THIRD SUPPLEMENT TO LOAN GUARANTEE SOLICITATION ANNOUNCEMENT

FEDERAL LOAN GUARANTEES FOR RENEWABLE ENERY AND ENERGY EFFICIENCY PROJECTS
Solicitation Number: DE-SOL-0007154
OMB Control Number: 1910-5134; OMB Expiration Date 11/30/2016
Announcement Type: Supplemental
Supplement Date: August 24, 2015

Background

As used in this supplement the term "**Distributed Energy Projects"** means projects that are comprised of installations of facilities utilizing a single technology, or a defined suite of technologies (either is referred to herein as "**Distributed Technology**"), at multiple sites, deployed pursuant to a master business plan.

Distributed Energy Projects are currently driving innovation and transforming U.S. energy markets. Technologies such as rooftop solar, energy storage, smart grid technology, and methane capture for oil and gas wells, solve key energy challenges. Catalyzing these technologies and demonstrating the viability of these markets would create economic opportunity, strengthen energy security, transform certain energy markets, and reduce greenhouse gas emissions. However, Distributed Energy Projects utilizing innovative technology are not being deployed at scale due in part to capital constraints associated with the structuring of Distributed Energy Projects and the innovative technologies that such projects use.

The Department of Energy's ("**DOE**") Loan Programs Office ("**LPO**") administers the loan guarantee program authorized by Title XVII of the Energy Policy Act of 2005, as amended, 42 U.S.C. §§16511-16516 ("**Title XVII**"). Title XVII addresses the capital constraints associated with innovative technologies in order to accelerate the domestic deployment of such innovative energy technology.

LPO believes that many potential Distributed Energy Project applicants may be reluctant to submit applications under the above-identified solicitation due to uncertainty as to LPO's determination of the eligibility of such projects or the acceptability of a Distributed Energy Project structure.

LPO believes that Distributed Energy Projects can be eligible projects under its currently outstanding Loan Guarantee Solicitation Announcement relating to Federal Loan Guarantees for Renewable Energy and Energy Efficiency Projects, Solicitation Number: DE-SOL-0007154 (the "**Solicitation**"). However, Distributed Energy Projects require different financial structures compared to the majority of LPO's current portfolio of large, centralized projects.

Consequently, LPO is supplementing the Solicitation to make clear that it will accept and consider applications for Distributed Energy Projects and to illustrate how a Distributed Energy Project transaction could be properly structured. LPO understands that other project structures may exist or be developed, and is prepared to accept and consider applications for projects that utilize such structures.

LPO has received inquiries from stakeholders as to whether state-affiliated financial entities, including state green banks, may submit applications for Eligible Projects. The Supplement makes clear that state and state-affiliated entities are invited to submit applications for Eligible Projects. (None of Title XVII, the 1703 Regulations or the Solicitation prohibit state and state-affiliated entities from becoming a Borrower, a lender or an equity participant in a Project solely as a result of such entities being a state or a state-affiliated entity). Such state or state-affiliated entity would be required to satisfy all other requirements for qualification as a Borrower, a lender or an equity participant, as applicable. Accordingly, LPO is supplementing the Solicitation to make clear that (1) state-affiliated financial entities, including state green banks, may submit applications for Eligible Projects, including Distributed Energy Projects, and (2) state and state-affiliated entities

may participate in Distributed Energy Projects as lenders or co-lenders, equity providers, or off-takers. As with all Eligible Projects, the credit strength of the project will affect the credit subsidy cost required to be paid at issuance of the loan guarantee, and with respect to state and state-affiliated entities (as with all projects), state sponsorship, including state credit enhancements, would be considered by LPO in evaluating the credit strength of the Project.

This supplement is issued under Title XVII and the implementing regulations set forth in Part 609 under Chapter II of Title 10 of the Code of Federal Regulations (the "**1703 Regulations**"), and is subject to all of the terms and conditions thereof.

The Solicitation is supplemented as set forth below (capitalized terms used herein and not otherwise defined in this supplement have the meanings ascribed thereto in the Solicitation).

The following is inserted as a new section, Section II.D, following Section II.C:

D. Distributed Energy Projects

A Distributed Energy Project, to be an Eligible Project under this Solicitation, must satisfy the requirements under the definition of an Eligible Project under this Solicitation and (a) involve a Distributed Technology, and (b) deploy installations of facilities at multiple sites utilizing that technology pursuant to a master business plan.

