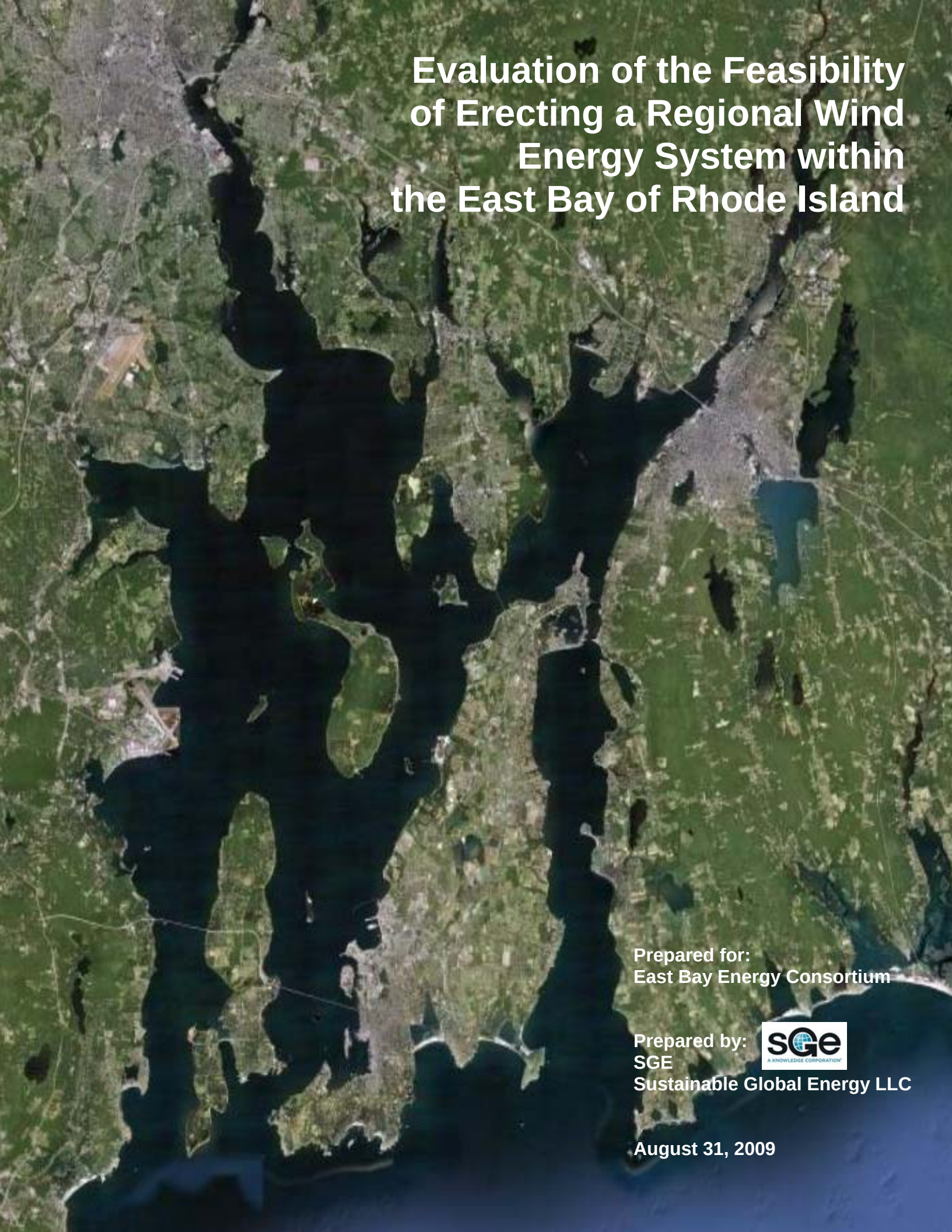
8-31-2009

Evaluation of the Feasibility of Erecting a Regional Wind Energy System within the East Bay of Rhode Island

Sustainable Global Energy, LLC

Evaluation of the Feasibility of Erecting a Regional Wind Energy System within the East Bay of Rhode Island



Prepared for:
East Bay Energy Consortium

Prepared by:
SGE
Sustainable Global Energy LLC

August 31, 2009

Sustainable Global Energy

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A KNOWLEDGE CORPORATION®

August 31, 2009

East Bay Energy Consortium
Bristol Town Hall
10 Court Street
Bristol, RI 02809
Attn: Diane M. Williamson, Director of Community Development

Re: Evaluation of the Feasibility of Erecting a Regional Wind Energy System within the East Bay of Rhode Island

Dear Ms. Williamson,

SGE is very pleased to submit this proposal to provide a Wind Power Feasibility Study for the East Bay Energy Consortium. We understand the importance of renewable energy projects in Rhode Island and are committed to helping organizations and municipalities implement innovative, effective energy solutions to meet their goals.

Our team offers:

- Northeast Engineers, the engineering division of SGE, has a history of conducting site evaluations and wind studies for coastal projects, and SGE has completed over 50 power projects in the Middle East.
- SGE offers turn key wind and solar solutions for commercial applications. From engineering and permitting, to procurement, construction, installation and commissioning, we take care of renewable energy projects from start to finish.
- We have assisted many of our clients to find funding through federal and state grants for the design and construction of wind projects. We can also assist in writing grants to off-set the up-front capital cost of renewable energy projects.
- SGE is committed to producing energy from clean resources like wind and solar that does not take a toll on our environment, or pollute the air, land and water. We are in the process of installing photovoltaic solar panels and a 100kW wind turbine at our corporate facility to generate almost all of the power needed to operate our office building. The 100kW wind turbine will be the first one of its size installed on Aquidneck Island for commercial use.

You will feel confident in having a partner who is committed to renewable energy and can assist you with the entire project. If you have any questions regarding this proposal, please contact me at 401.849.0810 or erico@sge-corp.com.

SGE

A. Eric Offenberg, P.E., LEED AP
Principal

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A KNOWLEDGE CORPORATION

EXECUTIVE SUMMARY

SGE is pleased to submit this proposal to the East Bay Energy Consortium. As further demonstrated in this proposal, the EBEC will feel confident in having a partner who can assist the Consortium with every step of the process.

TEAM AND RELEVANT EXPERIENCE

SGE and its engineering division Northeast Engineers & Consultants have

In the past 6 months, SGE has been involved and conducted several pre-feasibility and detailed feasibility wind studies in Rhode Island. Our team understands the steps, regulations and technologies required to complete a successful project. In addition to the traditional met tower to conduct wind resource assessment, SGE has successfully worked with the new SODAR technology. SGE has also closely followed or been involved with the development of zoning wind ordinances in the East Bay. SGE has also studied all financing and funding available to municipalities, private industries and non-profit organizations, and develop several financial analyses for its clients depending on wind turbine ownership.

For this project, SGE has teamed up with the Mayforth Group. Principals at the Mayforth Group have spent their careers working with elected officials in both state and federal government. They have extensive knowledge of how government operates and the people who affect legal changes here and in Washington. The Mayforth Group successfully pursues many city, state and federal projects throughout the country. As a government relations firm with contacts around the United States, they help their clients cut through government bureaucracy by setting up meetings and establishing relationships with the proper decision makers at all intergovernmental levels.

SGE is also in the process to install a 100kW wind turbine to power its building in Middletown RI.

