**Technical Specifications for On-site Wind Turbine Installations**

**DISCLAIMER**

This technical specification is intended as a resource only. ***It is the responsibility of Government Agency staff to ensure that all procurements follow all applicable federal requirements and agency-specific policies and procedures***. All procurements must be thoroughly reviewed by agency contracting and legal staff and should be modified to address each agency's unique acquisition process, agency-specific authorities, and project-specific characteristics.

**PERSPECTIVE and IMPORTANT NOTES**

These technical specifications are intended as a resource for a request for proposal (RFP) for an installation of a single, on-site, government agency-owned, behind-the-meter, grid-connected, size-neutral wind turbine in the United States that will be maintained by a third-party service provider on behalf of the federal agency through a maintenance agreement secured separately from the turbine installation agreement. The RFP bidder is expected to provide responses in their bid on how they will address or account for each of these technical specifications. Pluralization of key terms, where applicable, would be the only necessary modification for a multiple wind turbine installation.

A broad range of wind turbine sizes can be installed on-site to provide energy for a federal agency. For example, the National Nuclear Security Administration’s Pantex Renewable Energy Project has five 2.3 MW wind turbines while the Missisquoi National Wildlife Refuge (U.S. Fish & Wildlife Service) has one 10 kW wind turbine.

However, while these specifications are intended to be inclusive of all turbine sizes, costs and some equipment requirements vary widely between the small 10 kW turbines and the large multimegawatt turbines. The Agency may consider securing independent engineering reviews for certain project aspects (e.g., geotechnical investigation, commissioning) for a project greater than 100 kW.

**INSTRUCTIONS FOR USING THIS DOCUMENT**

This document is meant to be used as a customizable template for federal government agencies seeking to install wind turbines. Agencies are encouraged to remove or edit any of the specifications to fit the needs and requirements of the Agency.

Optional language and technical specifications are presented in (blue parentheses). Fill-in-the-blank areas are indicated in [red brackets].

**IMPORTANT:** The following items must be deleted from the template before solicitation:

* This title page and instructions for using these specifications;
* All instructions, options, and background information within the template in italics, blue or red font as well as any parentheses or brackets around instructions

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# Project Site Details

The wind turbine will be located at [this location].

[Other site details as desired].

(The wind turbine model shall) [produce sufficient energy to meet an energy consumption rate of XXX kilowatt-hour (kWh) per year].

# Generally Applicable Requirements

## Codes, Standards, and Regulations

The Contractor shall identify and comply with all applicable federal, state, and local statutes, as well as any relevant design codes and industry standards. The latest edition of the nationally recognized codes, and any updated supplements in effect at the time of contract award, shall be used throughout the project design and construction.

Applicable codes and standards include American Clean Power Association (ACP) 101-1 or American Wind Energy Association (AWEA) Small Wind Turbine Performance and Safety Standard 9.1-2009 for small wind turbines; National Fire Protection Association (NFPA); National Electrical Code (NEC); National Electrical Manufacturers Association (NEMA); American Concrete Institute (ACI); American Society of Civil Engineers (ASCE); Institute of Electrical and Electronics Engineers (IEEE); International Electrotechnical Commission (IEC); IEC System for Certification to Standards Relating to Equipment for Use in Renewable Energy Applications (IECRE System); Underwriters’ Laboratories (UL); American National Standards Institute (ANSI)/Telecommunications Industry Association (TIA)-222 for small wind tower structures; and the International Building Code (IBC), the Uniform Building Code (UBC), or their local equivalent. (Unified Facilities Guide Specification 48 15 00 (Wind Generator System) may also be applicable for the Department of Defense.)

## Permits and Licensing

The Contractor, on behalf of the Agency, shall be responsible for preparing all permitting and licensing applications for the project; paying all fees and complying with all requirements; providing any supporting documentation, data, and information that may be required for permitting; and coordinating and acting as the primary liaison with permitting and licensing agencies.

## Existing Feasibility Studies and Engineering Studies Done by Others

If any existing engineering studies or facility conditions reports are provided through this solicitation with the site information package or from the Agency representative, the Contractor shall independently verify all information provided.

