New Jersey Board of Public Utilities Town Center Distributed Energy Resources (TCDER) Microgrid

Design Incentive Program Application

Application Deadline: April 16, 2020 at 5:00 PM

Question Submission Deadline: March 26, 2020 by 5:00 PM

1. Program Description

The New Jersey Board of Public Utilities (NJBPU) initiated the Town Center Distributed Energy Resources (TCDER) Microgrid program as a result of Superstorm Sandy. Our State learned that further measures are needed to help New Jersey become more resilient, particularly with respect to critical facilities. NJBPU released a Microgrid Report in 2016, and in 2017 established a TCDER Microgrid Feasibility Study Incentive Program. That program (Phase I TCDER Microgrid Program) funded thirteen Feasibility Studies, which were received by the end of 2018. In 2019, twelve Feasibility Study applicants were informed that their studies met program requirements and that they would be eligible for a Phase II TCDER Microgrid incentive program (one Feasibility Study applicant withdrew from the program). Only the Feasibility Study applicants notified that their Feasibility Study met program requirements are eligible for this Phase II TCDER Microgrid Incentive Program. The Phase II TCDER Microgrid Incentive Program provides funding, on a competitive basis, for a design of a TCDER Microgrid. This Phase II TCDER Microgrid Incentive Program is intended to help move projects towards the development and construction phase.

1.1 Phase II TCDER Incentive Program – Application Deadlines and Submittal Requirements

1.1.1. The Phase II TCDER Microgrid Incentive Program is described in detail below. The application period opens on February 20, 2020. **Applications are due on or before April 16, 2020 at 5:00 PM**.

1.1.2. Completed applications must be emailed to: TCDERmicrogrid@bpu.nj.gov and board.secretary@bpu.nj.gov on or before the

date and time specified above.

1.1.3. Applications shall be submitted in Microsoft Word format, or in Adobe PDF format. If applications are submitted in Adobe PDF format, the document shall be searchable.

1.1.4. Questions pertaining to the application shall be addressed to TCDERmicrogrid@bpu.nj.gov. Questions should be specific and should reference the applicable section of the application requirements.

Questions must be submitted by 5:00 PM on March 26, 2020. All program participants will be copied on all questions and replies.

2. Eligibility

2.1. Eligible Applicants

The Phase II TCDER Microgrid Incentive Program is open only to those entities who participated in the TCDER Microgrid Feasibility Study Program, and whose Feasibility Study was found to have met the Feasibility Study Program requirements. Eligible entities are:

City of Atlantic City
Camden County
Galloway Township
Borough of Highland Park
City of Hoboken
Hudson County
Middletown Township
Montclair Township
Neptune Township
City of Paterson
State of New Jersey
Department of Treasury (City of Trenton-Mercer County)
Woodbridge Township

2.2. Eligible Projects

2.2.1. Projects must meet this definition of TCDER Microgrid:

A TCDER Microgrid, for the purpose of this Phase II TCDER Incentive Program, is a cluster of critical facilities within a municipal boundary that may also operate as shelter for the public during and after an emergency event or provide services that are essential to function during and after an emergency situation. The critical facilities are to be connected to a single or a series of DER technologies that can operate while isolated and islanded from the main grid due to a power

outage.

2.2.2. The project submitted pursuant to this Application must conform to existing law, code, and standing Board Orders. See Appendix B for a non-exhaustive collection of relevant legal material. The applicant is ultimately responsible for submitting a project that is legally permissible. By executing the Certification provided as Appendix A, the applicant certifies that its project is legally permissible. The applicant shall include with the application a brief narrative that explains how the project, as proposed, conforms with existing law, code, and Board Orders.

2.2.3. One Basis of Design per applicant will be considered. Alternative plans/options or future expansion capabilities will not be considered.

2.2.4. Applicants are permitted to modify the project presented in their Feasibility Study.

3. *Application Submittal Requirements*

Applications shall be submitted in Microsoft Word format, or in Adobe PDF format. If applications are submitted in Adobe PDF format, the document shall be searchable.

Applications shall be prepared and submitted in the format below.

3.1. Applicant Information

3.1.1. Applicant name and address

3.1.2. Applicant contact name, address, telephone number, email address

3.1.3. Project name

3.2. Project Description - 10 pages maximum, including attachments

3.2.1. A general description of the proposed TCDER Microgrid project

3.2.2. Whether the project differs from the Feasibility Study project, and if so, a description of the difference(s)

3.2.3. A listing of each facility that will be part of the TCDER Microgrid. This listing should include:

3.2.3.1. Why each facility has been chosen to be part of the Microgrid

3.2.3.2. A general explanation of who will benefit from the facility being part of the Microgrid

3.2.3.3. The FEMA Category of each facility

3.2.3.4. Each facility's ability to serve as a public shelter

3.3. Technical Summary - 10 pages maximum, including attachments

3.3.1. A brief narrative of why the proposed project is legally permissible

3.3.2. A description of each distributed energy resource (DER) presently anticipated to be part of the TCDER Microgrid, including a description of the technology, size, and how the DER will be integrated into the Microgrid