PROJECT MANAGEMENT

The project will be managed by a. Eric Offenberg, PE, LEED AP. Eric has more than 15 years of experience in civil and coastal engineering. As a principal of SGE and Northeast Engineers & Consultants, he has managed all of the company's major development projects. He has assisted state regulators in the development of environmental legislation; developed the soil erosion and sediment control certification program in Rhode Island; and, prepares and implements federal and state grants. His professional background includes nearly 10 years in private sector engineering firms and six years as Site Plan Review Coordinator for the Rhode Island Conservation District. In addition, as project manager, Eric has been responsible for local, State and Federal permitting on major land development projects. He is well acquainted with proper permitting procedures and is known as an experienced and knowledgeable orator in municipal forums.

PROJECT APPROACH

The proposed study will consist of two phases. The proposed scope of work follows a funnel approach. The funnel approach begins with a high level, general study of a broad number of sites and ends with a detailed, focused study of one or more targeted sites. This methodology results in a strategic, focused allocation of resources.

The first phase will consist of a Pre-Feasibility Study also known as Wind Power Site Suitability Assessment. The goal of this phase will be to identify and screen sites, to evaluate the potential of the sites for an economically feasible wind turbine project and to select sites for additional study. In general, this phase will consist of the gathering and evaluation of readily obtainable information.

The second phase will consist of a Detailed Feasibility Study of one or more locations selected during the first phase. During this phase various aspects of a wind power project will be evaluated including permitting requirements, geotechnical concerns, community support, aesthetic considerations, economics, etc. An option to collect and analyze preliminary meteorological data from each location is also proposed to augment the feasibility study. If requested, data will be obtained using Sound Detection and Ranging (SODAR) technology. Each location will be studied for a period of 3 months to provide a glimpse of the actual site-specific wind potential. The goal of this phase will be to identify the most suitable site(s) for further study.

This phase will include a Comprehensive Wind Resource Assessment which consists of the installation of one or more meteorological (met) tower(s) at the site(s) being studied. The sites will be selected based on the findings of the Detailed Feasibility Study. The study will be conducted over a 12 month period to obtain more reliable, long term, site-specific wind data. As an added service, SGE will establish a secure FTP web site accessible by the client. Meteorological data will be uploaded to the FTP site on a regular basis.

Additional services proposed in the scope of work include consultation and grant writing services.

Section 1 – Firm Description and Personnel

Sustainable Global Energy (SGE) has offered Civil and Coastal/Waterfront engineering for over 20 years. As such, we have an extensive resume of Waterfront Engineering projects that have required exhaustive wind climate evaluation and prediction. In order to expand our scope into the field of Wind and Solar power, SGE has recently acquired Rhode Island Wind and Solar, Inc., a locally owned company specializing in wind and solar design and construction.

Long term energy policy decision making can be both controversial and complex. SGE has over 20 years of experience in the areas of planning, zoning, permitting, surveying, investor advisory consultative services, financial market modeling, and public policy development services to navigate the process in an equitable and orderly manner.

Preparation and a non-judgmental environment are the keys to capturing potential project failure modes and dealing with them in a constructive and transparent environment. SGE can ensure that data sources are well-researched and understood. We also try to quantify project risk such that a clear track record becomes a living process and useful to those in future phases of the contract.

SGE has in-depth and current understanding of the regulatory and business changing economic environment. Knowledge of current policy status and economical climate is critical when evaluating a project's realities and viability.

SGE has the expertise to provide professional GIS management and production services for local and international projects as demonstrated by our portfolio of completed projects throughout New England and the Middle-East. Our base mapping systems are created with the most current and widely used GIS and Computer Aided Drafting (CAD) applications. Our technical staff is extensively trained in these GIS and CAD applications.

SGE is teaming up with the Mayforth Group to assist the EBEC with regulatory and legal issues. Principals at the Mayforth Group have spent their careers working with elected officials in both state and federal government. They have extensive knowledge of how government operates and the people who affect legal changes here and in Washington. The Mayforth Group successfully pursues many city, state and federal projects throughout the country. As a government relations firm with contacts around the United States, they help their clients cut through government bureaucracy by setting up meetings and establishing relationships with the proper decision makers at all intergovernmental levels.

They use their policy experience to adequately link their client's work with current laws and regulations that deal with all aspects of government. Lastly, the Mayforth Group has an extensive knowledge of the federal and state appropriations process, as well as grant programs, to provide the necessary resources for their clients' specific projects and business development.

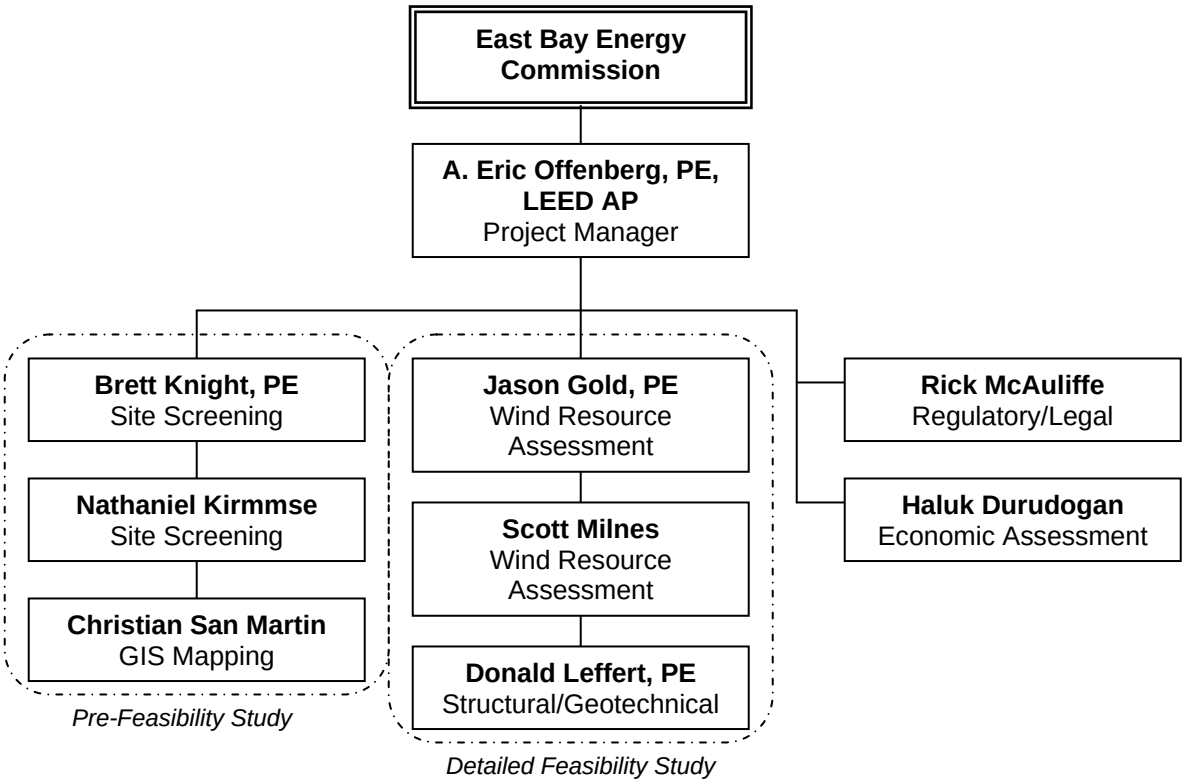
SGE is an established and competitive firm with a diverse, full time staff who encompass all the chief areas of this project. SGE is confident in our ability to provide an excellent product in accordance with the timeline required by the EBEC.

