind project that is forecasted to be exceeded 99% of the time. The P99 production for Antrim is approximately 72,406 MWh per annum, equivalent to a 28.7%

NCF. P99 production output is forecasted to be exceeded 99% of the time; therefore it is a lender's very conservative scenario

- Debt Service Coverage Ratio ("DSCR") In corporate finance, it is the
  ratio of the amount of cash flow available to meet annual interest and
  principal payments on a loan (i.e. the available project cash flow after all
  project operating expenses and taxes are paid) and the actual amount
  of those loan payments.
- Non-recourse project debt / loan in corporate finance, a non-recourse loan is a loan that is secured by a pledge of collateral, typically real property, but for which the borrower is not personally liable. If the borrower defaults, the lender can seize the collateral to seek repayment of its obligations, but the lender's recovery is limited to the collateral. In a wind project, collateral will include all project assets, including the turbines, equipment and buildings, leases, PPAs, and service agreements.

### **Construction Financing:**

As noted above, construction financing will consist of a construction loan and construction equity. Details of the sources of each component of the financing are below:

<u>Construction Equity</u>: Walden, through the backing of RWE, will provide 100% of the construction equity necessary to construct the Project. Subject to the issuance of a Certificate, the completion of all necessary commercial agreements for the Project, and securing the construction loan financing for the Project, RWE will provide the construction equity funding to Walden, which in turn will invest the equity into AWE through Walden's wholly owned subsidiary Walden Green Energy Northeast Wind LLC.

<u>Construction Loan</u>: As a prerequisite for providing a final funding commitment for a non-recourse construction loan to a wind project, lending banks typically require that several "conditions precedent" are met. Below is a list and discussion of the specific commercial requirements AWE will be required to provide its lender(s) in order to close on a construction loan:

- a. Final permits for placing the project in operation have been granted. In the case of the Antrim Project, a Certificate of Site and Facility will be required by lenders.
- b. Long-term offtake contract a long-term PPA or a financial hedge with a creditworthy counterparty to guarantee long-term cash flow from electricity sales. Lenders will require that AWE has a negotiated long-term PPA, typically with an investment grade rated counterparty (S&P rating above BBB-/Moody's rating above Baa3). The Project has numerous opportunities for securing a long-term offtake contract: i) over the past

year several New England utilities, including National Grid, Northeast Utilities and Unitil, have awarded renewable energy long-term contracts through competitive RFP processes to wind projects in Maine and New Hampshire to be constructed over 2-3 years, where winning bid prices were approximately \$80/MWh1. Based on the recent RFP results and bilateral discussions with interested counterparties in the New England market, AWE is confident that the Project is very competitive and will secure an adequate long-term PPA contract to support a successful project financing. ii) AWE has received a letter of interest from Altenex (see Appendix 18A), a leading energy management firm that Fortune 500 companies used to source clean energy for their power portfolios with clients such as GM, Dow and Microsoft. Working with Altenex represents one well-defined opportunity to secure long-term off take for the project from a credit-worthy counterparty. iii) Walden's management team has extensive experience originating, marketing and negotiating financial hedges in various commodity markets. The Project is well suited to support a long-term financial hedge for both energy and RECs and Walden is currently pursuing those opportunities.

- c. Acceptable Turbine Supply Agreement ("TSA"). AWE has entered into a Binding MOU for a TSA with Siemens. The TSA will be executed after a Certificate has been issued and prior to closing on construction financing.
- d. Acceptable Balance of Plant ("BOP") Contract. AWE has selected Reed and Reed as its BOP contractor and has entered into a Preconstruction Services Agreement ("PSA") with them. The PSA will be replaced by a BOP contract after a final Certificate is issued and prior to closing on construction financing.
- e. Acceptable O&M agreements for ongoing maintenance of the Project.

  AWE has negotiated a Binding MOU for a SMA with Siemens to provide service and maintenance for the turbines. The SMA will be executed after issuance of a Certificate and prior to closing on construction financing.

Project lenders seek to comply with market standard underwriting criteria when determining the optimal amount of debt for a wind project. Such criteria are based on four key financial parameters:

a. Maximum debt tenor. In current market conditions project finance lenders require debt tenors of approximately 15-18 years, driven by the term of the Project PPAs. Since the Project loan is "non-recourse" to the owners of the project, this requires that the cash flow generated solely by the Project is sufficient to repay the principal and interest on the loan within the final debt term.

