

**LOAN GUARANTEE
SOLICITATION ANNOUNCEMENT
AMENDED AND RESTATED AS OF JANUARY 16, 2020¹**



**U.S. Department of Energy
Loan Programs Office**

**FEDERAL LOAN GUARANTEES FOR ADVANCED NUCLEAR
ENERGY PROJECTS**

Solicitation Number: DE-SOL-0007791

OMB Control Number: 1910-5134; OMB Expiration Date: March 31, 2022

Announcement Type: Initial

Issue Date:	December 10, 2014
First Part I Submission Due Date:	March 18, 2015²
First Part II Submission Due Date:	October 14, 2015³

¹ The original version of the Loan Guarantee Solicitation Announcement, issued on December 10, 2014, has been annotated for the convenience of prospective applicants to reflect the supplements published and effective since the original issue date through January 16, 2020: namely, the Supplement to Loan Guarantee Announcement dated June 23, 2015 (“First Supplement”), the Second Supplement to Loan Guarantee Announcement dated November 6, 2015 (“Second Supplement”), the Eighth Supplement to Loan Guarantee Announcement dated January 16, 2020 (“Eighth Supplement”) and the updated Solicitation Attachment C, Summary Lifecycle GHG Emissions Data Worksheet, published on January 26, 2015. This version also incorporates updated section references to the regulations implementing Title XVII of the Energy Policy Act of 2005, which are located in Part 609 under Chapter II of Title 10 of the Code of Federal Regulations, and which were amended on December 15, 2016 (the “1703 Regulations”). This document is intended to reflect the cumulative impact of all such Supplements and updated 1703 Regulations on the Solicitation; this document is not intended to effect any other change to the Solicitation.

² Please refer to Section V.A. for multiple due dates regarding Part I submissions.

³ Please refer to Section V.A. for multiple due dates regarding Part II submissions.

Last Part I Submission Due Date:
Last Part II Submission Due Date:

March 16, 2022⁴
March 16, 2022⁵

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⁴ As amended by the Eighth Supplement.

⁵ As amended by the Eighth Supplement.

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**UNITED STATES
DEPARTMENT OF ENERGY**

FULL ANNOUNCEMENT

Loan Guarantee Solicitation for Applications for Advanced Nuclear Energy Projects

Solicitation Number: DE-SOL-0007791

I. Solicitation Description

A. Purpose of Solicitation

Applicants are invited to apply for loan guarantees from the United States Department of Energy (“**DOE**”) under Title XVII of the Energy Policy Act of 2005, as amended, 42 U.S.C. §§16511-16516 (“**Title XVII**”). Under this Solicitation (“**Solicitation**”), DOE seeks Applications for loan guarantees to finance projects located in the United States that employ innovative advanced nuclear energy technologies that avoid, reduce, or sequester anthropogenic emission of greenhouse gases (“**Advanced Nuclear Energy Facilities**”).

B. Background⁶

This Solicitation 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. Copies of the authorities cited herein may be found at <https://www.energy.gov/lpo/title-xvii> (the “**Program Website**”). Applicants should familiarize themselves with this guidance before submitting an Application. Capitalized terms defined herein have the meanings ascribed to them in this Solicitation. Capitalized terms used but not defined herein have the meaning ascribed to them by the 1703 Regulations.

Under this Solicitation DOE will make available up to Ten Billion Eight Hundred Ninety-Seven Million Dollars (\$10,897,000,000) in loan guarantee authority.

DOE’s authority to issue this amount of loan guarantees was provided by (a) the Revised Continuing Appropriations Resolution, 2007, P.L. 110-5 (the “**2007 Appropriations Act**”) and (b) the Omnibus Appropriations Act, 2009, P.L. 111-8, as amended by Section 408 of the Supplemental Appropriations Act, 2009, P.L. No. 111-32 (the “**2009 Appropriations Act**”). DOE’s authority to issue this amount of loan guarantees remains available until committed. The loan shall be senior secured debt.

Applicants must submit Applications in response to this Solicitation in accordance with the detailed instructions provided in Section V, Attachment A, and Attachment B.

II. Eligibility Information

A. Project Eligibility

Before seeking a loan guarantee, an Applicant is strongly encouraged to verify that its project (the “**Project**”) is not eliminated by the threshold determinations set forth in Section 609.5(a)⁷ of the 1703

⁶ As amended by the Eighth Supplement.