SGE is located at 55 John Clarke Road in Middletown, Rhode Island, and currently has 16 employees. Eric Offenberg, PE, LEED AP, Principal, can be contacted at 401-849-0810 extension 1206 with any questions regarding this proposal.

TEAM AND ROLES

- SGE Principal A. Eric Offenberg, PE, LEED AP, will serve as Project Manager. He will be the main point of contact for the EBEC, and assign, direct and oversee all assignments. He has 18 years of experience in civil design, regulatory requirements and permitting, and grant writing at a state and federal level;
- Brett Knight, PE, will lead the efforts for the pre-feasibility study, and develop the preliminary report. He manages all wind feasibility study for SGE, and is experienced with dealing with regulatory agencies and permitting
- Jason Gold, PE, Senior Environmental Engineer, will lead the efforts for the detailed feasibility study, analyze all wind resource data collected, and develop the final report. He has 13 years of site evaluation and permitting experience and has developed SGE's meteorological data analysis system;
- Scott Milnes, VP of Renewable Energy, will assist Jason Gold during the wind resource assessment. He is experienced in construction management, wind turbine site selection and installation as well as SODAR and met tower installation;
- Don Leffert, PE, Chief Structural Engineer, will review all geotechnical data and foundation requirements for the types of turbines under consideration during the study. He has 22 years of extensive foundation design experience, as well as certification of wind turbine towers;
- Rick McAuliffe, Principal of the Mayforth Group, will lead the regulatory and legal effort, and assist the EBEC with solving those issues in collaboration with the Roger Williams University School of Law. He has spent 11 years in the public sector, and began his career in Washington as a legislative assistant for Senator Jack Reed during Senator Reed's six years in the United States House of Representatives. He has extensive knowledge of both the state and federal committee processes, having presented testimony in many capacities on behalf of his clients. Through his work and experience, McAuliffe has established a strong working relationship with the members of the New England Congressional delegation, as well as state legislative leaders.
- Haluk "Luke" Durudogan, VP of Finance, will develop all financial analyses and estimates, and review details of financing and funding options, and tax incentives with the EBEC to assist in making ownership decision.
  He is the former President of APV, a billion-dollar European company with experience in wind markets, asset management and project financing;
- Nate Kirmmse, Engineering Technician, will assist with site screening phase. He has experience with wind turbine site screening and selection;
- Christian San Martin, GIS Technician, will research data and develop GIS map during the pre-feasibility study and the site screening process. He has extensive experience working with GIS data management.

ORGANIZATIONAL CHART



AVAILABILITY OF STAFF

SGE and the Mayforth Group are committed to providing the key staff identified in this proposal as well as other resources required to successfully complete the pre-feasibility and detailed feasibility studies for the EBEC.

Based upon our current level of commitment, SGE and the Mayforth Group have available capacity to complete all tasks associated with this project. SGE and the Mayforth Group have additional support staff available and ready to supplement the project required workforce for the proper completion of the project. Our project manager will add manpower to the project as necessary to complete the project on time, on schedule and within the expectations of the EBEC. Our group of professionals is diversely skilled and highly productive. We are backed by tremendous firm-wide resources that enhance the efficiency and quality of our services

RESUMES

Following are resumes of the team's personnel to be involved with the various project services as shown in the organizational chart. Resumes include educational background and professional project experience.

Section 2 – Relevant Experience

SGE has worked on several wind turbine projects at different stages of development. Detailed for the following projects can be found next:

- 100kW Wind Turbine, Easton Pond Business Center, Middletown RI
- Multiple sites, O'Neill Properties Group, Portsmouth RI
- Multiple sites, New Hampshire Electric Cooperative, NH
- Quaker Manor, Coastal Housing Corporation, Portsmouth RI
- Toray Plastics, North Kingstown RI

In addition, SGE/Northeast Engineers is currently conducting wind feasibility studies for:

- Prescott Farm, Newport Restoration Foundation, Middletown RI
- NewportFed, Portsmouth RI
- Brahmin Leather Works, Fairhaven MA
- Landings Real Estate Group, Middletown RI
- Millennium Renewable Energy, Tiverton RI
- North Kingston Green, North Kingstown RI

SGE has also been retained to provide all engineering services for the installation of 250kW wind turbine at the Hodges Badge facility in Portsmouth RI.

Furthermore, the company permitted, engineered and is currently managing construction for the installation of a 100kW wind turbine for the Easton Pond Business Center in the Aquidneck Corporate Park in Middletown RI where its headquarters are located. The turbine will be commissioned and on grid by the end of September.

100kW Wind Turbine, Easton Pond Business Center
Aquidneck Corporate Park, Middletown RI

SGE has been retained to provide engineering and construction program management services for the installation of a 100kW wind turbine to provide 60-70% of the power needs for the business center. SGE has conducted wind studies and installed a meteorological tower on site to measure wind speed. The tower will stay on site for a minimum of 3 months. Once all permits are in place, SGE will start the design and procurement phase. The project is expected to be completed by the end of September 2009.

Services Provided

- Grant writing for construction grant
- Feasibility studies including installation of MET tower
- Permitting
- Engineering
- Procurement and logistics
- Construction and installation
- Commissioning

Reference
Easton Pond LLC
55 John Clarke Road
Middletown, RI 02842
Blake Henderson, 401.742.8400

Completion Date
Construction to be completed
September 2009

Photo simulations
East Bay Energy Consortium
Evaluation of Feasibility of Erecting a Regional Wind Energy System within East Bay of RI

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Renewable Energy Feasibility Study for Multiple Sites
Carnegie Development, Portsmouth RI

SGE has been selected to conduct a renewable energy resources study at multiple sites located in Portsmouth, Rhode Island known as the Carnegie Beach Club, Weaver Cove, Carnegie Heights, and Carnegie Harbor Village. The study consists of two phases.

The first phase consists of a Renewable Energy Site Suitability Assessment of each study area. The goal of this phase is to evaluate the potential of the sites for an economically feasible wind turbine and/or solar power project and to select sites for additional study.

The second phase will consist of the installation of one meteorological (met) tower at one of the sites studied during the Initial Wind Resource Assessment. This phase will be conducted over a 12 month period. The goal will be to evaluate the feasibility of a wind and/or solar power project at the Site. The sites will be selected based on the findings of the Initial Wind Resource Assessment. The study will be conducted over a 12 month period to obtain more reliable, long term, site-specific wind data.

Reference
O'Neill Properties Group
Willow Lane
Portsmouth RI 02871
Edward Lopes, 401.682.2450

Completion Date
2010

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Site Screening for Feasibillty of Wind Turbine Installation
New Hampshire Electric Cooperative, Multiple Sites, NH

SGE was retained by the New Hampshire Electric Cooperative to screen potential wind turbine sites during the application process of the 2009 Small Wind Turbine Program. The program offers a rebate of up to 25% of the installed cost of a small wind turbine. The goal of the screening process is to determine if the applicant site is a “good” site for a wind turbine, where there is a reasonable expectation that there will be sufficient wind energy for a feasible project.