# Engineering and Construction

## Wind Turbine Selection

The proposed wind turbine model shall have been tested for performance, sound, safety, and duration at a testing facility and approved for certification by a third-party certification body.

For large wind turbines (i.e., generally turbines with peak power ratings of greater than 150 kW), certification can be demonstrated through type certification to IEC 61400-22.

For a small wind turbine (turbines generally having a peak power of 150 kW or less), certification can be demonstrated by being certified to either IEC 61400-1, or IEC 61400-2, depending on size, and IEC 61400-12, and IEC 61400-11 for performance and sound, respectively; the American Wind Energy Association (AWEA) Small Wind Turbine Performance and Safety Standards 9.1-2009; or the American Clean Power Association (ACP) 101-1 standard. Both the AWEA 9.1 and the ACP 101-1 refer to the IEC standards for basic requirements and processes.

The proposed wind turbine model shall be from an established manufacturer with at least five wind turbines of a similar model operating successfully in the United States for at least two years with documentation from the manufacturer to demonstrate compliance.

The Contractor shall provide an annual energy production estimate for the wind turbine. The estimated energy production shall be based on publicly available wind data.

If the Contractor proposes an experimental, demonstration, or noncertified wind turbine that does not meet the above criteria, the Contractor must provide minimum performance guarantees and a guarantee to remove the turbine, at the Contractor’s expense, in the event the turbine does not meet the performance guarantees.

## Turbine Warranty

The Contractor shall obtain a turbine manufacturer’s limited warranty of at least five years.

The [Contractor or Operations and Maintenance Service Provider] shall be responsible for performing an inspection of the wind turbine, with an Agency representative witness, before the end of the warranty period in order to document the condition of the wind turbine and all possible claims.

(The Contractor shall assist the Agency in sourcing extended warranty options from the turbine manufacturer or appropriate third-party insurer.)

## Geotechnical Investigation and Report

If the Agency or local authority having jurisdiction for foundation permitting does not allow the assumption of a 1,500 pounds per square foot (PSF) soil bearing strength, then geotechnical exploration and tests shall be performed by the Contractor. If the local area has expansive soils, then a special review to determine if any are present on the site shall be conducted and a mitigation plan developed if necessary.

The Contractor shall supply all labor, equipment, and materials necessary to accomplish the geotechnical investigation. Upon concluding the geotechnical investigation, the Contractor shall produce a geotechnical report to serve as the basis of design for the balance-of-station (i.e., placement of wind turbine foundation, access roads, crane pad, collector trenches, operations & maintenance buildings, etc.). The geotechnical report shall also synthesize any findings made during the field investigation with appendices dedicated to any boring logs, laboratory tests, or geophysical techniques used to characterize the nature and delineate the extent of soil and rock stratum at the site. Additionally, the report shall determine whether the use of ground improvement features is necessary to reinforce the strength of the soil profile for adequate support of the foundation and tower structure.

## Foundation Design

The foundation design shall be based on the site geotechnical conditions, turbine manufacturer design requirements, site drainage management best practices, and industry standards. In natural hazard-prone areas, where earthquakes or flooding may be common, for example, the foundation must be designed to withstand the worst case scenario event. The foundation construction must be designed and stamped by a professional engineer licensed to practice in the state or territory.

## Tower Design and Type

The Contractor shall only use a standard support structure design. The following support structures are standard: freestanding monopole, guyed monopole, freestanding lattice, and guyed lattice. The tower can have a tilt-up/tilt-down feature. The tower shall be corrosion resistant or painted.

The tower must be designed per the applicable standards that address extreme loads, fatigue life, stability, and resonance for the turbine size the tower will support. These standards include ACP 101-1 and AWEA 9.1-2009 for small wind turbines, ANSI/TIA-222 for small wind turbine support structures, and IBC and IEC 61400-6, -1, and -2 for large turbine tower and foundation design.