⁷ Formerly Section 609.7(a).

Regulations and that all of the eligibility requirements of Title XVII, the 1703 Regulations, and this Solicitation are met.

An “**Eligible Project**” under this Solicitation is a Project located in the United States that is an Advanced Nuclear Energy Facility (within the meaning of that term in Section 1703(b)(4) of Title XVII); and meets both of the following requirements:

- a) Avoids, reduces, or sequesters anthropogenic emission of greenhouse gases; **and**
- b) Employs New or Significantly Improved Technology as compared to Commercial Technology in service in the United State at the time the Term Sheet is issued.

The amount of funds available under the 2007 Appropriations Act is \$2,000,000,000. The amount of funds available under the 2009 Appropriations Act is \$8,897,000,000. Of the latter amount, \$2,000,000,000 is available exclusively for advanced nuclear facilities for the “front-end” of the nuclear fuel cycle. The remaining \$8,897,000,000 under the 2007 Appropriations Act and the 2009 Appropriations Act is available for nuclear power facilities.⁸

Advanced nuclear facilities for the “front-end” of the nuclear fuel cycle include:

- a) Uranium Conversion. Projects that economically convert U3O8 powder into a gaseous form of uranium hexafluoride;
- b) Uranium Enrichment. Projects or facilities that transform natural uranium or uranium tails to a higher isotopic content of U235 including by (1) gas centrifuge or (2) laser isotope separation; and
- c) Nuclear Fuel Fabrication. Projects that fabricate nuclear fuel including (1) production of UO2 powder that is “reconverted” from enriched UF6 gas from enrichment plants; (2) formation of UO2 pellets from UO2 powder through compaction and sintering; and (3) fuel assembly (i.e. insertion of pellets into zircaloy tubes and formation of a fuel assembly using fasteners).

Nuclear power facilities include:

- a) Nuclear reactors. Projects with state-of-the-art design improvements. These improvements are in the areas of fuel technology, thermal efficiency, modularized construction, safety systems, and standardized design;
- b) Small Modular Reactors. Projects with state-of-the-art design improvements. These improvements are in the areas of fuel technology, thermal efficiency, modularized construction, safety systems (especially the use of passive rather than active systems), and standardized design and are nominally 300 MWe or smaller in size;
- c) Upgrades. Projects consisting of improvements and/or modifications to an existing reactor that is operating but that due to such improvements and/or modifications will operate more efficiently; and
- d) Upgrades. Projects consisting of improvements and/or modifications to an existing reactor that is not operating and cannot operate without such improvements and/or modifications

⁸ As amended by the Eighth Supplement.

or an existing reactor that is operating but would be required to cease operating unless such improvements and/or modifications are made;

Nuclear power facilities include nuclear power projects and the associated nuclear reactor designs currently under Nuclear Regulatory Commission (“**NRC**”) licensing review, as well nuclear power projects and associated nuclear reactor designs that are under the NRC pre-application phase for certification, construction permit, or combined construction and operating license (“**COL**”) review.

Subject to limited exceptions that are set forth in the 2009 Appropriations Act, DOE may not be able to issue loan guarantees to projects using funds appropriated under that act that will benefit directly or indirectly from certain other forms of federal support, such as grants or other loan guarantees from federal agencies or entities, including DOE, federal agencies or entities as a customer or off-taker of the Project’s products or services, or other federal contracts, including acquisitions, leases and other arrangements, that support the Project.

Whether an Application for a loan guarantee for a project could be fully financed on a long-term basis by commercial banks, internally generated corporate funds, or other commercial means without a federal loan guarantee will be considered as an evaluation factor. Evaluation of this factor may occur prior to issuance of a Conditional Commitment or when a Conditional Commitment is issued and may be among the factors considered if a request is made to extend the termination date of a Conditional Commitment. If there is a material change in circumstances that might affect evaluation of this factor, final evaluation of this factor will occur at or shortly prior to closing. While DOE will gather information regarding the expected rates of return for investors and developers, given the significant importance of motivated equity sponsors in a transaction, DOE does not anticipate establishing requirements regarding such metrics.

