

## **7.0 Statement of Work**

### **Task 1.0 Project Management Meetings**

The project will commence with a kickoff meeting to be held within one month of contract execution to discuss project activities, outline responsibilities, and review project goals. Loren Pruskowski will be responsible for organizing the kickoff meeting. Kathleen Moore (IED), Dan Capuano (IED), Loren Pruskowski (SED), Alexander Gordon, Kevin Schulte (SED) and the NYSERDA appointed project manager will attend the kickoff meeting.

Project team meetings will be held twice per month to assure the project progresses in an orderly manner and that goals are met in a timely fashion. Once a quarter the project management team will meet with NYSERDA's project manager to keep them up to date on the status of the project. Loren Pruskowski will be responsible for the project team and quarterly meetings.

### **Task 2.0 Project Reporting**

SED will submit project progress reports to NYSERDA by the 15<sup>th</sup> of the month following the reporting period. The monthly reports will summarize progress, include performance metrics, explain budget-to costs variances, report on difficulties/set-backs, identify plans to resolve problems and restore project progress.

A Final Report of not more than 10 pages (excluding appendices) shall be prepared and submitted within two months of the completion of the project. The Final Report shall provide an overview of work completed, highlighting deliverables, milestones, economic and environmental benefits, as well as any indirect project impacts.

Deliverables Include:

- 1) Monthly reports detailing individual task progress, budget variance, difficulties/set-backs and possible solutions, and expectations moving forward
- 2) Final report detailing project results

Loren Pruskowski will be responsible for the Project Reporting deliverables.

### **Task 3.0 Site Prospecting**

SED and IED will work jointly to identify five sites in Albany County that have the greatest project development potential based on estimated wind resource, proximity to transmission capacity, land use, and ease of construction.

The project team will use the NY Truewind map in conjunction with high-resolution digital orthoimagery (available from the NYS GIS website) to determine geographic locations where wind resource quantity and quality can support a commercial scale wind

farm. The Truewind map wind speed estimates will be adjusted for differences in elevation and vegetation between the prospective site and the model assumptions. Turbulence intensity influenced by terrain features and vegetation will also be estimated. SED and IED will review topographical data of Western Albany County to identify the existence of any land features that may produce local “speed-up” effects in the wind regime, not otherwise identified by the Truewind model.

The project team will identify the nearest transmission lines and substations associated with any potential site, the owner of the line, the size of the line, and its proximity to the site. Load flow studies will be performed to determine how much of the lines available electrical capacity is currently being utilized and what the line can support with regards to project size. Electrical infrastructure costs associated with interconnecting the potential project will be estimated.

The project team will review land use maps to determine which sites are suitable for wind development. This will include fatal flaw analysis on areas such as protected wetlands, public lands, as well as the proximity of residential development.

The project team will assess each site for ease of construction and identify the maximum installed project capacity (MW). This review will include an assessment of ground conditions, ground cover and gradients and the resulting influence on transportation and installation of project equipment. Total project cost will be estimated. Fatal flaw analyses will be performed to identify other structures onsite—including houses, radio towers, and FAA structures—that could prevent development.

The project team will use the aforementioned site characteristics to evaluate each site on an estimated Cost (\$) / kWhr basis. Upon determination of the sites with the greatest wind development potential, Kathleen Moore and Loren Pruskowski will approach corresponding landowners, and whenever possible, meetings will be assembled with all potential landowners together in order to expeditiously disseminate wind energy information and to mitigate against potential false perceptions surrounding inequitable landowner treatment. The landowner with the most representative wind resource of the entire project area with respect to terrain and vegetation will be presented with an agreement for the project team to install a 50m meteorological tower and conduct a wind measurement study.

Deliverables include:

- 1) Site Prospecting Report
- 2) Minutes of meetings with landowners (to be included in monthly reports)
- 3) Signed Meteorological Tower Study Agreement with landowner

Loren Pruskowski will be responsible for the Site Prospecting deliverables.

#### **Task 4.0 Wind Resource and Energy Yield Assessments**

SED will supply and install a fully instrumented 50 meter meteorological tower with a data acquisition system as an in-kind contribution to the project. Also as an in-kind service, SED will decommission the tower upon study completion. SED will collect, monitor, and validate wind data on a monthly basis. Data summary reports will be generated quarterly for the first three quarters in the measurement year. Shear profiling will be conducted by IED using SODAR for one season. All labor involved with the SODAR study will be an in-kind contribution to the project from IED. The SODAR will be leased from ART, LLC. Upon completion of one year of meteorological data collection and SODAR shear profiling the average wind speed at the measured site will be extrapolated to turbine hub height and adjusted to a long-term average speed. An Energy Yield Analysis using up to three different wind turbine models will be performed.

Deliverables include:

- 1) Quarterly Wind Data Summarization Reports
- 2) Shear Profiling Report
- 3) Long Term Wind Speed Adjustment and Energy Yield Analysis Report

Loren Pruskowski will be responsible for the data summarization reports while Kathy Moore will be responsible for the Shear Profiling and Energy Yield Analysis Reports.

## **Task 5.0 Assessing and Building Community Support**

### *Assessing community support*

Dan Capuano, of IED, will measure the selected population's current level of understanding relative to community wind power issues and their support for a community based wind project in the selected municipality using a survey. SED and IED will jointly develop an appropriate survey consisting of 10 questions or fewer, which will be distributed using existing community events (Town-wide garage sales, Democratic Picnic, etc.) and the tax rolls. The same survey will be distributed after community education efforts have been active for 1 year, to assess any changes in public perception regarding wind energy.