## Cold Weather Package

*(This section outlines the considerations a Contractor shall follow when recommending a cold weather package for agencies who request this feature. In deciding if a cold weather package is necessary, agencies must consider the cost of a cold weather package against the value of staying operational through extreme cold.)*

(The Contractor shall be responsible for recommending a cold weather package to be included with the turbine purchase, at the Agency’s request, that is best tailored to the local conditions at the site. The Contractor shall consider technical heating solutions that widen operating temperatures during cold seasons, de-icing or anti-icing systems for rotor blades, and ice detection and forecasting systems, among others. Systems may employ a variety of different technologies and methods to prevent ice accumulation and equipment failure and to help sustain operations during challenging weather conditions, such as sensors, low temperature materials (e.g., insulation, water-resistant coatings), and low temperature operational functions (e.g., turbine component preheating, cold start-up).)

## Turbine Performance Monitoring

The Contractor shall be responsible for installing the equipment and software necessary for a web-based remote performance monitoring system. The Contractor shall provide technical, safety, and cybersecurity training on how to use the remote monitoring system to applicable Agency personnel. Remote access to the performance monitoring must be limited to only those roles that require access. The Contractor shall provide an internet connection, separate from the Agency-owned internet access.

## Turbine Condition Monitoring

(*This section covers the condition monitoring requirements the Agency may request to include with the wind turbine to facilitate preventative maintenance. Condition monitoring systems are typically not included with small wind turbines and may be prohibitively expensive to add.)*

(The Contractor shall install a condition monitoring (also known as predictive monitoring) system on the wind turbine. The Contractor shall provide technical, safety, and cybersecurity training on how to use the condition monitoring system to applicable Agency personnel.)

## Cybersecurity

All wind turbine monitoring and control equipment installed at federal agency sites must be granted Authorization To Operate (ATO) through agency cybersecurity officials. There are three aspects of cybersecurity agency requirements that Contractors shall anticipate:

* Secure network connections between the site hardware (data acquisition equipment, meters, sensors, instruments) and third-party data collection servers.
* A secured website that hosts the Agency's data dashboard.
* A secure data storage and retrieval means.

The Cybersecurity and Infrastructure Security Agency Act of 2018 mandated the development of a subagency under the Department of Homeland Security called the Cybersecurity and Infrastructure Security Agency (CISA). The CISA website is a useful source of guidance for Contractors and agencies. The Idaho National Laboratory’s Cybersecurity Guide for Distributed Wind can also be a reference.

## Data Ownership

All data collected into a cloud server and stored are the exclusive property of the Agency. The Contractor must seek the Agency’s written permission if data are to be disseminated to any entity not party to this contract.

## Fire Protection

The Contractor shall consult the provisions of the Fire Protection Design Basis Document (Chapters 4-8) of NFPA 850 (“Recommended Practice for Fire Protection for Electric Generating Plants and High Voltage Direct Current Converter Stations”) and apply the appropriate recommendations for the wind energy project.

(The Contractor shall involve the fire marshal, or authority having jurisdiction for fire protection, for design review and approval. The Contractor shall also observe design guidelines regarding firefighter access from the International Association of Fire Fighters and NEC 690.)

## Grounding, Lightning Protection, and Enclosures

The Contractor must meet the turbine manufacturer’s electrical requirements, grounding requirements per NEC 694, and lightning protection requirements per NFPA 780 with attention to Chapter 9 (Protection for Wind Turbines).

National Electrical Manufacturers Association enclosures rated for the site conditions shall be used. Major electrical components, such as the inverter, isolation transformer, and metering equipment, shall be installed in code-compliant enclosures.

## Transportation

The Contractor shall be responsible for all transportation permits needed to construct the project. The Contractor shall ensure that all necessary equipment can navigate to the project site. This requirement may require the use of beacon or escort vehicles and other traffic safety devices or people. The Contractor shall minimize the transportation’s disruption of traffic and parking to the extent possible.

## Site Preparation & Civil Work

The Contractor shall perform site work as necessary to prepare the site for construction activities. Site work may include engineering, procuring, and constructing office trailers, site access roads, crane pads, crane lay-down areas, turning radii and other civil infrastructure necessary. Security and access controls shall be implemented to prevent damage to or theft of equipment, prevent unauthorized entry to the site, and to protect wildlife from site exposure.