Mandatory criteria that DOE will use during each round of Part I and Part II reviews in determining which Project Applications will proceed to the next stage are (1) whether the Project provides a reasonable prospect of repayment of the principal and interest on the Guaranteed Obligation and other Project debt, and (2) whether the Guaranteed Obligation, when combined with amounts available from other sources, will be sufficient to carry out the Project. If these mandatory requirements are not validated in any given round of Part I or Part II reviews, or, at DOE’s discretion, cannot be validated if required changes to the Project and the financing proposal are made, such Application will not receive further consideration. Additionally, at closing the Applicant must demonstrate to DOE’s satisfaction that the answers to both of these criteria are met.

Projects that do not meet the criteria set forth in this Section II.A may be eligible to apply for a loan guarantee under other solicitations. Please visit the Program Website for guidance regarding other solicitations.

B. Catalytic Projects

This Solicitation is designed to provide loan guarantees under Title XVII to support those projects that have the most promising advanced nuclear energy facility technologies. DOE will look favorably on Eligible Projects that will have a catalytic effect on the commercial deployment of future Advanced Nuclear Energy Projects that replicate or extend the innovative feature of the Eligible Project.

In addition to projects that incorporate advanced nuclear reactor designs, this Solicitation also makes eligible fuel fabrication facilities that employ innovative fabrication techniques and/or processes, or fabricate nuclear fuel for advanced nuclear power facilities.

Prior to the execution by DOE of a Loan Guarantee Agreement, the prospective borrower must have filed for, or have obtained any required regulatory approvals for the Project. Any specific NRC licensing requirements deemed necessary for Eligible Projects will be addressed by conditions precedent to be incorporated in the project’s loan guarantee agreement. This Solicitation opens LPO’s remaining available nuclear-related authority to certain segments of front-end nuclear facility projects including advanced nuclear fuel fabrication facilities, provides a broad range of eligible reactor technologies, and offers flexibility regarding reactor technology and site location.

C. Scope of Solicitation⁹

The term “nuclear power facilities” includes nuclear power projects and the associated nuclear reactor designs currently under NRC licensing review or under the NRC pre-application phase for certification, construction permit, or combined construction and operating license. These include nuclear reactors, small modular reactors, uprates, and upgrades. By implication, the category excludes projects involving nuclear material that do not generate, or facilitate the generation of, power. The term “advanced nuclear facilities for the ‘front-end’ of the nuclear fuel cycle” includes uranium conversion, uranium enrichment, and nuclear fuel fabrication projects.

For purposes of this Solicitation, neither category of eligible projects includes projects for the manufacturing or use of radioactive isotopes for industry, agriculture, or medicine.

D. Early Upstream and Engineering Project Costs¹⁰

Projects Costs are defined in Section 609.2 of the 1703 Regulations as “those costs, including escalation and contingencies, that are to be expended or accrued by Borrower and are necessary, reasonable, customary and directly related to the design, engineering, financing, construction, startup, commissioning and shakedown of an Eligible Project as specified in §609.10¹¹ of this part. Project costs do not include costs for the items set forth in §609.10(b)¹² of this part.” Subject to the exclusion of Project Costs as set forth in Section 609.10(b) of the 1703 Regulations, Projects Costs, for purposes of this Solicitation include the Project Costs identified in Section 609.10(a)¹³ of the 1703 Regulations.

In the below table, DOE has (1) identified in the column with the headings “Early Upstream Categories” and “Engineering” categories of costs that may be applicable to the development of Advanced Nuclear Facilities, and (2) in the column with the heading “Eligibility Under 10 CFR § 609.10 Project Costs”, the subsection of Section 609.10(a) to which the applicable category of costs are identified as Project Costs under the 1703 Regulations.

Early Upstream Categories	Eligibility Under 10 CFR § 609.10 Project Costs
Site Suitability/Identification (feasibility studies, access, offsets)	(a)(1)
Site Specific Investigation (site improvements, site prep)	(a)(1)
Site Characterization/Quantification Activities (met tower, core samples, flora/fauna, 2 yr data)	(a)(1)

⁹As amended by the First Supplement.

¹⁰ As amended by the Second Supplement.

¹¹ Formerly Section 609.12.

¹² Formerly Section 609.12(c).

¹³ Formerly Section 609.12(b).