3.3.3. The proposed level of design. In order to be eligible for an award under the Phase II TCDER Microgrid Incentive Program, design must be to a level of at least 30%. Applicants may choose a more detailed level of design. The higher the level of design, the more the project will be deemed ready to proceed. Guidelines for the content of various levels of design are included in Appendix C

3.3.4. A description of how renewable energy and energy storage will be integrated into the Microgrid

3.3.5. A description of how the Microgrid will incorporate electric vehicle charging

3.3.6. A description of how the Microgrid will (compared to a base case of no Microgrid):

3.3.6.1. Reduce peak grid demand

3.3.6.2. Reduce Greenhouse Gas ("GHG") emissions

3.3.7. A description of energy conservation measures already implemented or expected to be implemented in the Microgrid facilities

3.3.8. Identification of expected permit requirements

3.3.9. A description of the control and communication protocols to be used

3.3.10. A description of cyber security measures to be employed

3.4. Financing and Business Model - 5 pages maximum, including attachments

3.4.1. The total estimated cost of the proposed design

3.4.2. The amount of the total design cost requested from the NJBPU (In-kind or prior cost contributions will not be considered)

3.4.3. The percentage of the total design cost requested from the NJBPU

3.4.4. The source(s) of the funding for the remaining design cost

3.4.5. The expected business model for the project

3.4.6. The expected cost of development and construction of the proposed project and

how that cost will be financed. Do not include funding sources that currently do not exist or are not authorized for use in funding TCDER Microgrid projects

3.4.7. A general description of tariffs that may be needed to support the operation of the Microgrid, along with documentation of any consultation with the Electric Distribution Company ("EDC")/Gas Distribution Company ("GDC") that the Applicant has had regarding tariffs

3.4.8. A discussion of who benefits and who pays, and the expected allocation of the project cost

3.4.9. Whether the project will operate under blue-sky conditions

3.4.10. The expected involvement by the EDC and GDC in the project design

4. *Evaluation of Applications*

Following the close of the Application Period, each application will be evaluated pursuant to the evaluation criteria below.

4.1. In reviewing each application, Board Staff may consult with:

4.1.1. The EDC in whose service territory the project is located

4.1.2. The GDC in whose service territory the project is located

4.1.3. The New Jersey Department of Environmental Protection ("NJDEP")

4.1.4. Any other applicable state agency

4.2. The Applicant may be required to supplement the information provided in the Application upon request from the NJBPU

4.3. NJBPU reserves the right to negotiate the scope of work, budget and funding levels with prospective awardees

5. *Evaluation Criteria*

Applications will be evaluated, scored and ranked based on the criteria below.

5.1. General Project Characteristics – 20 Points

Factors to be considered:

5.1.1. Overall description of the TCDER Microgrid

5.1.2. Number and type of FEMA Category III and IV critical facilities included

5.1.3. How the Microgrid will support the community during a grid outage

5.2. Technical Characteristics – 40 Points

Factors to be considered:

5.2.1. The readiness of the project to proceed from design to development and construction

5.2.2. The overall integration of DERs and loads in the Microgrid

5.2.3. The proposed communication and control protocols and cyber security measures

5.2.4. The degree of resilience the Microgrid will offer

5.2.5. The clean energy technologies to be incorporated into the Microgrid

5.2.6. The approach to reducing peak demand and/or GHG emissions

5.3. Financing and Business Model – 40 Points

Factors to be considered:

5.3.1. The reasonableness of the estimated cost of the proposed design

5.3.2. The amount and percentage of the design cost requested from the NJBPU

5.3.3. The source(s) of funding for the applicant's portion of the design cost

5.3.4. The reasonableness of the business model and financial models proposed

5.3.5. The reasonableness of the allocation of the project cost

5.3.6. The degree of involvement of the EDC and GDC

6. Awards

6.1. Incentive awards will be based on the score received; however, NJBPU will attempt to select at least one project for the award in each of the three EDC service territories where eligible applicants are located

6.2. $4 million is budgeted for the Phase II TCDER Microgrid Incentive Program. The number and amount of awards will be determined based on the application evaluation and available funds.

6.3. Prospective awardees will be required to enter into a Memorandum of Understanding ("MOU") with the NJBPU in order to transfer funds from the NJBPU to the applicant and to establish terms and conditions of the award.

6.4. 75% of the award will be provided upon execution of the MOU. The remaining 25% will be provided upon completion of the design review by NJBPU. The design review will be limited to:

6.4.1. Verification that the project designed is the project described in the application

6.4.2. Verification that the level of design is the level of design described in the application

7. Confidentiality

7.1. This Application is subject to disclosure under the Open Public Records Act, N.J.S.A. 47:1A-1 et seq. Sensitive and trade secret information that you wish to keep confidential should be submitted in accordance with the confidentiality procedures set forth in N.J.A.C. 14:1-12.3. At an appropriate time after awards are made, Applications will be posted to the Board's website.