The Contractor shall be responsible for applying and following the terms of the National Pollutant Discharge Elimination System (NPDES) Permit by preparing a stormwater pollution prevention plan (SWPPP) if construction activities are expected to exceed Clean Water Act limits. In accordance with local and state regulations and requirements, the Contractor shall also adhere to any existing water management plans.

The Contractor is responsible for locating all existing underground utilities before excavation and for using the "Call Before You Dig" hotline to confirm with any potentially affected public utility company. Any damage done to existing underground utility systems is the sole responsibility of the Contractor.

Any site utility drawings provided by the Agency, utility companies, municipal and county agencies, and previous Agency contractors are for informational purposes only and are to be considered incomplete and inaccurate. The Contractor is responsible for confirming the exact location, depth, and type of underground utilities present.

Underground utilities that may be found traversing the proposed project area might include but are not limited to the following: telecommunications trunks; cable TV lines; electrical distribution conductors; water mains; oil, steam, propane, and natural gas lines; access and security camera systems; wastewater and storm water drain pipes; traffic and street light power; and communications cabling.

The Contractor shall survey existing utilities to determine adequacy and need for modifications to support site activities. The Contractor shall obtain appropriate approvals and shall construct connections or new systems for electrical power, potable water, sanitary facilities, gas distribution, telephone, and other utilities, as required, to accomplish the installation.

## Interconnection to Electrical Distribution System

The Contractor shall be responsible for completing the electric utility’s interconnection application and complying with all utility interconnection requirements (including modifications or upgrades, funding any required interconnection studies to be performed by or on behalf of the utility, and passing any tests) prior to construction. The Contractor shall determine the interconnection point and design the interconnection. The interconnection shall be designed to comply with applicable utility standards, the interconnection agreement, and specifically IEEE 1547 in order to monitor and respond to grid conditions and communications. The interconnection shall be in compliance with any net metering requirements.

(If smart inverters are required in the state, or if providing ancillary services, such as voltage support or load following, are desired for the wind turbine installation, the Contractor shall install the required advanced controls and smart inverters.)

# Federal Agency Compliance

## National Environmental Policy Act

*(This section describes the Agency’s options for meeting National Environmental Policy Act requirements. The Agency must select the scenario that best describes their situation and delete the two alternatives.)*

The National Environmental Policy Act (NEPA) requires federal agencies to consider the effects of their actions on the human environment and identify alternatives that have the potential to reduce the impacts of those actions. When significant impacts might occur from project development, detailed statements must be prepared for public and federal agency review. The Council on Environmental Quality's implementing instructions can be found at 40 CFR Parts 1500-1508, and the Government's implementing instructions can be found in the Public Building Service's NEPA Desk Guide October 1999.

(The Agency has completed the [Categorical Exclusion / Environmental Assessment / Environmental Impact Statement] documentation and shall provide the results to the Contractor. The Contractor shall comply with all recommended actions and impact mitigation strategies, as applicable.)

(The Agency shall prepare the NEPA documentation and provide the results to the Contractor [at this time]. The Contractor shall comply with all recommended actions and impact mitigation strategies, as applicable.)

(The Contractor shall complete the [Categorical Exclusion / Environmental Assessment / Environmental Impact Statement] documentation on behalf of the Agency. The Agency estimates this cost to be [$]. The Contractor shall comply with all recommended actions and impact mitigation strategies, as applicable.)

## U.S. Fish & Wildlife Compliance

The Contractor shall consult the voluntary *U.S. Fish and Wildlife Service (USFWS) Land-Based Wind Energy Guidelines* to assess potential adverse effects to species of concern and their habitats and provide documentation of required mitigation actions, or documentation that no actions are required.

Additionally, any project that has a federal nexus, such as a project receiving federal funding, a federal permit, or any other federal authorization, must undergo the Section 7 consultation process (as mandated by the Endangered Species Act, Section 7 (a)(2)) to determine whether endangered or threatened species may be affected by the development.

