



1 Application Guidelines for Wind Feasibility Studies under NJCEP

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1. Introduction

The New Jersey Clean Energy Program (NJCEP) will include feasibility study incentives as part of the existing Renewable Energy Incentive Program (REIP) for wind projects. These incentives will be for feasibility studies with customer sited wind projects in New Jersey. These incentives will be offered on an open enrollment, ongoing basis, and are intended to increase the number of customer sited wind projects that get built in New Jersey each year. In addition, the incentives will increase the amount of public information that is available on customer sited wind projects, which will help policymakers, ratepayers, and the REIP program meet their renewable energy goals.

The funds will be administered by the NJCEP and is designed to promote development of customer sited wind energy projects by offering an incentive during the feasibility phase of development. The incentive will provide financial support for sound engineering, financial, and legal analysis of projects that have a high likelihood of being built. This design will favor projects that incorporate technologies with demonstrated maturity in the marketplace and commercial viability. Preference will also be given to applicants who demonstrate a commitment to developing the project if it is deemed feasible through the course of the study, and demonstrate a high likelihood of receiving the required permits.

Incentive funding is expected to be \$500,000 in 2010, and the size of the incentive awards will be determined by the expected size of the project as shown below.

Table with 2 columns: Project Size (kW) and Incentive Award Range. Rows include 100 kW - 249 kW, 250 kW - 499 kW, and > 500 kW.

2. Definition of a Feasibility Study

A feasibility study is a compilation of analytical tools and assessments that assist in determining the viability of a customer sited wind energy project. The study shall entail a comprehensive analysis that provides the necessary information to determine if a development project is technically, economically, and legally viable to allow the customer to make an informed "Go" or "No-Go" decision.

1 DRAFT Document version 1

### 3. Eligibility Requirements

Incentives will be offered to eligible customers whose projects meet the following requirements.

**Customer Eligibility:** All New Jersey non-residential customers that contribute to the Societal Benefit Charge (SBC) through the utility bill, including profit or non-profit corporations, state and regional entities, municipalities, and tribes.

**Interconnection:** Only behind the meter / net metered projects are eligible. All projects must be sized to meet the electrical needs at the site in accordance with New Jersey’s Net Metering statutes, regulations, and policies.

**Technology:** Only horizontal axis wind turbines are eligible.

**Generator Size:** > 100 kW

**Location:** Projects must be located in NJ within the service territory of a utility the charges the SBC to their customers. Although the CAFRA zone represents a set of challenges, the project can be located in the CAFRA zone.

**Wind Resource:** Sites must demonstrate a wind resource that is at least 11 MPH annual average at 50 meters according to existing wind resource maps.

**Feasibility Study:** All feasibility studies must be stamped by a licensed professional engineer and/or a certified wind assessor.

### 4. Required Scope of Work

Each Incentive Application and Feasibility Study shall include at least the following elements.

| #  | Required Element                            | Application | Feasibility Study |
|----|---|-------------|-------------------|
| 1  | Application Form                            | X           |                   |
| 2  | Customer Prequalification                   | X           |                   |
| 3  | Site Prequalification                       | X           |                   |
| 4  | Letter of Commitment                        | X           |                   |
| 5  | Team Qualifications                         | X           |                   |
| 6  | Physical Site Assessment                    |             | X                 |
| 7  | Utility Assessment                          |             | X                 |
| 8  | Zoning & Permitting Assessment              |             | X                 |
| 9  | Resource Assessment                         |             | X                 |
| 10 | Impact Assessment                           |             | X                 |
| 11 | Technology Assessment                       |             | X                 |
| 12 | Energy Production Analysis                  |             | X                 |
| 13 | Construction & O&M Cost Estimates           |             | X                 |
| 14 | Financing & Incentives Analysis             |             | X                 |
| 15 | Insurance Requirements Analysis             |             | X                 |
| 16 | Project Development Plan                    |             | X                 |
| 17 | Conclusion & “Go - No-Go” Decision Analysis |             | X                 |

Successful Applicants will be responsible for performing or retaining a consultant to perform the feasibility study described in the Proposal. The NJCEP and the successful Applicant will negotiate a Statement of Work, and all work products that are created using REIP funds will be considered the property of the State of New Jersey.