Dan Capuano will provide information regarding wind power and community based wind projects to a variety of stakeholders within the community using multiple techniques (forums, curriculum materials, brochures, web site development, and direct mailings, among others). Information provided to community members will be based upon the responses received from the initial survey and will likely include, but not be limited to, the following issues: economics, resource availability, impacts on viewshed, noise issues and impacts on wildlife (i.e. bats and birds). From the outset the emphasis will be on community-owned wind projects.

### *Building community support.*

The project team will establish a community wind focus group. The goals of the focus group will be: to discuss community wind power issues associated with the potential project, promote public awareness of community wind power, assimilate community response data, and provide input to the development of a project specific business prospectus. The community focus group will likely consist of community members, elected officials, industry experts, regulatory agents, and environmental representatives. Dan Capuano and Alexander Gordon, with their talented community networking skills, will play a large role in the formation of the focus group and its sustainability. Once established, the community focus group will meet on a monthly basis.

IED, with the aid of the community focus group, will develop a web site to provide educational information regarding community wind power projects. Responses received from the initial wind survey will aid with developing the educational content associated with the website. The project team will work with the community focus group to identify additional web site content. Local residents will be encouraged to visit the website to share their input through several media, e.g. announcements in the local newspaper and town newsletters.

Project team members, with the aid of the community focus group, will provide presentations to local elected officials and boards, community/civic organizations, school age populations and religious groups in the municipality and surrounding municipalities. A specific presentation will be held to discuss the community's wind project ownership options upon completion of the Business Prospectus (discussed in Task 7.0).

Deliverables include:

- 1) Report summarizing the level of community understanding of wind power issues.
- 2) Information disseminated to the public and a description of dissemination methods (to be included in monthly reports to NYSERDA)
- 3) Report documenting change in support for community wind power initiatives following education efforts regarding the same.
- 4) Minutes of community wind focus group meetings (to be included in monthly reports to NYSERDA).
- 5) Web site relating to Community Wind Development in Albany County
- 6) Summary of presentations to community/public wind forums (to be included in monthly reports to NYSERDA)

Dan Capuano will be responsible party for the Assessing and Building Community Support deliverables.

### **Task 6.0 Permitting and Environmental Assessment**

Kevin Schulte of SED will perform a preliminary analysis of environmental and permitting issues at the federal, state and local levels, identifying potential barriers to

project development. This analysis will include a review of wind farm issues relating to noise, equipment transportation, visual impact, cultural resources, ecological resources, and wetlands and streams.

It is expected that the use of radar for monitoring migrating bird and bat populations will be necessary to assess wind farm impact on avian life. Meetings will be held with the New York State Department of Environmental Conservation (NYSDEC) and the US Fish and Wildlife Service (USFWS) to verify this assumption. It is also expected that noise and visual impact assessments will be required. IED will conduct bird and bat surveys using radar and perform a Noise Study. The radar will be used for two migration seasons' worth of monitoring. SED will perform a Visual Impact Assessment in the form of a project photomontage.

Meetings will be held with local officials to discuss how the State Environmental Quality Review Act (SEQRA) applies to the project, who will be lead agency, and level of detail necessary to satisfy review requirements. Team will file a Full Environmental Assessment Form (EAF) with the appropriate town. It is expected that the permitting process, especially with regards to SEQRA, will be much easier to navigate through if the community owns the project and the project is limited to a size of half a dozen MW class turbines or less.

Deliverables include:

- 1) Preliminary Analysis of Environmental and Permitting Issues
- 2) Copy of Full Environmental Assessment Form (EAF) filed with town
- 3) Radar Study Report
- 4) Visual Impact Assessment
- 5) Noise Study
- 6) Minutes of meetings with agency representatives (to be included in monthly reports)

Kevin Schulte will be responsible for filing the EAF, preparing the Permitting Requirements Report, and performing the Visual Impact Assessment. Kathy Moore will be the responsible party for the Radar Study and Noise Study. Loren Pruskowski will be the responsible party for documenting the minutes of meetings with agency representatives.

## **Task 7.0 Business Prospectus**

The project team will write a business prospectus with the goal of using the prospectus to secure project financing. The prospectus will include: a summarization of work done to date, a project mission statement, project goals & objectives, an analysis of possible financing and community wind farm ownership structures, and a description of the steps necessary to reach successful project construction.

The project mission statement, project goals & objective, and the potential financing and ownership structure sections of the prospectus will largely be formed by community input gathered from the focus group. Financing and ownership scenarios include, but are not limited to: wind farm ownership by a municipal entity having access to low-cost public financing (bond issuance), wind farm ownership by local investors through the formation of an LLC, joint ownership by local investors (LLC) and an outside corporate investor (C-Corporation), and a public-private partnership between a municipal entity and a C-Corporation. 20-year Project Pro Forma's will be developed for each ownership scenario using the results of the Energy Yield Analysis and forecasts for the generated energy value associated with both the physical electrons and the Renewable Energy Credits under the RPS. Project risks, benefits, and mitigation efforts will be examined in detail.

The prospectus will be distributed to the potential project owner/s and/or financier/s. A presentation will be made to the public summarizing the prospectus.

Deliverable: Business Prospectus

Loren Pruskowski will be responsible for the Business Prospectus.