## Federal Aviation Administration (FAA) Compliance

The Contractor shall be responsible for complying with all FAA requirements and aeronautical study determinations as outlined in Title 14 of the Code of Federal Regulations (14 CFR) Part 77. The Contractor shall use the FAA’s Obstruction Evaluation / Airport Airspace Analysis (OE/AAA) Notice Criteria Tool to perform a preliminary obstruction evaluation to screen for possible radar interference and other siting conflicts prior to filing a Notice of Construction. The Contractor must submit a notice at least 90 to 120 days before proposed construction is to commence if the proposed structure exceeds the height, slope, airport proximity, or other criteria limits as determined by the Notice Criteria Tool and apply the appropriate changes to make the wind turbine installation FAA-compliant if a “Determination of No Hazard” is not received from the FAA after review.

Certain Notice of Construction filings may be forwarded for review to multiple agencies, including the Department of Defense (DOD) Military Aviation and Installation Assurance Siting Clearinghouse. The Contractor shall be responsible for ensuring compliance with any Clearinghouse requirements issued through a FAA aeronautical study determination. The Contractor shall comply with Clearinghouse suggestions for mitigating risk, including moving or removing certain turbines from a project layout, lowering the hub height of a project’s turbines, or modifying DOD operations or systems (e.g., upgrading or replacing an existing radar system). The Contractor can request an informal review by the Clearinghouse (<https://www.acq.osd.mil/dodsc/contact/dod-review-process.html>) in advance of filing with the FAA. The DOD’s informal review does not relieve the Contractor of any obligation to file notice with the FAA when the wind turbine installation meets 14 CFR Part 77.9 notice requirements.

# Review, Inspection, Commissioning, and Final Acceptance

## Initial Design Review

*(This section covers the Contractor’s responsibility to provide preliminary drawings and plans for review and approval by the Agency before construction begins for this recommended interim step).*

(Designs (including quantities, sizing, and specifications) and drawings shall be completed by the Contractor after contract award and submitted for approval before construction starts. All preliminary designs and drawings shall be reviewed and approved by the Agency. At a minimum, the Contractor shall prepare designs for the foundation, wind turbine, civil layout, and electrical interconnection.)

## Inspection

The Contractor shall conform to the requirements of FAR Clause 52.212-4 paragraph (a), Inspection/Acceptance, included by reference in this solicitation and resulting Contract.

The Contracting Officer (CO) or the delegated Contracting Officer's Representative (COR) may inspect the wind turbine installation at any time during construction or after the wind turbine has been put in operation, with a minimum 48-hour notice. The Contractor may be ordered to stop work, or shut the systems down, if unsafe conditions or code violations are noted.

A final inspection of the wind turbine installation shall be made only when all the materials have been furnished, all the work has been performed, and all the construction provided for by the contract in accordance with the terms has been completed. If, upon examination by the Contracting Officer or Agency inspection personnel, the project is determined not sufficiently completed to have warranted a final inspection, the Contractor may be charged with any additional cost of reinspection.

The Contractor shall give the Contracting Officer ten (10) calendar days advance notice, in writing, of the date the work will be fully completed and ready for final inspection.

The Contractor's request for final inspection will not be approved until the documentation below, at a minimum, has been provided to the Contracting Officer, in addition to all other contract requirements:

* Final built drawings (record drawings), meeting as-built requirements
* Maintenance requirements per Section 5.6
* Certificates of Authority Having Jurisdiction inspections
* Training of appropriate site staff regarding safe emergency shutdown procedures
* Posted instructions for tasks that site staff may need to perform, such as system shutdown during an emergency.

As soon as practicable, following final inspection, the Contracting Officer will inform the Contractor, in writing, of any discrepancies and omissions noted at the final inspection. The Contracting Officer also shall state the time allowable for replacement of material and performance of any unsatisfactory work necessary before written notification of System Acceptance Testing.

Upon written notification that all deficiencies identified during the final inspection have been corrected, the Contracting Officer will schedule a final inspection of the work. If all construction required by the contract is found completed and all contract requisites submitted, the Contracting Officer shall notify the Contractor in writing that the thirty (30) day performance period can begin. During this time period, the CO/COR can negotiate payment with the Contractor.