Services Provided

- Review online web resource maps to estimate the likely average wind speed at the site, aerial photographs and topographic map
- Visit sites to meet with owners and observe site conditions such as topography, obstructions, etc
- Compile findings of the site screening in a Pre-Approval Analysis checklist that describe a “likely feasible”/”not likely feasible” opinion
- Train NHEC personnel to conduct the pre-approval screening process

Reference

New Hampshire Electric Cooperative
579 Tenney Mountain Highway
Plymouth, NH 03264
Tom Palma, 603.254.9371

Completion Date

June 2009

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Wind Energy Feasibility Assessment Study
Quaker Manor, Portsmouth RI

Portsmouth Housing Authority selected SGE to assist with their modernization program for the Quaker Manor complex (40 elderly housing units). The program focuses on energy management and conservation, and study the possibility of using wind power to provide electricity for the development.

As part of the program, Portsmouth Housing Authority obtained a grant from the State of Rhode Island to conduct a wind assessment study for an on-site wind turbine to generate electricity for Quaker Manor and the adjacent Quaker Estates IV (18 elderly housing units). The complex could become the first affordable housing developments in Rhode Island to be powered using renewable energy. SGE has begun the site evaluation to determine wind turbine location, height, etc. to insure maximum electricity production next month. A meteorological tower will also be installed on site this summer to record wind speed data. If wind power is feasible, SGE will provide all engineering design, permitting, procurement and construction services for the installation of a 225kW wind turbine.

Services Provided

- Grant writing to secure funding for feasibility study
- Feasibility study (wind and solar energy)
- Preliminary Economic Assessment
- To be provided: wind resource assessment, detailed pro forma and financial analyses.

Reference

Portsmouth Housing Corporation
2638 East Main Road
Portsmouth, RI 02871
James Dilley, 401.683.3173

Completion Date

Wind Energy Site Suitability Assessment – August 2009
Wind Resource Assessment – To be completed by end of 2010

SGE
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Wind Resource Assessment using SODAR Technology
Toray Plastics, North Kingstown RI

CONFIDENTIAL – NOT PUBLIC RECORD

SGE has been retained to conduct a wind assessment study for a 3MW wind power facility at an industrial site in Rhode Island using sodar technology. The sodar technology measures wind energy in wind columns up to 800 feet. Using it, NE&C can certify the kinetic energy available to create electrical power at the site. Sodar technology is compact and mobile, and functions like a 200-meter MET mast, but sodar equipment is less invasive and easier to install.

The owner of the site is looking to develop a 3MW wind turbine facility. Once the wind assessment study is complete, NE&C will start conceptual design and present the owner with options for wind development.

Services Provided

- Preliminary site suitability assessment
- Wind resource assessment and report

Reference

Toray Plastics
50 Belver Avenue
North Kingstown, RI 02852
Steve Kerr, 401.667.4225

Completion Date

August 2009

SGE A KNOWLEDGE CORPORATION

PROJECTS AND STAFF

Staff	Role in this project	Relevant Experience				
		1	2	3	4	5
A. Eric Offenberg, PE, LEED AP	Project Manager	X	X	X	X	X
Brett Knight, PE	Site Screening		X		X	
Nathaniel Kirmmse	Site Screening	X	X	X	X	X
Christian San Martin	GIS Technician	X				
Jason Gold, PE	Wind Resource Assessment	X			X	X
Scott Milnes	Wind Resource Assessment	X				X
Donald Leffert, PE	Structural/Geotechnical	X				
Haluk Durudogan	Economic Assessment	X	X		X	X
Rick McAuliffe	Legal/Regulatory					

Relevant Experience

1	100kW Wind Turbine, Easton Pond Business Center, Aquidneck Corporate Park, Middletown RI
2	Renewable Energy Feasibility Study for Multiple Sites, Carnegie Development, Portsmouth RI
3	Site Screening for FeasibilIty of Wind Turbine Installation, New Hampshire Electric Cooperative, Multiple Sites, NH
4	Wind Energy Feasibility Assessment Study, Quaker Manor, Portsmouth RI
5	Wind Resource Assessment using SODAR Technology, Toray Plastics, North Kingstown RI

Section 3 – Proposed Scope of Work and Schedule

The East Bay Energy Consortium (EBEC) wishes to conduct a Wind Energy Feasibility Study for sites within the East Bay region. The proposed study will consist of two phases. The proposed scope of work follows a funnel approach. The funnel approach begins with a high level, general study of a broad number of sites and ends with a detailed, focused study of one or more targeted sites. This methodology results in a strategic, focused allocation of resources.

The first phase will consist of a Pre-Feasibility Study also known as Wind Power Site Suitability Assessment. The goal of this phase will be to identify and screen sites, to evaluate the potential of the sites for an economically feasible wind turbine project and to select sites for additional study. In general, this phase will consist of the gathering and evaluation of readily obtainable information.

The second phase will consist of a Detailed Feasibility Study of one or more locations selected during the first phase. During this phase various aspects of a wind power project will be evaluated including permitting requirements, geotechnical concerns, community support, aesthetic considerations, economics, etc. An option to collect and analyze preliminary meteorological data from each location is also proposed to augment the feasibility study. If requested, data will be obtained using Sound Detection and Ranging (SODAR) technology. Each location will be studied for a period of 3 months to provide a glimpse of the actual site-specific wind potential. The goal of this phase will be to identify the most suitable site(s) for further study.

This phase will include a Comprehensive Wind Resource Assessment which consists of the installation of one or more meteorological (met) tower(s) at the site(s) being studied. The sites will be selected based on the findings of the Detailed Feasibility Study. The study will be conducted over a 12 month period to obtain more reliable, long term, site-specific wind data. As an added service, SGE will establish a secure FTP web site accessible by the client. Meteorological data will be uploaded to the FTP site on a regular basis.

Additional services proposed in the scope of work include consultation and grant writing services.

TASK 1: PRE-FEASIBILITY STUDY

The first phase will consist of a Wind Power Site Suitability Assessment of each study area. The goal of this phase will be to evaluate the potential of the sites for an economically feasible wind turbine project and to select sites for additional study. In general, this phase will consist of the gathering and evaluation of readily obtainable information.

SGE will meet with the East Bay Energy Consortium (EBEC) to obtain list of sites that have already been identified by the consortium, and discuss why and how these sites have been selected. SGE will also request from City and Town Planners a comprehensive list of all sites owned by each community to assess the potential of

additional properties. Members of the EBEC will be critical to assist with the collection of this information, and with scheduling as needed with Town/City officials.

SGE will examine all municipal parcels of land within the participating cities and towns, and will create a list of potentially feasible parcels based on available GIS data.