Site Permitting (local/state/federal)	(a)(1), (a)(5)
Early Site Permitting (requires evaluation of alternative sites)	(a)(1), (a)(5)
Engineering	
Technology Assessment (identification and decision of technology best suited for application)	(a)(8)
Cost to support NRC COL (design and engineering)	(a)(5), (a)(8)
Other NRC licensing fees	(a)(5)
Other Professional Services and Fees, Costs of Engineering	(a)(2), (a)(8)
Site Specific Engineering (civil, geological, structural)	(a)(8)
Design Conceptual (Title I) Preliminary (Title II) Detailed (Title III)	(a)(8)

The amount of the Project Costs affects whether an Applicant is required to deliver a credit assessment and a credit rating. Additionally, the face value of the debt guaranteed by DOE is limited to no more than 80 percent of total Project Costs. The Secretary may from time to time audit any or all items of costs included as Project Costs in statements or certificates submitted to the Secretary or the servicer or otherwise, and may exclude or reduce the amount of any item which the Secretary determines to be unnecessary or excessive, or otherwise not to be an item of Project Costs.

III. Application Requirements

In accordance with Title XVII and the 1703 Regulations, this Solicitation requires Applicants to submit timely information in sufficient detail to support a thorough analysis of the Project’s compliance with the objectives and requirements established by Title XVII, the 1703 Regulations, and this Solicitation, as well as the rigorous underwriting criteria appropriate for projects of this scale. All information that DOE collects will be used and stored in accordance with DOE policies and procedures.

A. Required Information and Materials

1. **Required Materials:** Attachment A and Attachment B set forth the information and materials DOE requires from an applicant for the applicant to demonstrate compliance with the information collection requirements of 10 CFR Part 609.
2. **Additional Requested Information:** In addition to information requested in this Solicitation, each Applicant may also be required to submit additional information subsequently requested by DOE in order to clarify an Application.

B. Compliance with NEPA Regulations

The National Environmental Policy Act (“**NEPA**”) requires federal agencies to consider the potential environmental impacts of their proposed actions. DOE must complete NEPA review before it makes a decision to provide a loan guarantee. Therefore NEPA compliance is integrated into DOE’s Loan Guarantee Program decision-making procedures to ensure that a project’s environmental impacts are properly considered.

1. There are three possible levels of NEPA for an Applicant’s Project:

- a) Environmental Impact Statement (“**EIS**”): For projects expected to have significant effects on the quality of the human environment (biological, physical, and socio-cultural resources);
 - b) Environmental Assessment (“**EA**”): For projects with the potential to significantly impact biological, physical, and socio-cultural resources; and
 - c) Categorical Exclusion (“**CX**”): For projects that meet the conditions for excluding the requirement to prepare an EA or EIS because analysis of similar actions has determined such actions will not have significant impacts (e.g., re-equipping and retooling within existing facilities).
2. The NEPA review process begins once the Project has been accepted into the continued due diligence phase following Part II review. If DOE invites a Project Sponsor to begin negotiations for a loan guarantee, unless an EA or EIS has been prepared for the Project by another federal agency, DOE will evaluate the Project to determine the appropriate level of NEPA review required.
 3. The Applicant, with DOE oversight, is responsible for providing all necessary analysis and documentation to comply with NEPA and the applicable implementing regulations in the Code of Federal Regulations (“**CFR**”) (40 CFR 1500-1508 and 10 CFR 1021).
 4. An EIS typically requires an 18-24 month processing time, and an EA typically requires 6-9 months. Examples of projects normally requiring an EA or an EIS can be found in the DOE NEPA implementing regulations at 10 CFR 1021, Appendices C and D to Subpart D, respectively. A list of actions potentially eligible for categorical exclusion to the EA or EIS requirements can be found at 10 CFR 1021 Appendix B to Subpart D.
 5. Once DOE initiates the NEPA review process, Applicants should consult with DOE before commencing any work on the Project site (beyond preliminary design activities). Such consultation is necessary as certain actions that could cause adverse environmental impacts or limit the choice of available alternatives for the Project may not be allowable during the NEPA review process and could result in discontinuing consideration of an Application or terminating an outstanding Conditional Commitment.
 6. NEPA review must be completed before a loan guarantee can be issued.

