

OER SRP Solar DG Pilot Project

REQUEST FOR PROPOSALS: Contractor

Opportunity Summary

National Grid (“the Company”) is requesting proposals from consultants or professionals with significant expertise in residential and commercial solar photovoltaic (“PV”) assessments and system design in Rhode Island to serve as the Solar Contractor (“Contractor”) under the Rhode Island Office of Energy Resources’ (RI OER) System Reliability Procurement Solar Distributed Generation Pilot Project (the “Project”). The Solar Contractor will be responsible for (1) proposing a specific design for a pilot to demonstrate the capability, costs, and value for solar distributed generation to provide load reduction in a specific, load-constrained area and (2) based on review and approval of that design, develop a proposed implementation strategy for the procurement of pilot DG resources.

Applicants may be individuals, sole proprietors, professional consultants or companies with multiple employees. Proposals may be submitted by firms or individuals alone, or as a team with more than one firm or individual to provide the necessary breadth of skills to complete the Scope of Work.

Background

System Reliability Least Cost Procurement

In 2006, Rhode Island passed landmark energy efficiency legislation—the Comprehensive Energy Conservation, Efficiency and Affordability Act. This energy law, commonly referred to as “Least-Cost Procurement” (LCP), contains an important and innovative provision that requires Rhode Island utilities (National Grid, “the Company”) to develop a plan addressing electric system reliability.

As part of system reliability least cost procurement, the Company must strategically consider an array of customer and utility-sited energy resources to maximize their benefit to Rhode Island’s energy system. These “non-wires alternatives” (NWAs) include but are not limited to cost-effective energy efficiency measures, distributed generation and demand response measures that are targeted toward reducing the peak loads on the electricity grid. Efficient processes would be paired with these technologies in order to maintain reliability with the existing distribution system.

The Company is asked to assess whether an array of such resources could be deployed to avoid dirtier “peaking” generators and defer distribution (and potentially transmission) system investments. Deferring distribution system investments could provide savings over time for customers and could lower the volatility and cost uncertainty of the larger energy and capacity markets in New England by securing sources of energy supply and capacity from in-state resources.

The National Grid System Reliability Procurement Plan

On December 18, 2012, the PUC approved the 2013 National Grid System Reliability Procurement Report (SRP Report) which continues and progresses the work started in the summer of 2012 on a pilot in Tiverton and Little Compton. This pilot is designed to defer the need for a new substation feeder in the Tiverton/Little Compton region through at least 2017 by targeting energy efficiency measures and conducting a demand response program in the area that will reduce the load on specific feeders attributable to customer air conditioning, lighting, and other summer-peaking loads. If the pilot is successful in enrolling and providing 1 megawatt (MW) of sustained load relief over its planned lifecycle, it will result in deferred construction of a new substation feeder estimated to cost \$2.9 million for four years.

The Rhode Island Office of Energy Resources System Reliability Procurement Solar DG Pilot Project

The Company’s pilot currently relies solely on efficiency and demand response measures to achieve the required load relief and has not proposed including or assessing the potential of distributed renewable energy systems to supplement the system reliability portfolio. Therefore, the RI OER has proposed to allocate thirty-five percent (35%) of auction proceeds from the 2011 Regional Greenhouse Gas Initiative (RGGI) auctions for the OER System Reliability Procurement Solar DG Pilot Project (the “Project”), to assess via a pilot project the viability, costs, and benefits of distributed generation as a system reliability resource (non-wires alternative).

The Project will explore the viability, costs, and benefits of targeted deployment of solar DG. The pilot will consist of two tasks: 1) a design phase and 2) a proposed implementation strategy. The first task will assess deployment options and result in a proposed configuration for a portfolio of DG resources to meet 250kW of summer peak load reduction. The design may be modified based on stakeholder feedback. The second task will involve the development of a recommended implementation strategy to solicit participation in the pilot and deploy the DG resources. The ultimate goals of the project are to understand via a pilot case study 1) whether solar_DG resources can provide sustained, reliable load relief, along with the other technologies used in the National Grid SRP Project, possibly leading to a distribution investment deferral; and 2) to gain insight into the associated costs and benefits of using DG resources as part of a system reliability portfolio. Projects potentially selected to participate in the demonstration pilot may vary depending on the characteristics of the constrained area and may include, but are not limited to, photovoltaic solar generation or thermal solar systems that displace current electric load (e.g. an electric hot water heater).

Links

2013 National Grid System Reliability Procurement Plan:

[http://www.ripuc.org/eventsactions/docket/4367-NGrid-SRP-2013Plan\(11-2-12\).pdf](http://www.ripuc.org/eventsactions/docket/4367-NGrid-SRP-2013Plan(11-2-12).pdf)

2012 Plan for the Allocation and Distribution of Regional Greenhouse Gas Initiative Auction Proceeds:

<http://www.energy.ri.gov/documents/rggi/RGGI%20%20Proposed%202012%20Plan.pdf>

Scope of Work

The Contractor will be asked to (1) propose a DG deployment solution in the area encompassed by the Company's SRP pilot in Tiverton and Little Compton, RI based on a goal of 250kW of demand reduction and (2) recommend an implementation strategy which maximizes the assessed value that will be administered by the RI OER.

In addition to work associated with activities below, the Contractor will need to interact with designated Company and RI OER staff closely throughout the duration of the work period. The Contractor will be responsible for scheduling regular project management/update meetings with National Grid and OER staff, in addition to field visits and working sessions with National Grid staff. National Grid and OER will provide the Contractor with a list of staff who will attend and participate in these meetings.