List of Attachments

Appendix A: Certification

Appendix B: Non-Exhaustive Collection of Relevant Legal Material

Appendix C: Guidelines for the Content of Various Levels of Design

Appendix A: Certification

Applicant Certification

The undersigned warrants, certifies, and represents that:

1) I, _____(Name), am the _____(title) of the Applicant_____(name) and have been authorized to file this Applicant Certification on behalf of my organization; and
2) The information provided in this Application package has been personally examined, is **true, accurate, complete, and correct** to the best of the undersigned's knowledge, based on personal knowledge or on inquiry of individuals with such knowledge; and
3) The TCDER Microgrid facility proposed in the Application is intended to be designed as described in the Application and **in accordance with all Board rules and applicable laws**; and
4) My organization understands that this Application is **subject to disclosure under the Open Public Records Act**, N.J.S.A. 47:1A-1 et seq., and that sensitive and trade secret information that they wish to keep confidential should be submitted in accordance with the confidentiality procedures set forth in N.J.A.C. 14:1-12.3; and
5) My organization acknowledges that submission of false information may be grounds for denial of this Application or forfeiture of any award granted, and if any of the foregoing statements are willfully false, my organization and/or individuals are subject to punishment to the full extent of the law.

Signature: _____ Date: _____

Print Name: _____ Title: _____

Company: _____

WITNESSED BY:

Signature: _____ Print Name: _____

Date: _____

Appendix B: Non-Exhaustive Collection of Relevant Legal Material

N.J.S.A. 48:3-51 - Definitions

Off-site end use thermal energy services customer
"Off-site end use thermal energy services customer" means an end use customer that purchases thermal energy services from an on-site generation facility, combined heat and power facility, or co-generation facility, and that is located on property that is separated from the property on which the on-site generation facility, combined heat and power facility, or co-generation facility is located by more than one easement, public thoroughfare, or transportation or utility-owned right-of-way.

On-site generation facility
"On-site generation facility" means a generation facility, including, but not limited to, a generation facility that produces Class I or Class II renewable energy, and equipment and services appurtenant to electric sales by such facility to the end use customer located on the property or on property contiguous to the property on which the end user is located. An on-site generation facility shall not be considered a public utility. The property of the end use customer and the property on which the on-site generation facility is located shall be considered contiguous if they are geographically located next to each other, but may be otherwise separated by an easement, public thoroughfare, transportation or utility-owned right-of-way, or if the end use customer is purchasing thermal energy services produced by the on-site generation facility, for use for heating or cooling, or both, regardless of whether the customer is located on property that is separated from the property on which the on-site generation facility is located by more than one easement, public thoroughfare, or transportation or utility-owned right-of-way.

N.J.S.A. 48:3-77.1
Utilization of locally franchised public utility electric distribution infrastructure
In order to avoid duplication of existing public utility electric distribution infrastructure, and to maximize economic efficiency and electrical safety, delivery of electric power from an on-site generation facility to an off-site end use thermal energy services customer as defined in section 3 of P.L.1999, c.23 (N.J.S.A. 48:3-51), shall utilize the existing locally franchised public utility electric distribution infrastructure. The New Jersey electric public utility having franchise rights to provide electric delivery services within the municipality shall provide electric delivery services at the standard prevailing tariff rate that is normally applicable to the individual off-site end use thermal energy services customer.

N.J.S.A. 48:2-21.37
Distributed Generation (DG)
"Distributed generation" means energy generated from a district energy system or a combined heat and power facility as that term is defined in section 3 of P.L.1999, c. 23 (C.48:3-51), the simultaneous production in one facility of electric power and other forms of useful energy such as heating or process steam, and energy generated from other forms of clean energy efficient electric generation systems.

Appendix C: Guidelines for the Content of Various Levels of Design

The US Army Corps of Engineers New York District Design Submission Requirements Manual (2009)[1] provides the following design content guidelines:

Concept Design (30-35%)

The Concept Design represents approximately 30 to 35% of the design effort and shall be of sufficient detail to show how the users' functional and technical requirements will be met, indicate the designer's approach to the solution of technical problems, show compliance with design criteria or provide justification for noncompliance, and provide a valid estimate of cost.

Interim Design (60-65%)

The Interim Design represents a design analysis developed to approximately 60% completion, includes approximately 60% complete drawings including those addressing construction phasing, and includes a detailed cost estimate developed to approximately 60% completion including Bid Options where applicable.

Final Design (90 -100%)

The Final Design represents a 100% complete design including all design calculations, all explanatory material giving the design rationale for any design decisions which would not be obvious to an engineer reviewing the final drawings and specifications, and any information for the Resident Engineer that will assist in administering the construction contract.

[1] https://www.nan.usace.army.mil/Portals/37/docs/EngDiv/ManStdsProc2009.pdf