The screening process will rely on Geographic Information System (GIS) data. A GIS map will be created using ESRI's ArcGIS platform. The GIS database may include the following data layers obtained from the Rhode Island GIS:

- Town Lines
- Rare Species habitats
- Wetlands
- Industrial areas
- Historic districts
- Statewide elevation model
- CERCLIS (contaminated sites)
- Lakes, ponds, reservoirs
- Land use 2003/2004
- Rivers and Streams
- Scenic Areas
- State Conservation and Park Lands
- Digital color orthophotography
- USGS topographic maps
- Railroad rights of way
- Roads
- Electrical transmission lines
- Natural gas transmission lines

Estimated wind resources will be evaluated to determine the likelihood that the wind speed at sites is sufficient to economically produce wind power. Existing regional wind maps such as New England Wind Maps, by TrueWind Solutions, LLC, will be consulted to make this evaluation. TrueWind produced the New England maps of mean wind speeds at 30, 50, 70, and 100 m height and of mean wind power at 50 m height, on a 200 m grid resolution using its MesoMap system. The map has been validated by the National Renewable Energy Laboratory (NREL) as well as consulting meteorologists. Regional wind maps are predictions based on computer models. They are not intended to represent accurate conditions at a specific site; however, they are useful to predict the general wind resources of a particular region.

GIS Data obtained from the New England Wind Maps will also be added to the GIS database

- o <u>Parcel Map Rectification</u>

  Plat maps are readily available in pdf format for all participating Towns with the exception of Bristol, Barrington, Little Compton, Tiverton and Newport. We will work directly with these towns to obtain available parcel information for inclusion in the GIS map.
  - The towns' assessor's maps will be overlaid onto the base drawings images then aligned and rotated to match the correct location of each parcel.

- Reference points will be created to locate match-lines between abutting assessors maps.
- A World File (TFW) will be created for each of the TIFF images allowing for each of the images to be geo-referenced to the appropriate State Plane projection.
- Each of the parcels will be extracted from the TIFF images as polylines in AutoCAD and Polygons in ArcGIS.
- Each parcel will be a closed polyline/polygon and verified to have no dangles, gaps etc.

Once the GIS database is created, the parcels will be screened to identify sites that could potentially accommodate a viable wind turbine or wind farm. For siting considerations and constraints, the following criteria will be considered when filtering the properties:

- Size of parcels
- Presence of wetlands
- Rare species habitats
- Proximity of airports
- Cemeteries
- Densely populated residential neighborhoods
- Land use
- Protected space
- Available area (fall zone, noise abatement, setbacks turbine separation distance for wind farms)
- Ownership information
- Zoning
- Wind Speed
- Proximity to electrical transmission lines.

SGE will work with members of the EBEC to collect data on facility electrical consumption and cost for each community for a one-year period. SGE will also review and discuss future development and/or reduction plans with each community to evaluate future consumption needs that will have to be taken into account when sizing the wind turbines.

SGE will work with National Grid to confirm the available and types of power transmission lines present in the area of each site. Three-phase is required for all interconnection applications. Although 480 volts are required at most turbines, an onsite transformer can raise or lower line voltage appropriately.

SGE will conduct a preliminary determination of potential environmental impacts including avian, noise, shadow flicker, and wetlands, and a review a permitting requirement at the local, State and Federal level for each site under consideration.

SGE will complete a financial feasibility analysis of the conceptual wind turbine design. The analysis will include a consideration of available sources of outside funding, revenue, cost savings, and incentives. Economic incentive programs will be reviewed in an attempt to identify possible sources of outside funding, including grants, loans, and tax incentives available from local, State, and Federal sources that may be applicable.

Ten hard copies and a digital copy of the pre-feasibility study report will be submitted to the Consortium upon completion.

TASK 2 – DETAILED FEASIBILITY STUDY

The second phase will consist of a Detailed Feasibility Study of one or more locations selected during the first phase. During this phase various aspects of a wind power project will be evaluated including permitting requirements, geotechnical concerns, community support, aesthetic considerations, economics, etc. An option to collect and analyze preliminary meteorological data from each location is also proposed to augment the feasibility study. If requested, data will be obtained using Sound Detection and Ranging (SODAR) technology. Each location will be studied for a period of 3 months to provide a glimpse of the actual site-specific wind potential. The goal of this phase will be to identify the most suitable site(s) for further study.

This phase will also include a Comprehensive Wind Resource Assessment, consisting of the installation of wind monitoring equipments at the sites studied during this phase to obtain more reliable, site-specific wind data. As an added service, NE&C will establish a secure FTP web site accessible by the client. Wind data will be uploaded to the FTP site on a regular basis.

At completion, SGE will present al key findings to the EBEC, and will provide 10 copies of the report and supporting documentation, as well as a digital file.

a. Technical Assessment:

SGE will evaluate the potential wind energy resource at each Site, as follows:

- SGE will employ computer-generated wind resource maps. These maps provide a general indication of the available wind resource and are useful when selecting or comparing sites.
- Physical wind energy limitations such as topography, trees, buildings, and other obstacles will be evaluated.

SGE will evaluate physical site restrictions including:

- The proximity of overhead utilities;
- Existing easements;
- The height and location of structures;
- Impact on recreational use of the sites;
- Available space.

SGE will assess the Sites with respect to their suitability for the construction of wind turbines. This will include:

- The available access at each site for the transport of large, prefabricated turbine components;
- SGE will conduct a geotechnical investigation of each of the sites to evaluate the load bearing capacity of the underlying soil to support a wind turbine. The scope of work assumes that the geotechnical investigation will consist of one day of drilling at each site.

SGE will assess electrical interconnection issues. This will include:

- The ability to interconnect with electrical transmission lines at each site (including current on-site electrical components such as transformers, as well as physical proximity to power transmission lines).
- The size and carrying capacity of local power transmission lines;
- New England grid interconnection and local power company protocols.

SGE will review the potential economic viability of a wind turbine project at each site. This will include a review of:

- Available State and Federal grants and tax incentives;
- Public and private sector based financing structures
- Cost avoidance and/or profitability as appropriate
- Detailed pro-forma analysis and modeling tools;
- Business management and consulting services;

i. Wind Resource Assessment:

Upon completion of Task I (or the optional SODAR study), SGE will commence a Wind Energy Resource Assessment for the sites selected. This assessment is a detailed analysis that includes monitoring actual meteorological conditions and analyzing the results in order to quantify and predict the available wind energy. This data is then used to generate a financial model that facilitates the selection of site-appropriate wind turbine equipment.

SGE will erect a meteorological (met) tower at the sites. The met tower will be used to monitor the final sites for a 12 month period. It is possible to conduct the study for a 6-month period only; however, "An Analysis of Wind Resource Uncertainty in Energy Production Estimates" prepared by AWS Truewind, LLC (undated) indicates that the average uncertainty of month long measuring periods is about 9%. This uncertainty drops to about 2% for 12 month study periods. However, in the event that this is not an issue, a truncated study of six months could yield an uncertainty rate of about 5.5%, which could be appropriate for this project. Also, many financing options would require a minimum observation period of 12 months.

In preparation for the met tower installations, SGE will assist in obtaining basic building permits if necessary. If any other permits are required (such as approvals from the local zoning or planning departments), SGE will assist the Work Group in obtaining them at our hourly rates. If requested, SGE will assist the Work Group in applying for a 50-meter met tower loan from Roger Williams University (RWU) at no additional charge.

SGE will transport the meteorological equipment to each site and set it up at the beginning of the study, maintain it during the study, and remove it upon completion. The Work Group will be responsible for any additional site preparation work or access for construction, should it be required. Security of the equipment, any associated fencing, and liability insurance is the responsibility of the Work Group.