1. Financing Structures

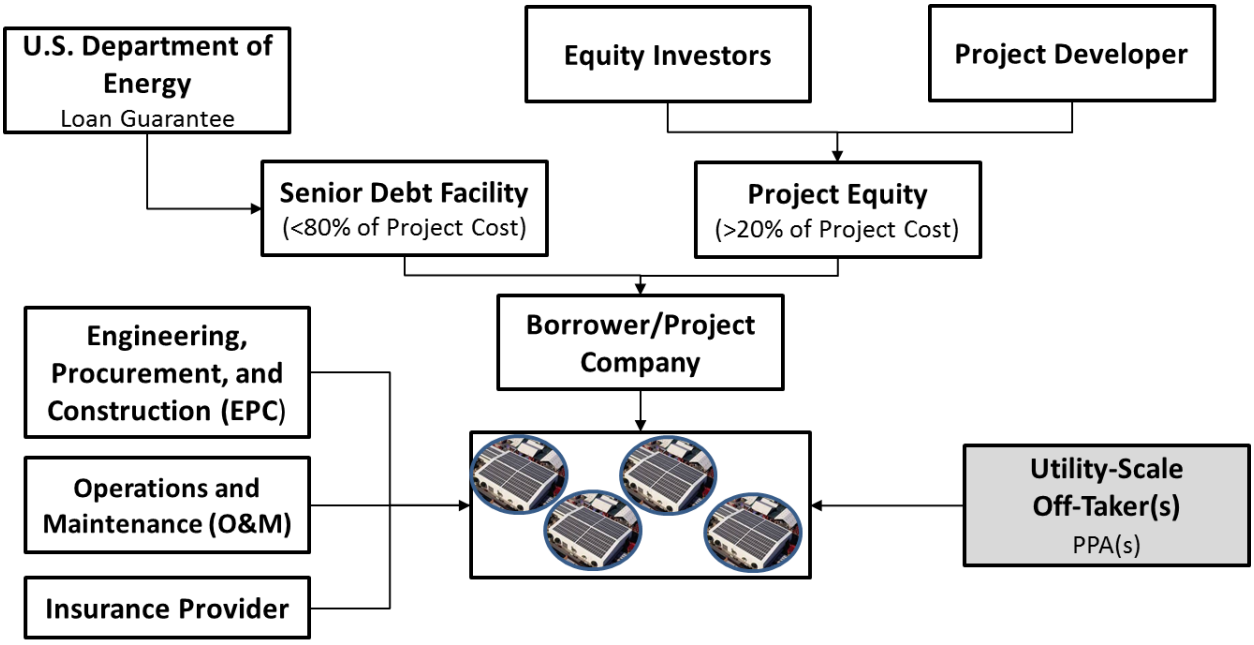
Typically, each installation or facility in a Distributed Energy Project would be too small, if individually financed, to benefit from a DOE-guaranteed loan due to the transaction costs associated with the financing and DOE's participation. However, under certain circumstances, DOE may issue loan guarantees to support the financing of an aggregation of such installations and facilities, permitting the borrower to access financing under a single arrangement for the

multiple installations of the applicable facilities. A Distributed Energy Project using Distributed Technology will constitute a single Project under Title XVII and the 1703 Regulations because the aggregation of installations and facilities at multiple locations are integral components of a master business plan, necessary to the viability of the Project. To establish that the Project will be located in the United States at least one of the locations will be identified in the Application.

LPO believes that a Distributed Energy Project structured in a manner described in the three examples shown in Diagrams A, B, and C below would be an acceptable project structure.

Example A

Diagram A – Key Features: Multiple Physical Sites with Single Site Owner, Utility-Scale Offtakers /PPA(s)



In the hypothetical example shown in Diagram A, the Project Developer/Sponsor ("**Sponsor**"), a credit-worthy entity with experience developing projects employing similar technologies on a distributed facility basis, forms the borrower/project company ("**Borrower**" and "**Project Company**") entity in partnership with other credit-worthy equity investors. Such Borrower/Project Company receives equity contributions and/or guarantees from its Sponsor resulting in not less than 20% of the total project costs being borne by the equity participants.