## Final As-Built Drawing Requirements

A final set of as-built drawings shall be submitted as part of the final acceptance process. The final as-built drawings will be compared to the design review drawings to determine if any variation is material enough not to be acceptable. The as-built drawings shall at a minimum include:

1. One sheet showing wind turbine layout, turbine size (kW) for each location, tower type, inverters, and billing meter locations designated on drawing under a numbering scheme with each item correspondingly labeled in field. Documentation to show compliance that the layout and location comply with federal agency regulations.

2. Sheet to show locations of major balance of system components (e.g., inverter, transformer, switchgear).

3. Show all Agency-approved design changes made during design and construction and commissioning phases. All relevant drawing sheets shall be updated showing changes made to structural, electrical, and geotechnical components.

4. Single-line electrical drawing showing all DC and AC circuits. Drawing to highlight location of critical disconnect switches.

5. Any underground utilities discovered that are in the project area.

6. Any supervisory control and data acquisition (SCADA), data acquisition system, metering telemetry, and communications wiring diagrams.

Upon verifying that all items of the design have been approved and implemented as approved and that the construction is complete, the Contractor shall provide a record of “signed and sealed” as-built drawings and specifications demonstrating that all development standards have been met. Each submitted final design drawing, calculation document, and specification manual shall be signed and dated by, bear the seal of, and show the State Certificate Number of the Architect or Engineer who prepared the document and is responsible for its preparation.

## Commissioning

The Contractor shall give the Agency ten (10) business days advance notice before starting commissioning. An Agency manager or representative may request to be present during any or all phases of the start-up, commissioning, and testing activities. *(It is strongly recommended that an Agency representative witness all start-up, commissioning, and testing activities.)*

The Contractor shall be responsible for all commissioning and testing activities per the turbine manufacturer's commissioning guidelines and procedures and shall complete all commissioning requirements before final inspection. The Contractor shall provide a Commissioning Report that documents that the wind turbine and associated equipment, including but not limited to the electrical interconnection, is functioning properly and successfully. The Contractor shall demonstrate the successful operation of the wind turbine for [XX hours or YY days or ZZ weeks] prior to the initiation of the warranty period (and conduct daily checks on the wind turbine until it is accepted by the Agency as operating properly and successfully). The Contractor shall provide basic technical and safety training to federal agency staff so they can respond to fault alarms and other emergency warnings.

## Site Demobilization

The Contractor shall be responsible for conducting all necessary demobilization activities after construction and commissioning are complete to restore the site to a condition as close to a preconstruction state as feasible. The demobilization of the project refers to the removal of any temporary facilities (e.g., construction office trailers); implementation of erosion control measures such as seeding, mulching, sodding, and erosion control fabrics; restoring roads, structures, and utilities; planting trees, shrubbery, grasses, and other vegetation; and removing and disposing of all hazardous materials. The Contractor shall comply with federal, state, and local requirements for any task involving the transportation of hazardous wastes and contaminated materials to off-site treatment, storage, or disposal facilities. This includes 40 CFR 260, 49 CFR 172, 173, 178, and 179, and all other applicable federal, state, and local transportation regulations. During the removal process, the Contractor shall evaluate and categorize all components and materials into categories of condition and reuse, salvage, recycling, and disposal. The Contractor shall dispose of unsalvageable materials at authorized sites in accordance with applicable regulations.

## Maintenance

The Contractor shall prepare and submit an operations and maintenance plan with a maintenance checklist and a spare parts inventory list, as recommended by the wind turbine manufacturer, for the Agency to use to prepare a separate maintenance agreement.

## Final Acceptance

The following requirements must be fulfilled before final acceptance:

* The wind turbine installation has met the commissioning requirements.
* The wind turbine has been approved for interconnection by the utility and has a signed interconnection agreement.
* Submission of as-built drawings.
* Training fulfillment documentation.

Then the Contractor shall send a Completion Notice to the Contracting Officer so that the Agency can complete its final acceptance. The Agency shall have ten (10) Business Days after receipt of the Completion Notice to verify that the wind turbine installation is complete, safe, aesthetically acceptable, functional, constructed to all code requirements, does not interfere with Agency or tenant operations, and otherwise meets all other requirements. The Contracting Officer will notify the Contractor in writing of final acceptance.