The Measure-Correlate-Predict (MCP) method will be used for both the SODAR study and the meteorological (met) tower study. In general, the MCP method makes use of statistical relationships and physical measurements to attempt to predict future, site specific conditions. Long term observations from a reference station at one elevation are used to estimate conditions at a specific elevation at the site. This process includes the following:

1) Meteorological measurements at the sites will be made with a met tower and associated instrumentation.
2) The data collected will be correlated with publically available data obtained from appropriate long term reference stations.
3) The potential energy output of the proposed wind turbines will be predicted by analyzing the long term reference data, the short term correlation, site specific wind shear measurements, and alternative wind turbine specifications.

Data analysis is only as good as the underlying data. Therefore, unreliable data will be filtered out during each step of the process. The entire assessment including the writing of the final reports and all of the associated calculations will be subject to SGE's internal Quality Assurance/Quality Control (QA/QC) procedures.

- Wind Resource Assessment using SODAR Technology

  As an option, SGE will discuss the possibility of using SODAR technology to conduct the assessment to expedite the study and accelerate the project schedule. SGE recommends conducting the assessment using a met tower at least one site, and using SODAR technology for the additional sites.

  If this option is selected, selected sites will be monitored concurrently with Triton SODAR units for a period of three months. The data obtained during the three-month period will be correlated with an appropriate reference station.

  A Triton SODAR will be used to measure conditions at the site in 10 minute intervals. Readings are collected at intervals from 40 meters to 200 meters above ground. The Triton will be used initially because it is relatively inexpensive to commission and decommission and does not need to be permitted. The advantages of SODAR over a traditional met tower include:

  - Ease of installation → lower installation cost
  - No permitting required → faster commencement of data collection
  - More data collected, less extrapolation → more accurate power production estimates
  - Does not interfere with the wind being measured → more accurate power production estimates
  - Data based on a volume of air rather than a single point → more accurate power production estimates

  The Triton sonic wind profiler is a rugged and weather resistant monocoque design constructed from recyclable low density polyethylene

(LDPE) plastic, aluminum and stainless steel. It stands approximately six feet tall (2m) on a rectangular base which is six feet long (2m) and four feet wide (1.22m). It uses sonic detection and ranging (SODAR) to remotely gather data about wind. It works by sending out acoustic pulses (beeps or shots) and then listening for the return signal. Characteristics of the return signal are analyzed to gain information about wind speed, direction, and turbulence.

SODARs measure wind speed by emitting high frequency acoustic pulses into the atmosphere. The Triton beeps in three consecutive directions: A, B and C. All three beam directions are tilted 11.4° from vertical and are spaced 120° from one another. After each beep, some of the acoustic energy is backscattered due to turbulence and temperature gradients in the atmosphere. The Triton measures the returned signal and the frequency content is analyzed at each station height (i.e. measurement height). The change in frequency (from the transmit frequency) is directly proportional to wind speed along the beam. This is referred to as the radial wind speed and is broken down into its vertical and horizontal components.

In ten minutes, the Triton beeps around 260 times (about 86 times per direction) and, at each ten-minute interval, the average radial wind speed in each direction and at each station height is calculated. These average wind speeds are then combined to form the horizontal wind speed, vertical wind speed, and wind direction.

Second Wind's SkyServe satellite data service is bundled with Triton for data transfer. With SkyServe, Triton transmits data every 10 minutes via the Globalstar satellite network to a Second Wind server at a secure server farm. This near real-time service offers immediate access to the latest data from a Triton through a web browser. SkyServe provides an instant assessment of Triton reported data, including the latest readings and trends. SkyServe provides precise timestamps and location information using GPS technology. Information on current conditions is available and extensive data analysis can be performed using SkyServe's online tools. In addition, all data in SkyServe can be exported from the web page for analysis.

The methodology used to complete the SODAR study is similar to that proposed in the following section.

ii. Permitting Requirements:

SGE will review all applicable permitting requirements for the different sites. Those will include:

- Federal
    - Federal Aviation Administration
      The Federal Aviation Administration (FAA) must be notified of construction projects that may affect the navigable airspace. Structures with the following criteria will require FAA notification:
        - Structures more than 61 m (200 feet) in height above the ground level at its base.

- A structure height that extends above an imaginary surface, extending outward and upward at 50 to 1 slope for a horizontal distance of 3048 m (10,000 feet) from the nearest point of the nearest runway of each airport with its longest runway less than 975 m (3,200 feet) in actual length.

- State

  - Environmental
    Contamination at a site is regulated under the jurisdiction of the Rhode Island Department of Environmental Management (RIDEM) "Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases". Construction of a turbine at a contaminated site would require permitting through DEM.

  - Rare Species Habitat
    Construction within Rare Species Habitats, identified by the Rhode Island Natural Heritage Program, may be restricted. The RIDEM Environmental Resources Map displays Rare Species Habitats, which also includes the habitats of federally listed endangered species.

  - Wetlands
    Construction which may alter any freshwater wetland is regulated by the "RIDEM Rules And Regulations Governing The Administration And Enforcement Of The Fresh Water Wetlands Act". Special design considerations and permitting requirements may apply in such a case.

  - Coastal
    Construction within 200 feet of a coastal feature, any contiguous saltwater wetland, or any inland Special Area Management Plan is regulated by the Rhode Island Coastal Resources Management Council.

  - Historic
    Any development within or adjacent to a site designated a State Historic District requires the notification of and a review by the Rhode Island Historical Preservation & Heritage Commission, if the development in question makes use of any Federal funding.

- Municipal

  - Zoning
    SGE will review zoning requirements for all sites into considerations, including site use and surroundings area uses, and the applicable zoning ordinances.

    SGE will meet with zoning officials in each town where sites are under considerations to discuss zoning requirements.

    SGE, through Northeast Engineers & Consultants, has worked in and given expert testimony at zoning hearings in each town associated with the East Bay Energy Consortium.

iii. Environmental Impacts:

- Avian Risk Assessment

  The relative risk to birds and bats will be evaluated based in part on the RI Natural Heritage Areas map and the "Service Interim Guidance on Avoiding and Minimizing Wildlife Impacts from Wind Turbines" published by the US Fish & Wildlife Service in 2003. The physical attributes and ecological attractiveness factors described in the Guidance along with any Natural Heritage Areas that may be present will be considered during the assessment. Physical attributes include topographic, meteorological, and site characteristics that may influence bird and bat occurrence and movements. Ecological attractiveness factors include ecological magnets and other conditions that would draw birds or bats to the site or vicinity.

  The assessment will not included a detailed preconstruction wildlife survey. The goal of the Avian Risk Assessment will be to determine if a more detailed study conducted by a qualified biologist is warranted.

- Noise Modeling

  The potential noise level at receptor locations will be evaluated using sophisticated modeling software. The decibel of noise generated by the turbine(s) at each potential receptor will be calculated and evaluated.

- View Shed Impact (Photo simulation)

  SGE will provide a video rendering of the proposed turbine(s). The video rendering of the wind turbine on a proposed site will be created using a combination of on-site video footage and 3D animations of the turbine system, the turbine can be properly scaled in height and size with surrounding landmarks (buildings, trees, etc) and incorporated in actual video footage shot at the proposed site. The video will be shot from at least four viewpoints, identified by the client, to enable community representatives and neighbors to visualize the actual proposed turbine at the site. As an enhancement, audio recordings of an actual turbine in motion from selected distances may also be added to the video presentation, Additionally, the flicker effect showing the blade shadowing of nearby locations at selected times of year can also be visualized. A sample video of the proposed turbine at SGE's office can be found online at: http://www.sonalystsmedia.com/gallery/Turbine-Visualization/ and is included with the electronic copy of this proposal.