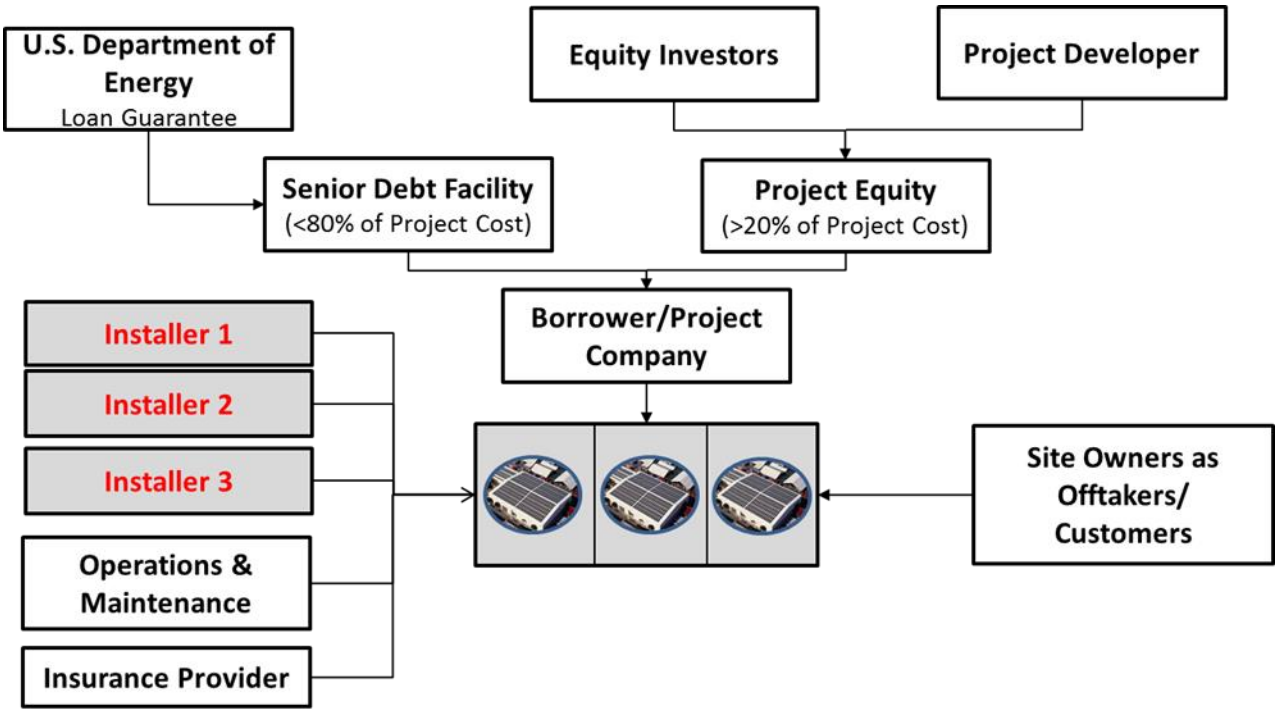
The Borrower/Project Company, which will develop, construct, operate and own, directly or through one or more Project Company subsidiaries, revenue-generating assets consisting of multiple installations of Distributed Technology at multiple sites, contracts with an experienced master contractor, who may or may not be affiliated with the Sponsor, for fully-wrapped engineering, procurement and construction services required for the installation of the eligible technology.

Either the host sites are owned by a single, credit-worthy party, or the Borrower/Project Company or its subsidiary, as applicable, will secure control of diversely owned sites in a manner that is 1) highly standardized, and 2) structured to mitigate against the risk of unrated credit, as the case may be, of the site owners. The universe of sites on which the installations would occur would be identified in order to permit DOE to satisfy its obligations under the National Environmental Policy Act ("**NEPA**") and complete other necessary diligence. Alternatively, in some circumstances it may be sufficient to identify the proposed sites categorically, with conforming site information to be certified by the Borrower and verified and/or audited by LPO as the project proceeds after closing. In either case, LPO would view favorably a structure whereby the Borrower/Project Company leases the host sites from their respective owners on fixed terms not less than the loan term, and Borrower/Project Company derives its revenue through a common offtake arrangement with a creditworthy entity for at least the same term.

Example B

In the hypothetical example shown in Diagram B, the Borrower/Project Company derives its revenues from standardized contracts, such as equipment leases or power purchase agreements with multiple host site-owners, provided however that such host site-owners, individually and in the aggregate, meet pre-defined credit criteria. In the latter case, LPO may look for greater equity participation in the risk associated with the offtake arrangements. In such a project, LPO can envision the Borrower/Project Company implementing its master business plan for installations of Distributed Technology using two or more installers. In such a project, LPO would also anticipate looking through a Distributed Energy Project's lease, power purchase agreement or other revenue contract structure to ensure that the Borrower/Project Company is not merely re-lending DOE-guaranteed loan proceeds to project hosts for unreasonable profit.