1. **Application Form:** The NJCEP will provide an application form that all interested parties must use to apply for the incentives.
2. **Customer Prequalification:** All applicants must demonstrate that the customer has been prequalified and informed about the steps that are involved in developing a wind energy project. Prequalification may include;
  - a. A statement of the Customer's goals for the project.
  - b. Standard financial underwriting requirements such as a credit check, borrowing capacity, budgeting and cash flow analysis.
  - c. Annual energy usage and how this matches up with typical turbine energy output.
  - d. Expectations on financial returns, especially in the context of complimentary investments in conservation and efficiency.
  - e. Expectations on the customer's involvement in permitting, installation and maintenance.
  - f. An acknowledgement letter stating that the customer has been educated in the basics concerning, turbines, towers and tower heights, energy production expectations, turnkey cost expectations, reliability, and maintenance requirements. Customer's attendance at one of the NJ Wind Energy Symposium's held in 2009 and January 2010 can satisfy this requirement.

Applicants are encouraged to demonstrate that the customer has toured at least one successful customer sited wind energy project.

3. **Site Prequalification:** All applicants must demonstrate that the site has been prequalified by identifying basic information about;
  - a. The property's size,
  - b. The site's orientation,
  - c. The utility territory,
  - d. The average annual wind speed, and
  - e. Known zoning requirements.

Applicants are encouraged to use the Site Prequalification to identify particular areas of emphasis that the Feasibility Study needs to address for the specific site being developed.

4. **Letter of Commitment:** This letter should be signed by both the customer and the prime contractor who will be completing the feasibility study, and include the following
  - a. The price of the study,
  - b. An outline of the deliverables included in the price, and
  - c. A statement that the feasibility study will be completed within six months.
5. **Team Qualifications:** Each application must include the qualifications of the development and feasibility study team.

6. **Physical Site Assessment:** The Site Assessment must include a detailed description and measurements of the site's physical and geographic characteristics, including;
  - a. Site size, obstacles, and orientation,
  - b. A one-page site map showing the overhead view of the project and/or an electrical one-line diagram,
  - c. Eight photographs of the proposed installation site showing a panoramic view starting facing north and consecutive pictures at each 45 degree position on the compass, and
  - d. A soils conditions analysis.
7. **Utility Assessment:** The Utility Assessment must include at least the following elements as applicable.
  - a. Copies of customer bills showing electric usage for previous 12 months
  - b. If the electric utility does not charge the SBC fee, a copy of the gas bill showing the SBC charge would be needed.
8. **Zoning & Permitting Assessment:** The Zoning & Permitting Assessment must identify all applicable zoning and permitting requirements, if the township has a small wind ordinance, variances, and/or special use waivers that apply to the site. If necessary, assistance with town permitting approvals can be incentivized. This may include;
  - a. Setbacks from public roads, occupied structures, property lines, overhead & buried utilities, etc,
  - b. FAA permits requirements,
  - c. Application process per type of permit.
9. **Resource Assessment:** The Resource Assessment should reference existing resource assessment data and analytical tools to conduct calculations on the quality and quantity of the wind resource at the site. If necessary, primary data collection and analysis can be incentivized. The Resource Assessment must include at least the following elements;
  - a. Regional wind data gathering from each of the following sources
    - i. <http://firstlook.3tiergroup.com>
    - ii. <http://windexplorer.awstruewind.com/NewJersey/NewJersey.htm>
    - iii. <http://eosweb.larc.nasa.gov/cgi-bin/sse/grid.cgi>
  - b. De-rate calculations according to site characteristics.
10. **Impact Assessment:** The Impact Assessment should include an analysis of the following environmental impacts.
  - a. Bird & Bat requirements,
  - b. Visual,
  - c. Noise,
  - d. Air & Water Emissions,
  - e. Other Wastes,
  - f. Habitat.