Additional information on the NEPA process for loan guarantee projects is available in Attachment B and on the Program Website at:

<https://www.energy.gov/lpo/title-xvii/title-xvii-environmental-compliance>

C. Davis-Bacon Requirements

All laborers and mechanics employed by contractors and subcontractors in the performance of construction work financed in whole or in part by a loan guaranteed under Title XVII must be paid wages at rates not less than those prevailing on projects of a character similar in the locality as determined by the Secretary of Labor in accordance with subchapter IV of chapter 31 of title 40, United States Code (the “**Davis-Bacon Act**”). Each Borrower will be required in the Loan Guarantee Agreement to make representations and warranties, agree to covenants, and satisfy conditions precedent to closing and to each disbursement that,

in each case, relate to its compliance with the Davis-Bacon Act and all applicable Davis-Bacon Act regulations, including all requirements set forth in 29 CFR Part 5 and the wage determination schedule(s) applicable to the Project. Borrowers are advised that, in accordance with the Davis-Bacon Act and its implementing regulation at 29 CFR 1.6(g), the Davis-Bacon Act obligations described above for construction work financed in whole or in part with a Title XVII loan guarantee must be complied with beginning with the “construction, prosecution, completion or repair” (as defined in 29 CFR 5.2(j)) of such Project, regardless of whether the closing of the DOE loan guarantee has occurred. An exception to the requirement to comply prior to closing of the DOE loan guarantee is available if the Administrator of the Wage and Hour Division, Employment Standards Administration, United States Department of Labor (“**DOL**”) finds that it is necessary and proper in the public interest to prevent injustice or undue hardship and there is no evidence of intent to apply for federal funding or assistance prior to the start of construction. Applicants should visit the DOL website at <http://www.dol.gov/whd/govcontracts/dbra.htm> and the Program Website for additional guidance regarding the Davis-Bacon Act and its related acts.

In addition to the Davis-Bacon Act requirements, applicants are encouraged to consider the use of Project Labor Agreements (“PLAs”). The federal government has found that PLAs can be beneficial for successfully completing large-scale and technically complex construction projects.

D. Cargo Preference Act of 1954 Requirements

All Projects that receive a loan guarantee under this Solicitation must comply with the Cargo Preference Act of 1954, which establishes certain requirements for the use of U.S. flagged vessels in the movement of cargo in international waters. These requirements may apply to shipments contracted for or made prior to receiving a loan guarantee. DOE urges Applicants to contact the Maritime Administration directly to ensure that relevant Project agreements provide for compliance with the Cargo Preference Act.

General information on cargo preference can be found at the Maritime Administration’s web site: <https://www.maritime.dot.gov/ports/cargo-preference/cargo-preference>. You may also address questions on cargo preference to the Maritime Administration’s Office of Cargo Preference and Domestic Trade at (202) 366-4610 or via email to cargo.marad@dot.gov.

IV. Application and Evaluation Process

A. Application Components

The Application is divided into a Part I submission and a Part II submission. Detailed instructions for the contents of the Parts I and II submissions are set forth in Attachment A.

Part I: The Part I submission provides DOE with a description of the Project, technical information, a completed copy of Attachment C providing a summary of the lifecycle greenhouse gas emission data for the Project, background information on management, financing, construction, and operating strategies, and progress to date of critical path schedules. These schedules include items such as obtaining licenses or regulatory permits and approvals, site preparation and long-lead procurements, and are used as a basis for determining the overall eligibility of the Project and the Project’s readiness to proceed. All Part I submissions will be competitively evaluated against all others submitted during the corresponding round of review. DOE will evaluate each Part I submission based upon the factors summarized in Attachment A – Part I. Projects that do not meet the requirements set forth in this Solicitation will not receive any further consideration.

Part II: The Part II submission may be filed at any time after DOE invites an Applicant to make a Part II submission. The Part II submission consists of the items summarized in Attachment A – Part II as well as

other information that may be requested to facilitate DOE’s continued due diligence review. All Part II submissions will be competitively evaluated against all others submitted during the corresponding round of review. DOE shall have the right, in its sole discretion, to defer consideration of a Part II submission to a later round, if one is available, and to terminate an incomplete Application after the final round. Projects that do not meet the requirements set forth in this Solicitation will not receive any further consideration.

