BOREAL
renewable energy development

Boreal Renewable Energy Development accelerates the process of adding renewable wind, photovoltaic and solar thermal power to government facilities. Boreal holds a GSA contract under Schedule 03FAC - Facilities Maintenance and Management.

Boreal also holds a Comprehensive Professional Energy Services (CPES) Blanket Purchase Agreement (BPA) with GSA for this same scope of services. As a BPA holder, Boreal, and its teaming partners can provide Federal agencies with support as they plan and implement Federal mandates such as Executive Order 13423 and 13514 or manage energy projects funded by the American Recovery and Reinvestment Act (ARRA) of 2009.

By working with Boreal through the CPES BPA process, Federal agencies are able to obtain our services using an efficient and streamlined acquisition approach.

Boreal's services include these Special Item Numbers:

- SIN 871-209 Innovations in Energy
- SIN 871-211 Energy Consulting Services
- SIN 811-006 Facilities Maintenance and Management Consulting
- SIN 003-97 Ancillary Repair and Alterations

Selected projects

FEDERAL

U.S. Dept. of Veterans Affairs – Calverton, NY & Bourne, MA

Wind/Solar Feasibility > Design > Construction

Seeking to reduce more costly electricity from utilities, these national cemeteries chose to explore renewable energy to power visitor centers. After evaluating the options best suited to each location, Boreal oversaw construction of a small-scale wind turbine in Bourne National Cemetery on Cape Cod. At the Calverton National Cemetery on Long Island, Boreal installed a turnkey ground-mounted 92 kW photovoltaic system.

Highlands Center – National Park Service – Truro, MA

Solar/Wind Feasibility

This campus encompasses the fields of art, education, and science. Located within the Cape Cod National Seashore, officials sought to increase use of renewable energy and evaluate options for public demonstration projects for multiple buildings and ground spaces. Boreal identified 17 locations that could yield solar production of 780 kW and investigated the feasibility of utility-scale wind turbines, forming the basis for an environmental impact report.

NASA/Plum Brook Station – Sandusky, OH

Wind Feasibility

When the U.S. space agency considers a project, you know it will be large scale. Boreal evaluated a wind farm installation of 80 MW to serve this facility outside Cleveland. Given the complexity of NASA operations at the site, Boreal also explored the potential for commercial agreements and interconnect approvals.

U.S. Dept. of Energy – Washington, DC

Consulting

Global consulting firm ICF International chose Boreal to examine the market potential for building mid-scale (500 kW) wind turbines. Boreal provided business model analysis and other research on community-based renewable energy projects. The DOE later created incentives to encourage the manufacture of these turbines to support smaller-scale renewable energy ventures.

STATE

Massachusetts Water Resources Authority – Charlestown, MA

Wind/Solar Feasbility > Design > Construction

At a large regional wastewater pump station and treatment facility, this state agency initially hired Boreal to conduct a feasibility study and, later, to manage design and construction of a 1.5 MW wind turbine to offset electricity demand. Boreal obtained all approvals and permits within six months of project start. Boreal also supported planning for additional turbines and assisted with a solar feasibility study and design.

Dover Municipal Landfill – Dover, NH

Solar Feasibility > Design

This complex project involved a 45-acre Superfund site contaminated by industrial waste. Environmental remediation groundwater pumps at the site have a large continuous electrical demand. Boreal studied the site and designed a 2.15 MW ground-mounted solar installation uniquely configured to account for ongoing ground settling. Options included electricity sale to the city at rates lower than the local utility.

PRIVATE/INDUSTRIAL

Notus Clean Energy LLC – Falmouth, MA

Wind Feasibility > Design > Construction

Seeing the potential for a utility-scale wind power project in a large, hilltop industrial park location, Notus chose a 1.65 MW, 262-foot-high installation for optimal capacity. Boreal obtained necessary clearances from local, state, and Federal agencies. Acting as owner's agent on the $4 million project, Boreal completed installation within four months of construction start, the fastest completion of a utility-scale turbine in Massachusetts.

Varian Semiconductor Equipment Assoc. Inc. – Gloucester, MA

Wind Feasibility > Design > Construction

Varian own and operates manufacturing and office buildings for more than 2,000 employees on a rocky, 21-acre hilltop. Company executives recognized the site's potential for wind power and explored utility-scale wind power generation. Boreal evaluated, designed and managed construction of the project. After winning over $500,000 in grants, construction began on a single turbine, with generation capacity of up to 2.5 MW.

CONSULTING

Boreal works with private organizations, consulting firms and government agencies to align and streamline policies, processes and renewable energy programming. Clients have included:

Dominion Energy – At two large power plants, Boreal explored solar and wind power generation options to offset operating expenses for environmental benefits and reduce electric consumption.

Cape Cod Commission/Cape Light Compact – Boreal completed a comprehensive report on available wind turbine technology and the economic, siting and performance details needed to serve regional agencies representing 21 towns. Boreal's analysis supported a regional effort to develop model zoning bylaws to govern development of wind turbines and renewables.

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Photo: Notus Clean Energy project – 2010