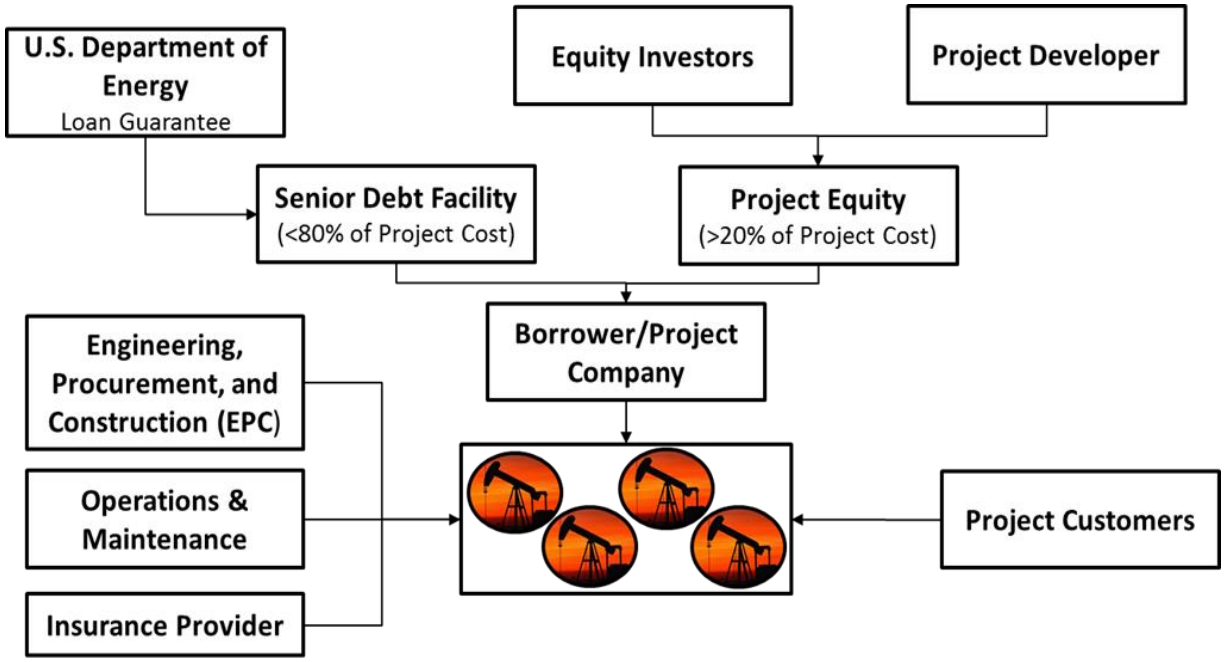
Diagram B - Key Features: Multiple Physical Sites with Multiple Site Owners as Offtakers/Customers, Multiple Installers



Example C

In the hypothetical example shown in Diagram C, the Borrower/Project Company operates a mobile technology, deriving revenues from its temporary set up and operation of such technology at multiple customer sites.

Diagram C - Key Features: Multiple Physical Sites/Customers, Using Mobile Technology



All Examples

In each of these example structures, LPO would expect successful Distributed Energy Projects to develop highly standardized (or readily customizable) installation plans, in order to permit replication and reduce construction risk. In instances where the equipment supply and the construction process pose greater than normal risk, LPO would look more favorably on Distributed Energy Projects structured in a manner to permit loan disbursements for project costs only after the relevant installation and/or pool of installations is completed and tested in accordance with the requirements of the Engineering, Construction, and Procurement Contract ("EPC") and offtake agreements.

To further mitigate risk and to facilitate LPO analysis at the credit decision and in connection with each requested loan disbursement, and in order to permit the more rapid deployment of the installations comprising a Distributed Energy Project, LPO would expect a successful Distributed

Energy Project to employ highly standardized contract forms for each of its site hosts, and would look for common/master agreements for other project contracts and services including operation and maintenance agreements, insurers, and credit agencies as applicable.

While the above structural examples describe only the basic parameters of project structures for Distributed Energy Projects, LPO believes they are good baselines for the consideration of prospective applicants for a Distributed Energy Project model. LPO will consider any of the above financing models for the deployment of Distributed Energy Projects using qualifying technologies as well as alternate financing models consistent with Title XVII and the 1703 Regulations.

2. Prohibited Borrower Activities

The Solicitation is **not** able to support borrowers in connection with any of the following activities:

Re-lending. The Solicitation does not involve a re-lending program. DOE will continue to be a senior lender, control loan disbursements based on project milestones, and have full recourse to adequate security.

