



New Jersey Clean Energy Program

Pre-Application Wind Equipment

Please read carefully all of the following information. With the help of your installation contractor, fully complete sections A through D as applicable, of this Wind Equipment Pre-Application.

GENERAL TERMS AND CONDITIONS

Rebates will be processed based on the date *New Jersey's Clean Energy Program*[™] (NJCEP) approves the final paperwork packet, not on the purchase date of the equipment. Program procedures and rebates are subject to change or cancellation without notice. To qualify for a rebate, the applicant must comply with all *Renewable Energy Incentive Program* (REIP) eligibility requirements, terms and conditions, installation requirements and submit all completed forms. For more information about NJCEP or for assistance in completing applications or forms, please see NJCleanEnergy.com or call **866-NJSMART**.

The *Pre-Application Wind Worksheet* is an evaluation tool for interested applicants and is used to help determine the site's wind potential and estimate the wind REIP rebate. The *Pre-Application Wind Worksheet* collects site specific wind resource and turbine equipment data. The rebate calculation is determined using a NJCEP licensed calculation tool that is not publicly available. The rebate will be calculated by the program administrators.

If the turbine is not listed on the NJCEP list of approved turbines, applicants can complete the Wind Alternative Calculation Method (WACM) for consideration by the program administrators for turbines not shown on the approved list. Visit: NJCleanEnergy.com/renewable-energy/programs/renewable-energy-incentive-program/for-customers/applications/wind-alternative-calculation-method.

INSTALLATION REQUIREMENTS

Equipment installation must meet the following minimum requirements in order to qualify for a rebate. These requirements are not all-encompassing and are intended to only address certain minimum safety and efficiency standards.

A: CODE REQUIREMENTS

1. The installation must comply with the provisions of the National Electrical Code and all other applicable local, state, and federal codes or practices.
2. All required permits must be properly obtained and posted.
3. The NJCEP inspection must be performed before the local Building Code Enforcement Office. If not, this may delay the processing of the rebate.
4. All required inspections must be performed (i.e., Electrical/NEC, Local Building Codes, etc.). Note: In order to ensure compliance with provisions of the NEC, an inspection by a state-licensed electrical inspector is mandatory.

B: WIND TURBINE, ANEMOMETER AND TOWER

1. Approved turbines listed in this pre-application will be accepted for rebate. Applicants considering turbines not shown on the approved list can complete the Wind Alternative Calculation Method (WACM) for consideration by the program administrators.
2. All wiring must conform to the National Electric Code. Overcurrent protection must be provided in accordance with the provisions of the NEC.
3. The wind turbine tower must be well-grounded and bonded in accordance with the provisions of the NEC and any other applicable codes.
4. Appropriate lightning protection and surge suppression must be installed in accordance with the provisions of the NEC and any other applicable codes.
5. An anemometer will be installed one rotor length below the swept area of the turbine and will face the direction of the predominant wind direction at the turbine location based on the wind rose data.
6. The output of the anemometer will have a data logger system that can be accessed to show instantaneous and average wind speed.
7. The data logger output can be transmitted either by card reader, a dedicated land line or web based system that can provide reporting information on the system.

C: INVERTER AND CONTROLS

1. The inverter and controls must be properly installed according to manufacturer's instructions.
2. The inverter must be certified as compliant with the requirements of IEEE 929 (including anti-islanding) and with UL 1741.
3. The system should be equipped with the following visual indicators and/or controls:
 - On/off switch
 - Operating mode setting indicator
 - Operating status indicator
 - AC/DC overcurrent protection
4. Warning labels must be posted on the control panels and junction boxes indicating that the circuits are energized by an alternate power source independent of utility-provided power.
5. Operating instructions must be posted on or near the system or on file with facilities operation and maintenance documents.



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6. Systems must have monitoring capability that is readily accessible to the owner. This monitor (meter or display) must at minimum display instantaneous and cumulative production.

D: CONTROL PANEL TO WIND TURBINE WIRE RUNS

1. Areas where wiring passes through ceilings, walls or other areas of the building must be properly restored, booted and sealed.
2. All interconnecting wires must be copper. (Some provisions may be made for aluminum wiring; approval must be received from utility engineering departments prior to acceptance.)
3. Thermal insulation in areas where wiring is installed must be replaced to "as found or better condition." Access doors to these areas must be properly sealed and gasketed.
4. Wiring connections must be properly made, insulated and weather-protected.
5. All wiring must be attached to the system components by the use of strain reliefs or cable clamps, unless enclosed in conduit.
6. All outside wiring must be rated for wet conditions and/or encased in liquid-tight conduit.
7. Insulation on any wiring located in areas with potentially high ambient temperature must be rated at 90° C or higher.
8. All wiring splices must be contained in UL-approved workboxes.

E: BATTERIES (IF APPLICABLE)

1. The batteries must be installed according to the manufacturer's instructions.
2. Battery terminals must be adequately protected from accidental contact.
3. DC-rated overcurrent protection must be provided in accordance with the provisions of the NEC.