B. Loan Guarantee Process Overview

The following table outlines the Application, approval, and post-selection process for obtaining a loan guarantee under this Solicitation:

<u>Stage</u>	<u>Party Responsible</u>	<u>Costs due from Applicant¹⁴</u>
• Issue Solicitation	DOE	--
• Confirm Applicant eligibility	Applicant	--
• Fulfill Application requirements	Applicant	--
• File Part I submission	Applicant	\$50,000 of Application Fee
• Review Part I and determine eligibility and Project’s readiness to proceed	DOE	--
• Invite qualified Applicants to file Part II submission	DOE	--
• File Part II submission	Applicant	Remainder of Application Fee, as applicable
• Review and evaluate Part II submissions	DOE	--
• Invite selected Applicants to continue due diligence	DOE	--
• Continue due diligence of selected Applicants	DOE	Consulting and legal costs
• Negotiate Term Sheets with selected Applicants	DOE/Applicant	--
• Issue Conditional Commitment for loan guarantee	DOE	25% of Facility Fee
• Negotiate transaction documents	DOE/Applicant	--
• Determine Credit Subsidy Cost	DOE	
• Execute Loan Guarantee Agreement	DOE/Applicant	75% of Facility Fee

¹⁴ Please refer to Section VI for an explanation of all fees associated with submitting an Application under this Solicitation.

100 % of first annual
Maintenance Fee
100% of Credit Subsidy
Cost

C. Summary of Application Evaluation Process

DOE will review each Part I submission to determine whether or not such submission is responsive to the requirements of this Solicitation. DOE's Part I evaluation will place particular importance on verifying that an Application meets the Project eligibility requirements set forth in II.A, specifically that the Project:

1. Qualifies as an Advanced Nuclear Energy Facility in the technology areas described herein;
2. Avoids, reduces, or sequesters anthropogenic emission of greenhouse gases;
3. Employs New or Significantly Improved Technology as compared to Commercial Technology in service in the United States;
4. Is located in the United States;
5. Provides a reasonable prospect of repayment of the principal and interest on the Guaranteed Obligation and other Project debt;
6. Has sufficient funds to carry out the Project; and
7. Is not benefitting from certain other federal assistance as more fully described in II.A.

Applicants for Projects that, in DOE's Part I evaluation, are deemed eligible and ready to proceed, will then be invited to make a Part II submission. DOE will conduct a more detailed, weighted review of each Part II submission based on the factors referred to in this Solicitation.

Section 609.5¹⁵ of the 1703 Regulations sets forth information regarding programmatic, technical, and financial evaluation of Applications. DOE will evaluate Applications based on the requirements of Title XVII, the 1703 Regulations, and this Solicitation. In addition to the factors listed in Section 609.5(b)¹⁶ of the 1703 Regulations, pursuant to Section 609.5(b)(14)¹⁷ of the 1703 Regulations DOE will consider such other criteria that DOE deems relevant in evaluating the merits of an Application including, without limitation, the following factors:

1. Whether the Project could be fully financed on a long-term basis by commercial banks, institutional investors, or the capital markets without a federal loan guarantee;
2. Whether the Project has identified a dedicated and appropriate Project site. Generally, a Project is restricted to one location within the United States. However, DOE may, in its discretion, consider an Application for a Project using a particular technology that is proposed to be situated in more than one location in the United States if multiple locations are integral components of a unitary plan, necessary to the viability of the Project, and at least one of the locations is identified in the Application;

¹⁵ Formerly Section 609.7.

¹⁶ Formerly Section 609.7(b).

¹⁷ Formerly Section 609.7(b)(16).

3. The level of NEPA review required by DOE;
4. Whether the Guaranteed Obligation is expected to be senior-secured debt;
5. The best use of the loan guarantee (i.e., Applications that demonstrate the most efficient and competitive uses of the loan guarantee);
6. The Project Sponsor's experience in the development of Advanced Nuclear Energy Projects including experience in securing project financing, project due diligence, developing, designing, equipping, building, interconnecting and commissioning the assets, and contracting for the sale/purchase of energy; and
7. The extent the Project uses partial guarantees and/or co-lenders. The use of partial guarantees and/or co-lenders will be viewed favorably by DOE.

DOE will make decisions as to whether to continue due diligence on Projects competitively evaluated during a given round of Part II reviews after the closing of such round. At any time following the closing of any particular round of Part II submissions, DOE may select, for purposes of continuing due diligence, underwriting, and negotiations, Applications meeting the requirements of Title XVII as well as the underwriting criteria for this Solicitation. During this period of review, communications from the Applicant to DOE are generally not permitted with respect to an Application, except in instances when the Applicant is required to respond to DOE's written notification to such Applicant. Approval of an Application for the purposes of continuing due diligence, underwriting, and negotiations is not an assurance that DOE will offer a Conditional Commitment or a loan guarantee.