<sup>&</sup>lt;sup>1</sup> (Source: North American Wind Power magazine http://www.nawindpower.com/e107\_plugins/content/content.php?content.12664

- b. Minimum amount of equity as a percentage of total project cost. The Project will cost approximately \$63-65 million to construct. Based on project lenders' current market standard requirements the Project Sponsors will be required to invest a minimum of 15% of common equity in the Project during the construction phase. However, this amount is not determined on an absolute basis, but is evaluated as part of the key financial tests listed above. For example, if the Project debt amount is initially set at 85% of Project costs, but after performing the test of maximum debt tenor for repayment, (described above), and the DSCR tests, (described below), it is determined that the debt quantum is too high, then the Project Sponsors may be required to invest more than the minimum 15% equity threshold.
- c. DSCR P50 test. In wind finance project lenders seek an annual financial test to be met, whereby the project can meet a DSCR P50 ratio of 1.45x. This means that the cash flow generated by the project, net of project operating expenses, is equal to 1.45 times the sum of principal and interest payments under the non-recourse loan during each year of the loan term.
- d. DSCR P99 test. In wind finance project lenders seek an annual financial test to be met, whereby the project can meet a DSCR P99 ratio of 1.0x. This means that the cash flow generated by the project, net of project operating expenses, is equal to 1.0 times the sum of principal and interest payments under the non-recourse loan during each year of the loan term. This is a conservative lenders case and means that 99 years out of 100, the project will be able to pay all operating costs and service the loan.

AWE's financing plan for the Project has been formulated to comply with the above described market standards. Based on a reasonable assumption of obtaining a long-term PPA at current market rates, a construction cost of approximately \$63-65 million, and the above financial ratios required by lenders, the Project's construction will be funded with a \$50-55 million construction loan converting to a term loan upon COD, and \$10-13 million of equity. The variance in the ranges for debt and equity amounts are driven by a conservation assumption on the range of final PPA prices and PPA contract tenors AWE has seen in the market.

Binding commitments for construction debt financing are typically not obtained until after permitting is completed and all final permit conditions and costs are factored into final loan documentation. However, due to the strength of the Project, the strong experience of the Project's Sponsors and the backing of RWE, AWE has obtained Letters of Intent ("LOIs") from two separate commercial banks with considerable experience in lending to utility scale wind projects that are interested in providing the debt financing package for the construction of the Project. The LOIs are included with this Application in Appendix 18B and 18C.

To provide the Committee with additional assurance that AWE has the financial capability to construct and operate the Project, AWE will agree to a condition that it provide evidence to the Committee that the debt and equity financing required for the construction of the Project is in place prior to commencement of construction.

# Permanent Financing:

Permanent financing is comprised of tax equity, bank term loan, and common equity. The Production Tax Credit ("PTC") for U.S. wind has been extended by Congress for 5 years and Walden will be able to access this tax credit for the Project. A tax equity investor becomes part of the capital structure once the Project is operational. The tax equity capital will replace a portion of the construction loan and become the third piece of the capital stack. The remaining portion of the construction loan will convert to a term loan and become subordinated to payments to the tax equity investor. Walden has had conversations with a number of potential tax equity investors, is familiar with the structure and has employed tax equity on other projects. The combination of tax equity and bank debt financing is the standard funding structure for financing all renewable energy projects in the US. In 2015 alone, \$6.4 billion of tax equity was deployed in 40 wind projects totaling 5,700 MW. Based on Walden's financial expertise and conversations with potential investors, Walden is confident that the Project will be very attractive to numerous tax equity investors.

Prior to the conversion to permanent financing, both the construction debt and equity will have been deployed in full to bring the Project to commercial operation, hence no additional funding will be required for the operation of the Project. The relevant financial tests that govern the repayment of the term loan post COD will be the DSCR tests described earlier: (i) DSCR test of the Project's ability to maintain sufficient contracted cash flow net of all project expenses to service principal and interest on the term loan at a multiple of 1.45x in the P50 wind production case, and (ii) DSCR test of the Project's ability to maintain sufficient contracted cash flow net of all project expenses to service principal and interest on the term loan at a multiple of 1.0x in the P99 wind production case.

Notably, AWE recently participated in the 10<sup>th</sup> forward capacity auction in ISO New England ("FCA 10") and the Antrim Project cleared in the auction, taking on a 7-year capacity supply obligation ("CSO") starting on June 1, 2019. Revenue associated with the forward capacity market will benefit the Project in a financing as it will improve P50 and P99 DSCR tests.