Capitalization of State Green Banks. The Solicitation is not a vehicle to capitalize State green banks. However, State green banks or other state entities are invited to submit an application for a loan guarantee as an eligible borrower, sponsor, or co-lender under Title XVII and the 1703 Regulations. Moreover, any Distributed Energy Project involving a State green bank would need to be fully defined, have a master business plan involving the deployment of Distributed Technology, and satisfy all of the other criteria of Title XVII, the 1703 Regulations and this Solicitation. Additionally, as with all project Sponsors, to the extent a State's credit backs repayment of the guaranteed loan, the State's creditworthiness could affect the credit subsidy cost of the

transaction. Generally, a project backed by a State with strong credit would have a lower credit subsidy cost than would a project that is not backed with a strong credit.

Low-cost financing. The Solicitation does not offer low-cost financing for proven commercial technology. For example, standard roof-top solar or energy efficiency technology is not eligible unless at least a portion of the Project meets the Title XVII "innovation" requirements.

Multiple, unrelated technologies. Projects must deploy Distributed Technology and have a clear master business plan. Loans would not support multiple, unrelated projects.

3. Illustrative Distributed Energy Project Technologies

The following sample list of potential types of eligible projects is provided for illustrative purposes only. The sample list is not intended to be, and is not, exclusive or limiting. It is simply intended to identify types of projects that could be eligible, subject to technical review.

Potential types of eligible projects may include but are not limited to:

Grid Infrastructure and Storage

Distributed grid infrastructure and storage technologies that mitigate issues related to distributed generation, such as variability, dispatchability, congestion, and control by providing and/or enabling functionality such as active demand management, integration of both utility and customer owned storage assets, frequency and voltage regulation, etc. These technologies enable efficient operation of the utility, and increased renewable generation capacity.

• Cost effective, distributed storage technologies that provide consumers greater flexibility in managing their energy use to maximize the use of generation, while being available to grid operators for system reliability and stability services.

• Smart grid technologies and software systems that enable improved asset utilization for grid operators across the utility enterprise for increased reliability, operational efficiency, resiliency, and stability while accommodating a greater penetration of generation.

• Advanced Distribution Management Systems – Software platforms that support the full suite of distribution management and optimization including geographic information systems (GIS), outage management systems (OMS), distributed energy resource management systems (DERMS), fault location, isolation and service restoration (FLISR), volt/VAR optimization (VVO), conservation voltage reduction (CVR), peak demand management, support for microgrids and electric vehicles, etc.

• Distribution Automation – Sensors, actuators and associated software and data transmission methods that enable dynamic circuit reconfiguration to support improved reliability, stability, resiliency, and increased distributed generation.

• Active Demand Management Systems - Integrated, real-time demand management software tools that allow utilities to respond immediately to changing demand and enables customers to automatically manage energy consumption in response to grid.

• Smart inverters or other technologies that allow voltage variability control by grid operators.

Energy-Efficient Buildings and Installations

Zero Energy or Low-Carbon building technologies and installations that reduce energy consumption in a building, campus, or complex. These advanced building designs will demonstrate greater energy efficiency, integration of resources, and onsite microgrid systems.

• The distributed energy component of energy efficient buildings or building technologies that significantly reduce lighting usage, thermal heat loss, and plug loads.

• Passive building technologies that reduce the demand for heating and cooling.

• District cooling systems that utilize renewable energy, such as deep cold sea, lake, or river water.

• High-efficiency distributed generation and transmission systems that provide any combination of power, heat, or islanding capabilities and improve or reduce energy usage in residential, institutional, and commercial facilities, buildings, and/or processes.

• The distributed energy component of building energy systems that enable active demand management and storage in order to mitigate issues related to variability, dispatchability, and congestion.

• Energy generation, including distributed generation, incorporating storage.

• Smart grid systems incorporating any combination of demand response, energy efficiency, sensing, and storage to enable greater penetration of generation.

• Landfill methane to power gas turbines or fuel cells.

Distributed Power Generation

Decentralized power or thermal energy generation projects that incorporate new or significantly improved technology at a scale smaller than traditional utility-scale projects that increase efficiency and minimize losses associated with transmission and distribution by being located at the point of consumption.

• Distributed renewable energy generation that may be combined with storage including: solar photovoltaic installations such as solar gardens, rooftop solar or building integrated solar; wind; geothermal; modular low head hydropower systems along a single structure or body of water.

• Distributed cogeneration and/or combined heat and power including biofuels, biogas, landfill gas and sewage gas.

• Distributed thermal heating and/or cooling installations including solar thermal and ground-sourced geothermal.

• Waste energy recovery and use from thermal, mechanical, electrical, chemical or hydro-processes.

* * * * * * * * * *