11. **Technology Assessment:** The Technology Assessment must include a comparative analysis of the tower and turbine technologies that are suitable for the site. This must include at least the following elements;
  - a. Recommended Tower Type
    - i. Based on customer preference
    - ii. Determined by availability and best match for turbine
    - iii. Based on site conditions
    - iv. Recommended tower height
      1. Based on site conditions
      2. Based on customer preference
      3. Based on budget
      4. Mindful of zoning
  - b. Recommended Turbines
    1. based on amount of utility offset requested by customer
    2. based on realistic production in the given resource
    3. based on budget
    4. based on turbine availability
  - c. Equipment Specifications,
  - d. Equipment availability,
  - e. Equipment reliability, and
  - f. System maintenance assessment.
12. **Energy Production Estimates:** Energy Production Estimates must be calculated for each turbine and tower combination based on the wind resource identified at the site.
13. **Construction & O&M Cost Estimates:** Cost estimates for each complete system must be calculated based on factors such as turbine type, tower height, tower type, site measurements, foundation requirements, and crane and heavy equipment access. Estimates should cover the expected life, replacement cost, and applicable decommissioning of the equipment.
14. **Financing & Incentives Analysis:** The Financing and Incentives Analysis must identify all applicable incentives, tax credits and revenue streams (such as REC credits), and produce an estimated balance sheet, income statement, and cash flow statement for the life of the project. Financial metrics such as return on investment, payback period, and internal rate of return are also required.
15. **Insurance Requirements Analysis:** The Insurance Requirements Analysis must identify and estimate the cost of obtaining an appropriate amount of liability and other applicable insurance coverage types that may be required throughout the development and construction cycle.
16. **Project Development Plan:** The project development plan should describe the actions that will take place after a Go decision is made to build the project. This should include a timeline of milestones, responsible parties, as well as the following elements.

- a. **Professional Service Providers Assessment:** The Professional Service Providers Assessment must identify the installers, contractors, and other professional service providers who are expected to be available to work on the project.
- b. **Contracting Plan:** The Contracting Plan must identify and analyze the ownership structure and the expected contracts and other paperwork that are required to complete the project, including if applicable;
  - i. Engineering, Procurement & Construction
  - ii. Consulting Contracts
  - iii. Subcontractor Contracts
  - iv. Purchased Power Agreement,
  - v. REIP application requirements
- c. **Installation & Commissioning Plan:** The Installation & Commissioning Plan must identify and schedule the sequence of tasks, milestones and critical paths that lead to the successful completion of the project.

**17. Conclusion & “Go – No Go” Decision Analysis:** The final element of the Feasibility Study must include a Conclusion and an analysis of the foregoing elements that arrives at a recommendation for a “Go – No-Go” decision.

## 5. How to Apply

**Step 1:** Download and review the REIP Wind Feasibility Study checklist and documents from the NJCEP web site at [www.NJCleanEnergy.com](http://www.NJCleanEnergy.com).

**Step 2:** Complete all documents listed in the checklist, and submit them to:

Renewable Energy Market Manager  
c/o Conservation Services Group  
75 Lincoln Highway, Suite 100  
Iselin, NJ 08830  
Phone: 866-NJSMART (866.657.6278)  
Fax: 732-634-8010

**Step 3:** You will receive confirmation of the applications arrival within 5 business days of receipt, and notification of the outcome of your application within 30 days of receipt of the application. Successful Applicants will receive an Approval Letter with specific directions on how to complete the award process as part of this notification.

## 6. Award Process & Feasibility Study Schedule

Feasibility Studies must be completed within six (6) months of the approval letter notification. The incentive payment will be paid in two equal installments. The first incentive payment will occur after completion of the feasibility study, and the second incentive payment will occur after the project is completed.

## 7. Evaluation Criteria

Applications that meet threshold eligibility requirements will qualify for a review by an evaluation committee. Projects will be ranked by a committee of experts, without conflict. Final awards will be determined based on indicators including, but not limited to;

- Scored reviews by the evaluation committee,
- Funding availability,
- Committee rankings,
- Award recipient diversity (individual, non profit, profit, etc),
- Total amount of disbursement.

### General Criteria

- The proposed feasibility study is valuable, unique, and replicable.
- The site and applied technology of the proposed project is viable.
- The proposed project is reasonably expected to be economically viable.
- The project proponent is committed to the project and likely to be capable of carrying it out.
- The proposed project yields significant energy benefits.
- The proposed project has a limited environmental footprint.
- The local community receives direct benefits from the proposed project.