Task One: Design a solar DG deployment solution based on an assessment of potential and value

The Contractor will be responsible for determining the most viable solar DG equipment, the most optimal locations/configurations/orientations for those installations within the Project area and the magnitude of the value these installations would be able to provide. Value is broadly defined as the extent to which renewable DG resources can provide sustained, reliable load relief, either as a stand-alone option or in conjunction with the other technologies used in the National Grid SRP Pilot, possibly leading to a distribution investment deferral. The Contractor will be responsible for determining the value the proposed portfolio of installations would provide via a comparison of costs and benefits associated with the recommended deployment scenario. This analysis should concentrate on the reliability benefits accrued through a possible distribution investment deferral, as well as evaluating other monetary benefits such as generation and capacity.

To complete this task, the Contractor will be required to survey the Project area, assess the electric system configuration and loads in the Project area, conduct analyses, participate in discussions with designated staff members of the Company and the RI OER and provide recommendations. In making recommendations, the Contractor should include consideration of the following to identify the solutions that create the most value as defined above:

- deployment options (e.g. residential, commercial, ground mount, tracker)
- interconnection options (e.g. grid tied, behind the meter)
- ownership options (host owned, lease owned, utility owned, etc.)
- area geography

- area customer base and building stock
- potential use of energy storage
- cost effectiveness
- available budget

The Contractor will have access to customer account data as necessary to assist in the assessment of load reduction. A confidentiality agreement will be provided by the Company and must be signed by the Contractor to facilitate data access.

The Contractor will be required to have knowledge of the following to facilitate this task:

- Solar DG equipment including components, performance capabilities and realization rates.
- Solar DG installation practices in Rhode Island, including permitting, interconnection and the installation process. Additionally, knowledge of impacts on costs of project-specific scenarios will be required.
- Solar DG contract models, terms and conditions and best practices.
- End-use customer needs, constraints and preferences for solar DG equipment.
- End-use customer behaviors and propensities for adopting solar DG in conjunction with energy efficiency and demand response technologies.
- Peak load reduction analysis
- Incentive design, including existing incentives/procurement programs in Rhode Island, as well as other states in the Northeast

Task Two: Propose an implementation strategy to execute the pilot

Based on the conclusions and recommendations made in Task One, the Contractor will be responsible for proposing an implementation strategy to install and manage the optimal portfolio of solar DG projects. Such a plan should draw on programs in other states, build on published reports and papers, and incorporate existing renewable DG support programs and incentives in Rhode Island (e.g. the Distributed Generation Standard Contracts Program and the Renewable Energy Fund). The recommended deployment design identified in Task One will guide the structure of the implementation strategy—for example, if the deployment consists of a smaller number of larger systems, a more simple/directed procurement may be optimal; if the deployment consists of a larger number of smaller systems, a group purchase or “Solarize”-type design may be more appropriate. The finalized implementation plan will be presented to and reviewed by the RI OER; the OER may then implement the recommendation at its discretion.

Components of this plan shall include but are not limited to:

- Detailed breakdown of equipment installation targets including recommended locations for each
- Description of implementation strategy delivery mechanism and processes (e.g. incentives, solicitation, group purchase, other, etc.?)
- Contract design
- Marketing strategy recommendations
- Synergies that can be leveraged between the RI OER and the Company
- Identification of necessary roles in program deployment

- Data to be collected and required documentation
- Itemized budget not to exceed \$800,000.00

The implementation plan should also identify a process for handling leads that are determined to be non-feasible for solar DG such that the customer’s participation in energy efficiency or demand response might still be realized.

Timeline

Below is an estimated overview of the timeline for the encompassed work.

Milestone	Date
RFP Release Date	November 8, 2013
Bidder’s Conference	November 22, 2013
Application Deadline	December 5, 2013
Decision and Contract Award	December 13, 2013
Deadline for Draft Assessment	January 31, 2013
Review and Revision Period	February 3, 2014 – February 7, 2014
Deadline for Finalized Assessment	February 14, 2014
Deadline for Implementation Plan Draft	March 3, 2014
Review and Revision Period	March 3, 2014 – March 7, 2014
Deadline for Finalized Implementation Plan	March 14, 2014

Funding Availability

The anticipated budget range for this solicitation is approximately \$30,000-\$50,000. The Contractor should bill the Company on a time and materials basis. This budget shall be inclusive of contractor expenses, including travel.

Proposal Requirements

All proposals submitted for this request must include the following in order to be considered:

- **Executive Summary:**including a summary of their organization, qualifications and proposed approach
- **Methodology:** proposal to complete the tasks outlined in this scope of work
- **Project Management:**consisting of a proposed schedule including the milestones outlined in this request as well as recurring meetings and other communication dates and a description of the proposed quality control procedures
- **Staff Qualifications:**including resumes of each individual who will be providing technical services and written descriptions of the individuals’ experience. The Company reserves the right to investigate and review the background of any or all personnel assigned to work under an agreement for services, and based on such investigations, to reject the use of any persons within the Company’s discretion. Any changes to personnel require formal written approval by the Company, and the Company reserves the right to terminate an agreement for services if changes are not approved.

- **Rate Sheet Submission:** a detailed budget, including information on rates of all team members working on this project, and anticipated expenses.
- **Other:** Any questions, concerns or issues, comments or relevant suggestions on the scope of work.