- Shadow Flicker

  A growing concern among many communities is the potential for shadow flicker from a wind turbine to adversely affect neighboring properties. Generally, exposure to shadow flicker for duration of more than 30 collective hours per year is considered adverse.

  The potential impact of shadow flicker on receptors will be evaluated using sophisticated modeling software. A map of the potentially impacted receptors as well as a calendar of flicker impact will be generated to further evaluate potentially impacted receptors. The

evaluation will include factors such as the number of hours of flicker, the time of day, and the daily duration of flicker.

- Other Environmental Considerations

  In addition, SGE will evaluate the following:

  - The proximity of the site to any protected wetlands; and
  - The potential effects of any electrical interference.

b. Economic Assessment:

The findings of the Technical Assessment will be used to evaluate the financial feasibility of utility scale wind turbine(s) at the site(s).

Financial models will be provided to allow for scenario modeling by SGE as well as by members of the EBEC. The models will address not-for-profit, for-profit, private and public sector alternative business structures.

SGE will prepare "Pro Forma" business planning models to address proposed sites as well as the various types of project financing available to the EBEC. These models will look at a large number of project variables and will endeavor to allocate benefits and risks to the applicable project parties.

Detailed financial and risk management inventories must be created and maintained ; not only to ensure that project failures are avoided, but also to ensure that all alternatives are compared using a fair, comprehensive and consistent criteria.

Potential Avoided Costs will be inventoried and used to maximize any available profit margin.

SGE has a toolkit of proprietary processes and capabilities which they will use to provide recommendation for the sites with the best chance for success. Additionally, SGE will train the EBEC on how to develop their own models. Providing clients with the skills for self-sufficiency is a foundation of SGE's client partnership development.

i. Project Cost Estimates:

As part of its pro form financial analyses and models, SGE will develop full construction estimates, operation and maintenance, insurance and financing costs. Several models will be developed to account for different types of ownership.

ii. Project Revenue Estimates:

Wind power projects are more likely to be financially beneficial when outside sources of funding are used to reduce the total project cost. These may come in the form of grants, low interest loans, or tax incentives.

The Database of State Incentives for Renewable Energy website, funded by the U.S. Department of Energy, lists various incentives on both the federal

and state level. Please refer to www.dsireusa.org for details of the potential resources summarized in this section.

Depending on various factors, such as the official size and nominal rating of the wind turbine, certain tax incentives and grants may or may not apply. It is important to understand that in order to receive the maximum overall tax benefit a wind study must be performed. This will provide enough information to decide which funding or tax incentives will pertain to this project and which turbine size will be the most economically beneficial.

Incentives vary based on the type of ownership, which will also be investigated (see next section).

- Federal

  The American Recovery and Reinvestment Act of 2009 allows taxpayers eligible for the federal renewable electricity production tax credit (PTC) to take the federal business energy investment tax credit (ITC) or to receive a grant from the U.S. Treasury Department instead of taking the PTC for new installations. The new law also allows taxpayers eligible for the business ITC to receive a grant from the U.S. Treasury Department instead of taking the business ITC for new installations.

  - Clean Renewable Energy Bonds
    Clean renewable energy bonds (CREBs) may be used by certain entities -- primarily in the public sector -- to finance renewable energy projects. The list of qualifying technologies is generally the same as that used for the federal renewable energy production tax credit (PTC). CREBs may be issued by electric cooperatives, government entities (states, cities, counties, territories, Indian tribal governments or any political subdivision thereof), and by certain lenders. CREBs are issued -- theoretically -- with a 0% interest rate. The borrower pays back only the principal of the bond, and the bondholder receives federal tax credits in lieu of the traditional bond interest.

  - Qualified Energy Conservation Bonds
    The *Energy Improvement and Extension Act of 2008*, enacted in October 2008, authorized the issuance of Qualified Energy Conservation Bonds (QECBs) that may be used by state, local and tribal governments to finance certain types of energy projects. QECBs are qualified tax credit bonds, and in this respect are similar to CREBs.

  - United States Conference of Mayors - Energy and Environmental Block Grant (EEBG) Program
    The Energy and Environmental Block Grant program assists local and state governments to develop and implement a comprehensive energy efficiency strategy which emphasizes a bottom-up, community-based approach in helping the nation meet its energy and climate protection goals.

  - Business Energy Investment Tax Credit (ITC)
    The credit is equal to 30% of expenditures, with no maximum credit for wind turbines placed in service after December 31, 2008.

- o Renewable Electricity Production Tax Credit (PTC)
  The federal renewable electricity production tax credit (PTC) is a 2.1 cents per-kilowatt-hour tax credit for electricity generated by wind energy resources and sold by the taxpayer to an unrelated person during the taxable year.

  The duration of the credit is generally 10 years after the date the facility is placed in service. The tax credit is reduced for projects that receive other federal tax credits, grants, tax-exempt financing, or subsidized energy financing.

- o Modified Accelerated Cost Recovery System and Bonus Depreciation (2008-2009)
  Under the federal Modified Accelerated Cost-Recovery System (MACRS), businesses may recover investments in certain property through depreciation deductions. The MACRS establishes a set of class lives for various types of property, ranging from three to 50 years, over which the property may be depreciated. Small and large wind facilities are classified as five-year properties.

  Also, if the wind facility meets certain requirements, the owner is entitled to deduct 50% of the adjusted basis of the property in 2009. The remaining 50% of the adjusted basis of the property is depreciated over the ordinary depreciation schedule. The bonus depreciation rules do not override the depreciation limit applicable to projects qualifying for the federal business energy tax credit. Before calculating depreciation for such a project, including any bonus depreciation, the adjusted basis of the project must be reduced by one-half of the amount of the energy credit for which the project qualifies.

- State

  - o Renewable Energy Sales Tax Exemption
    Certain renewable energy systems and equipment sold in Rhode Island are exempt from the state's sales and use tax. Eligible products include wind turbines and towers.

  - o RIEDC - Renewable Energy Fund Grants
    The Rhode Island Economic Development Corporation (RIEDC) is now accepting financing applications for renewable energy projects that "directly benefit the state of Rhode Island." These financial incentives, which include grants, recoverable grants and loans, are funded by the Rhode Island Renewable Energy Fund (RIREF). The program areas include:
    - Pre-development Consultant and Technical Feasibility Program for business, commercial, not-for-profit, municipal, and institutional projects: there is no project cap or limit but funding is limited to no more than $200,000 per year.
    - Renewable Energy Development Program for business, commercial, not-for-profit and institutional projects: there is a project cap of $750,000 ($250,000 per award year).