APPROVED TURBINES FOR REBATES*

MANUFACTURER	MODEL	NAMEPLATE CAPACITY (kW)	MANUFACTURER	MODEL	NAMEPLATE CAPACITY (kW)
Abundant renewable energy	ARE 110	2.5	GE Energy	GE 1.6 xle	1600
Abundant renewable energy	ARE 442	10	Northern Power Systems	North Wind 100 (21m)	100
Aerostar	6 meter	10	Proven Engineering	WT6000	6
Bergey Windpower	BWC XL.1	1.0	Proven Engineering	WT15000	15
Bergey Windpower	BWC EXCEL - S	10	Southwest Windpower	Skystream	2.4
Endurance Wind Power	S-343	5	Cascade Engineering	Swift	1.5
Endurance Wind Power	G-3120	35	Turbowinds	T400-34	400
Endurance Wind Power	E-3120	50	Wind Energy Solutions	Tulipo	2.5
Enertech	E-44	40	Wind Energy Solutions	WES 18	80
Entegrity Wind Systems	EW15	50	Wind Energy Solutions	WES 30	250
GAIA Wind	11kW	11	Wind Turbine Industries (Jacob)	26-15	15
GE Energy	GE-1.5 sl/sle/xle	1500	Wind Turbine Industries (Jacob)	31-20	20

*Applicants must include the pre-application package and the completed WACM spreadsheet when using a turbine that is not on the approved list for consideration by the program administrators. To complete the WACM spreadsheet, visit: NJCleanEnergy.com/renewable-energy/programs/renewable-energy-incentive-program/for-customers/applications/wind-alternative-calculation-method



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A: APPLICANT INFORMATION

Applicant Name: _____ Installer Name: _____
 Mailing Address: _____ Mailing Address: _____
 City, State Zip: _____ City, State Zip: _____
 Phone number: _____ Phone number: _____
 E-mail Address: _____ E-mail Address: _____

Installed Address: _____
 City, State, Zip: _____

Customer type: Residential Commercial Farm Non-Profit
 Has this customer applied for any other renewable energy incentives from the NJCEP? YES NO

B: EQUIPMENT INFORMATION

1. Wind Turbine Manufacturer: _____ Turbine Model Number: _____
 2. Wind Turbine Power Output: _____ AC Watts or _____ DC Watts (Peak output at 11 m/s) _____
 3. Number of Turbines: _____
 4. Inverter Manufacturer: _____ Inverter Model Number: _____

C: PROPOSED INSTALLATION/INTERCONNECTION INFORMATION

1. Wind Turbine Location: Latitude _____ Longitude _____

2. Average Annual Wind Speed at 50 meters:

Average annual wind speed at 50 meters using the free NASA windmap:

<http://eosweb.larc.nasa.gov/cgi-bin/sse/grid.cgi> _____ m/s

If available, include at least one of the two fee-based wind resource maps listed below: (The wind REIP program uses the average of the wind speed results from each wind map). If only the NASA wind map is provided, the wind speed will be reduced to reflect a more realistic result when using only one wind map and consequently will result in a lower rebate incentive.

<http://www.3tier.com/firstlook/> _____ m/s

<https://www.windnavigator.com/cms/> _____ m/s

3. Proposed Wind Turbine Rotor Hub Height: _____ feet, or _____ meters

4. Proposed Wind Turbine Blade Length: _____ in feet

5. Please include a one-page site map. This document must indicate the location of the wind turbine(s) and any obstructions within 500' of the turbine and their associated heights, and distance from the turbine. The applicant must show that the entire rotor diameter be 30' above any obstructions within 500'. If this is not possible, a wind site assessment will be required by a certified wind site assessor. The installation address must also be included on the site map. If site elevation changes more than 10 feet within the 500 foot radius then a site topographical map must also be included.

6. Is this system to be self installed? Yes No

D: INCENTIVE REQUEST CALCULATION ***FOR NJCEP PROGRAM ADMINISTRATOR USE***

Incentives are based on estimated annual energy production (in kWh) for the proposed turbine at the specific site and hub height.. Incentive calculation will be done by program administrators. **Rebate funds are not allocated until full application is submitted, approved and applicant receives an approval letter from the NJCEP.**

1. Incentive Calculation: **Residential systems are capped at a maximum of 16,000 kWh**

Small Systems –

a. (0-16,000 kWh/year estimated annual output) _____ X \$3.20/kWh = \$ _____

Large Systems –

b. (16,000 to 1,000,000 kWh/year estimated annual output) = (_____ -16,000 kWh) X \$0.50/kWh + \$51,200 = \$ _____

2. Total Installed System Cost: \$ _____

(Eligible installed system cost includes all equipment, installation, and applicable interconnection costs before the NJCEP incentive.)

3. **Requested Incentive** (Enter the appropriate value from D.1. a or b): \$ _____