If any of these requirements are not met, then the Agency shall provide the Contractor with a detailed notice of such failure (i.e., a "Rejection Notice") within the ten (10) Business Day period, with details regarding the required remedy, and the time allowed to complete the remedy. The Contractor shall promptly remedy at Contractor's cost the items identified in the Rejection Notice. In each such case, the Contractor shall send a new Completion Notice to the Agency and the foregoing procedures shall be repeated.

Written acceptance shall be final and conclusive, except as regards latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards the Agency’s right under any warranty or guarantee.

# Other Considerations

*(All RFPs will include the Agency’s standard technical proposal submittal requirements and technical evaluation criteria. This section highlights two factors, corporate experience and past performance, that are recommended when evaluating a wind turbine installation contractor, if not already accounted for in the Agency’s standard practice.)*

## Corporate Experience

*(This section describes how the Offeror must demonstrate its corporate experience as it pertains to the types of work and volume of work completed by the Offeror that are comparable to the types of work covered in this request for proposal, in terms of size, scope, and complexity.)*

The Offeror shall provide evidence of corporate experience by submitting project data sheets for no more than five (5) projects. Each project data sheet shall include the information outlined in this Section and shall follow the format listed below:

Contract Number
Contract Awardee name, address, and contact information
Contract Type (Firm-Fixed Price, Time and Materials, etc.)
Project Title
Project Location
Client Contact information
Project Start Date
Project Completion Date
Project Cost (Awarded cost and Final cost)
Project Description
Description of self-performed work
Other pertinent information

Offeror shall demonstrate experience designing, financing (including beneficial use of renewable energy credits/rebates/incentives/tax credits), constructing, owning, operating, and maintaining a renewable system(s) similar in scope, size, type, and complexity to a project(s) identified in the RFP. Project(s) cited and references shall be recent (i.e., within five years of the date of the proposal). Offerors are encouraged to include narratives regarding experience obtaining signed interconnection agreements, including challenges and how issues were resolved.

For all submitted projects, the project description shall clearly describe the scope of work performed and the relevancy to the project requirements of this RFP as described above, along with the client name, primary point of contact, address, telephone number, and email address.

If the Offeror is a Joint Venture (JV), relevant project experience shall be submitted for projects completed by the Joint Venture entity. If the Joint Venture does not have shared experience, projects shall be submitted for each Joint Venture partner.

If an Offeror is using experience information of affiliates/subsidiaries/parent/LLC/LTD member companies (name is not exactly as stated on the SF33), the proposal shall clearly demonstrate that the affiliate/subsidiary/parent firm will have meaningful involvement in the performance of the contract.

Project data sheets shall be limited to three (3) single-sided pages per project. Offerors shall submit no more than 15 pages of corporate experience.

## Past Performance

*(The section describes how the Contractor must prove successful past performance. Past performance pertains to both the relevance of recent efforts and how well an Offeror has performed on the contracts.)*

The Offeror shall provide references and information about its past performance for up to five wind projects of similar size, contract type, complexity, and scope.

If available, Offerors shall submit past performance data for the projects provided in response to corporate experience.

Offerors shall submit the Past Performance Questionnaire (PPQ).

PPQ's shall be completed and signed by the Offeror's previous clients. If the Offeror is unable to obtain a completed PPQ from a client for a project(s) before proposal closing date, the Offeror shall complete and submit with the proposal the first page of the PPQ, which will provide contract and client information for the respective project(s).

The Agency may contact the Offeror's references to determine customer satisfaction with various aspects of the Offeror's performance, and may use other sources of information. If the Offeror fails to provide valid client contacts, past performance references may not be considered.

While the Agency may elect to consider data from other sources, the burden of providing detailed, current, accurate, and complete past performance information rests with the Offeror.

The Offeror shall follow up with clients/references to ensure timely submittal of questionnaires. If the client requests, questionnaires may be submitted directly to the [Agency’s point of contact] before the proposal's closing date.