As noted above, AWE has received documented interest from several large commercial banks experienced in providing construction financing to wind projects in the US and will seek the most competitive terms. AWE's agreement to provide evidence that financing is in place prior to commencement of construction specifically addresses this requirement for the issuance of a Certificate. The strong economics of the Project, the backing of RWE in providing the equity to construct the Project, and the clear framework of service and maintenance agreements put in place, all ensure that once construction

financing is closed, the Project will generate sufficiently strong cash flow to ensure its continued operation in compliance with all conditions contained in the Certificate and industry best practices.

### Applicant's Technical and Managerial Capability

AWE will be responsible for the overall management of the Project, including the execution and administration of all commercial agreements necessary to ensure that the Project is constructed and operated in conformance with accepted industry practices and the Certificate of Site and Facility. As the owner of AWE, Walden will be ultimately responsible for the management of all contractors engaged to construct and operate this facility. AWE is committed to constructing and operating the Project to achieve the highest standards for safety, reliability and performance. To ensure such standards for safety, reliability and performance, as well as compliance with all regulatory requirements applicable to the Project, AWE has engaged DNV-GL as its Owner's Engineer. DNV-GL has been recognized as the world's leading technical authority on Windpower generation for three decades and will advise AWE in its capacity as Owner's Engineer on finalization of all BOP construction, turbine supply and service and maintenance agreements. See Appendix 19C for a more complete description of DNV-GL's relevant experience. In additional to utilizing DNV-GL's substantial resources to ensure a smooth transition from start of construction through long term operations, AWE will also rely on several well-established and highly experienced firms to perform the construction and operation of the facility. AWE has selected vendors for the Project that are the most qualified firms available, including Reed & Reed Inc., and Siemens Energy, Inc., described more fully below.

AWE has selected Reed and Reed as its BOP contractor and has entered into a Preconstruction Services Agreement ("PSA") with them. Additional information on Reed and Reed's qualifications is detailed in Sections F.5.b and G.5 as well as Appendix 19A. The PSA will be replaced by a BOP contract and the PSA stipulates that "Any BOP Contract that is negotiated between the Parties will be a fully-wrapped lump sum agreement (based on fully transparent cost plus pricing) under which Contractor will provide all post permit electrical design (Civil Design by Owner), related procurement, technical and construction services required to complete and, working in a coordinated manner with Siemens, turn over a fully commissioned and operational project within designated cost, schedule, quality and safety requirements, including (a) purchase of all materials and placement of construction contracts; (b) completion of a detailed scope of work; and (c) the provision and management of all construction labor and construction equipment." AWE will rely on its contractual arrangement with Reed & Reed to construct, commission and deliver to AWE the fully operational Project. Reed & Reed's extensive qualifications in this regard, which includes experience installing Siemens turbines, are further detailed in Appendix 19A.

In addition to the PSA signed by AWE and Reed & Reed, AWE has selected Siemens Energy, Inc. as its turbine supplier and service and maintenance provider and has entered into a binding memorandum of understanding ("MOU") with Siemens. Additional information on Siemens is detailed in Sections F.5.b and G.1 as well as

Appendix 19B. The Siemens MOU provides Siemens with the exclusive right to negotiate a Turbine Supply Agreement ("TSA") and Service and Maintenance Agreement ("SMA") with respect to the Project. The TSA will govern Siemens' responsibilities to manufacture and deliver the turbine components to the Project site where they will be installed by Reed & Reed with technical assistance from Siemens as necessary. Siemens will also be responsible for turbine commissioning. The TSA will also contain warranty and performance guarantee provisions covering the Siemens Turbines. The SMA with Siemens will cover all planned and unplanned service requirements on the Turbines during the term of the contract. AWE and Siemens will negotiate the final TSA and SMA, including the term of the SMA, after permitting for the Project is completed. AWE expects to enter into an SMA with Siemens for a period of between two and five years. This term may be extended upon the expiration of the initial SMA term, or AWE may then contract with a qualified third party service provider such as UpWind Solutions or EDF Renewable Services to take over this scope. The scope of services under the SMA will be finalized in the negotiations, but will include, at a minimum:

- A dedicated Siemens maintenance team. This team will consist of 2-3 individuals (2 will always be on-site during normal hours and a third will be present for any activities requiring three technicians on site for safety reasons)
- Performance of scheduled maintenance of the WTGs (unscheduled maintenance will be provided as part of the Siemens warranty under the TSA)
- Parts/consumables supply and inventory management
- Provision, maintenance and calibration of tools required for WTG maintenance
- Provision and maintenance of all safety equipment required for WTG servicing
- 24 x 7 Remote monitoring of the Supervisory Control and Data Acquisition ("SCADA") system and alerting AWE of any issues
- Retrieval and backup of SCADA data
- Monitoring and analysis of the Turbine Condition Monitoring ("TCM") data to predict and mitigate potential malfunctions
- Implementation of relevant changes to TCM and SCADA software as necessary
- Initiating appropriate response to the events, warnings and alerts monitored
- Maintaining turbine specific logs detailing all Siemens work, repairs and visits
- Submitting monthly reports
- Notifications to AWE of all unusual events and malfunctions
- Report any incident involving Siemens personnel
- Monitoring and reporting on WTG availability in relation to the TSA guarantee

Additional terms of the SMA will reflect Siemens standard industry practices to ensure that the facility is operated safely, in a manner consistent with the terms of the interconnection and Off-Take Agreements, and that turbines are maintained in accordance with the manufacturer's specifications.

Together with DNV-GL, AWE will ensure that all necessary Balance of Plant O&M ("BOP O&M") and Asset Management services are in place for the Project. These services include all operations and maintenance required on the site that is not covered by the Siemens SMA, including:

- managing scheduled maintenance of the above and below ground electrical collector system through licensed electrical contractors
- managing maintenance of the Project substation, including switchgear, main transformer, breakers, switches and relays
- performing inspections and maintenance of pad mount transformers
- emergency response management in coordination with Siemens and local emergency response services
- parts supply and inventory management
- fiber/ethernet network maintenance
- daily turbine monitoring and fault analysis
- road maintenance (including snow removal) and repair
- general building maintenance and repair
- vegetation removal, waste disposal and general site upkeep
- maintaining site security and ensuring safety
- managing public access to the site
- conducting visual inspections of the MET tower and radar equipment and coordinating any necessary repairs
- reporting to AWE on plant production, inventories, breakdowns, maintenance performed, turbine availability, and accidents
- managing and ensuring compliance with all post construction environmental monitoring and reporting requirements
- ensuring compliance with the SEC Certificate
- ensuring compliance with applicable requirements under Federal Energy Regulatory Commission ("FERC"), North American Electric Reliability Council ("NERC") and ISO-New England regulations
- ensuring compliance with the Town of Antrim Agreement
- managing day to day relations with the Town and Antrim and State of New Hampshire
- managing landowner relations
- administrative activities

Working together with DNV-GL, AWE will hire a qualified team of 2 full time staff who, along with qualified subcontractors, will perform the duties listed above. These AWE personnel will staff the Project site during all normal business hours and will be on call 24/7 to deal with any emergencies that may arise. General qualifications in the following areas will be required for these positions: site safety and regulatory compliance experience; general wind facility operations and maintenance experience; construction monitoring experience; turbine technical knowledge; reliability and performance experience; balance of plant maintenance experience including roads and related items; electrical system experience; experience managing technical subcontractors; and ability to coordinate with a range of parties including landowners, local and regional regulatory entities. There is ample availability of qualified workers that AWE will be able to draw upon to fill these two positions and AWE plans to fill both site staff positions prior to commencement of construction activities. DNV-GL will assist AWE in developing complete job descriptions for these positions, soliciting applications from

qualified personnel, reviewing applications and conducting interviews, making final hiring decisions and integrating new hires into the Project team.

In total, AWE expects an on-site staff of 4-5 personnel, including 2 AWE staff and 2-3 Siemens technicians. Additional personnel may be on site when necessary to perform specialized services such as electrical workers to perform substation or collector system maintenance, local contractors providing routine building maintenance, road plowing/repair or vegetation clearing jobs.

Both Siemens and AWE site personnel, through their contractual arrangements with AWE, will possess the authority to take any actions that are required to ensure Project operations are carried out in a manner consistent with all regulatory requirements, industry best practices and to ensure the safety, reliability and performance of the facility at all times.

As the Project Owner, AWE will maintain oversight of all contractors on the site to ensure all contractual obligations are being met in a manner satisfactory to AWE and its lenders and that the Project is operated and maintained in compliance with all applicable regulatory requirements and conditions contained in a Certificate.