- o Net Metering
  Net metering is available to customers that generate electricity using solar or wind resources. This allows the owner of a generating system to remain connected to the utility electrical supplier, and allows the meter to, in effect, turn backwards. If the amount of electricity generated onsite exceeds the amount being used, the customer will receive payment at market rate from the utility. The maximum individual system capacity is limited to 3.5 MW for municipalities and Narragansett Bay Commission, 2.25 MW for certain systems serving municipalities, and 1.65 MW for commercial customers. Legislation passed in July 2009 further improved net metering in Rhode Island by offering the choice of monthly compensation of indefinite roll-over of NEG for regular customers and meter aggregation (up to 10 meters) for cities, towns, schools, farms, non-profit affordable housing, and NBC.

iii. Project Ownership Options:

Once EBEC and SGE have determined the most beneficial financial models to all parties involved with the project, SGE Team will work closely with the EBEC and Roger Williams University Law School to evaluate ownership options based on the criteria and requirements of applicable financial funding and incentives.

Examples of ownership options that could be investigated are:

- o Municipally owned, bonded, funded and operated.
- o Third-party owned, funded and operated with Power Purchase Agreement with the EBEC or municipalities.
- o Investor flip model: investors built and owned for a negotiated period of time (investors would take advantages of tax credits and rapid depreciation), and sale to the EBEC or municipalities for a reduced price.

c. Project Schedule:

It is anticipated that the project will adhere to the following milestones and timelines. The assumed start date of Task I is based on the consultant selection schedule listed in the RFP (September 2009). The actual start date of Task II will start once the EBEC makes a final decision on site selection.

Task	Milestone	Start Date	Duration	End Date
			→	
1	Site Screening	Sept. ‘09	1 month	Oct. ‘09
	Completion of draft Report	Oct ‘09	1 month	Nov ‘09
	Completion of final Report	Nov ‘09	2 weeks	Nov ‘09
2	Wind Resource Assessment - Met tower	Dec ‘09	12 months max	Dec ‘10
	Wind Resource Assessment - SODAR	Dec ‘09	3 months	Mar ‘10
	Completion of draft Stage 2 report	Dec ‘10	1 month	Jan ‘11
	Completion of final Stage 2 report	Jan ‘ 11	1 month	Feb ‘11

These estimated dates are based on past experience and on the Project Description. Any changes to the described Scope of Services or unforeseen events or delays will alter these estimates.

Note: **We understand that the EBEC would like to complete the project by July 2010. This goal could be accomplished if the Wind Resource Assessment with the Met tower is shortened to 6 months instead of a full 12-month study. Data collected during 6 months is acceptable and would give a reliable representation of wind conditions at the site. However, many financing/funding organizations require 12 months of data to be collected on site. Shortening the length of the data collection using MET tower equipment can only be decided once the EBEC decide on a financial model and financing options.**

Section 4 – Cost Proposal
(IN SEPARATE ENVELOPE)

Section 5 – Additional Items

INSURANCE

SGE maintains the following types and amounts of insurance as standards.

Insurance Type	Amount of Coverage
General Liability	
Workers Compensation	
Bodily Injury By Accident	$500,000 Each Accident
Bodily Injury By Disease	$500,000 Policy Limit
Bodily Injury By Disease	$500,000 Each Person
General Liability	
General Aggregate	$2,000,000
Products/Completed Operations Aggregate	$2,000,000
Each Occurrence	$1,000,000
Personal Injury	$1,000,000 Per Person/Organization
Automobile Liability	$1,000,000 Combined Single Limit
Professional Liability	
Professional Liability	$1,000,000 Each Claim $2,000,000 Aggregate

ASSURANCES

SGE and the Mayforth Group assure the EBEC that they have the ability and availability of staff to manage and complete all tasks associated with this project, and to deliver all deliverables.

REFERENCES

O'Neill Properties Group
Willow Lane
Portsmouth RI 02871
Edward Lopes, 401.682.2450

Project: Renewable Energy Feasibility Study for Multiple Sites, Carnegie Development, Portsmouth RI

SGE has been selected to conduct a renewable energy resources study at multiple sites located in Portsmouth, Rhode Island known as the Carnegie Beach Club, Weaver Cove, Carnegie Heights, and Carnegie Harbor Village. The study consists of two phases.

The first phase consists of a Renewable Energy Site Suitability Assessment of each study area. The goal of this phase is to evaluate the potential of the sites for an economically feasible wind turbine and/or solar power project and to select sites for additional study.

The second phase will consist of the installation of one meteorological (met) tower at one of the sites studied during the Initial Wind Resource Assessment. This phase will be conducted over a 12 month period. The goal will be to evaluate the feasibility of a wind and/or solar power project at the Site. The sites will be selected based on the findings of the Initial Wind Resource Assessment. The study will be conducted over a 12 month period to obtain more reliable, long term, site-specific wind data.

New Hampshire Electric Cooperative
579 Tenney Mountain Highway
Plymouth, NH 03264
Tom Palma, 603.254.9371

Project: Site Screening for Feasibility of Wind Turbine Installation, Multiple Sites, NH

SGE was retained by the New Hampshire Electric Cooperative to screen potential wind turbine sites during the application process of the 2009 Small Wind Turbine Program. The program offers a rebate of up to 25% of the installed cost of a small wind turbine. The goal of the screening process is to determine if the applicant site is a "good" site for a wind turbine, where there is a reasonable expectation that there will be sufficient wind energy for a feasible project.

Services Provided

- Review online web resource maps to estimate the likely average wind speed at the site, aerial photographs and topographic map
- Visit sites to meet with owners and observe site conditions such as topography, obstructions, etc
- Compile findings of the site screening in a Pre-Approval Analysis checklist that describe a "likely feasible"/"not likely feasible" opinion
- Train NHEC personnel to conduct the pre-approval screening process

Portsmouth Housing Corporation
2638 East Main Road
Portsmouth, RI 02871
James Dilley, 401.683.3173

Project: Wind Energy Feasibility Assessment Study, Quaker Manor, Portsmouth RI

Portsmouth Housing Authority selected SGE to assist with their modernization program for the Quaker Manor complex (40 elderly housing units). The program focuses on energy management and conservation, and study the possibility of using wind power to provide electricity for the development.

As part of the program, Portsmouth Housing Authority obtained a grant from the State of Rhode Island to conduct a wind assessment study for an on-site

wind turbine to generate electricity for Quaker Manor and the adjacent Quaker Estates IV (18 elderly housing units). The complex could become the first affordable housing developments in Rhode Island to be powered using renewable energy. SGE has begun the site evaluation to determine wind turbine location, height, etc. to insure maximum electricity production next month. A meteorological tower will also be installed on site this summer to record wind speed data. If wind power is feasible, SGE will provide all engineering design, permitting, procurement and construction services for the installation of a 225kW wind turbine.

Toray Plastics
50 Belver Avenue
North Kingstown, RI 02852
Steve Kerr, 401.667.4225

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Project: Wind Resource Assessment using SODAR Technology, North Kingstown RI

SGE has been retained to conduct a wind assessment study for a 3MW wind power facility at an industrial site in Rhode Island using sodar technology. The sodar technology measures wind energy in wind columns up to 800 feet. Using it, NE&C can certify the kinetic energy available to create electrical power at the site. Sodar technology is compact and mobile, and functions like a 200-meter MET mast, but sodar equipment is less invasive and easier to install.

The owner of the site is looking to develop a 3MW wind turbine facility. Once the wind assessment study is complete, NE&C will start conceptual design and present the owner with options for wind development.