The term "due diligence" means the research and analysis that LPO conducts concerning a project for which LPO is considering providing a loan guarantee. During the due diligence process, LPO confirms all material facts regarding the project by, among other things, looking at various aspects relating to the subject project, such as general company data, company financial information, corporate agreements, relevant corporate and project legal documents, intellectual property rights, corporate insurance coverage, corporate litigation history and documents, key personnel and their ability to perform the roles assigned to them, environmental matters, corporate tax filings and documents, marketing information, internal controls, information systems, and operational information. Such research and analysis may include questions (among others) such as who will provide the funds, other than the DOE-guaranteed debt, for the construction of the project; how will the project pay its operating expenses and repay its debt; which parties are responsible for which risks; what experience does your construction contractor and operator have on these types of projects; what permits are required to construct and operate the project and does the project have such permits; and is it possible that there could be cost overruns under the construction contract and, if so, who will pay for those cost overruns. In addition to information requested in this Solicitation, each Applicant may also be required to submit additional information subsequently requested by DOE in order to clarify an Application.

Mandatory criteria that DOE will use during each round of Part II reviews in determining which Project Applications will proceed to the next stage are (1) whether the Project provides a reasonable prospect of repayment of the principal and interest on the Guaranteed Obligation and other Project debt, and (2) whether the Guaranteed Obligation and other Project debt, when combined with amounts available from other sources, will be sufficient to carry out the Project. If these mandatory requirements are not validated in any given round of Part II reviews, or, at DOE's discretion, cannot be validated if required changes to the Project and the financing proposal are made, such Application will not receive further consideration.

As required by Section 609.3(b) of the 1703 Regulations, DOE shall consider the following factors (the "**Initial Part II Factors**") in determining to make guarantees to Projects under this Solicitation: financial

factors, technical factors, and programmatic factors. Additionally, DOE intends to consider policy factors (the “**Policy Factors**”) in determining to make guarantees to Projects under this Solicitation. After evaluation of an Application based on the Initial Part II Factors, selected Applications will then be evaluated against each other based on Policy Factors. Only Applications for Projects that are determined to be highly qualified based on Policy Factors will continue with due diligence. An Application for a Project that scores very highly on the Part II Initial Factors but does not score well on the Policy Factors is highly unlikely to continue with due diligence. Applications for Projects that do not score well on the Initial Part II Factors will not be part of the competition based on the Policy Factors.

The following table summarizes the relative weightings for each Initial Part II Factor:

<u>Criteria</u>	<u>Weighting</u>
Financial Factors: Creditworthiness	45%
Technical Factors: Technical relevance, merit, technical approach, work plan, and construction plan	35%
Programmatic Factors: Legal, environmental and regulatory Factors	<u>20%</u>
TOTAL	100.0%

D. Review of Financial Factors (Weighting: 45%)

As part of its Part II review process, DOE will conduct a thorough review of all financial factors associated with an Application. Among other considerations, the financial review will:

1. Assess the creditworthiness of the Project:
 - a) The Project’s economic viability with and without the DOE loan guarantee, the availability of other federal and state incentives other than the DOE loan guarantee, its ability to generate sufficient cash flow to service the borrower’s debt obligations over the life of the loan guarantee;
 - b) Each Project Sponsor’s financial commitment to the Project, financial strength, including its ability to pay transaction costs arising out of the Project (e.g., fees and expenses for DOE’s internal technical resources and its independent consultants and outside counsel) on a timely basis, and the credibility of its business and financial plans; and
 - c) Overriding market factors that could significantly influence the success of the Project;
2. Assess the financial viability of the Project, review the sources and uses of funds proposed by the Applicant in the financial plans submitted with the Application, and review updates and projections for future financial performance;
3. Consider the Project Sponsor’s prior financial and managerial investment in the Project and its capability to implement the Project as proposed;
4. Consider the extent to which the Project uses partial guarantees and/or co-lenders; and
5. Review all other financial factors DOE deems appropriate.

E. Review of Technical Factors (Weighting: 35%)

As part of the Part II technical review, DOE will rely on the quality and scope of the Application's technical submission, which shall include the technical elements found in Section 609.4(c)¹⁸ of the Final Regulation and as supplemented in Section IVA and C herein. Among the considerations for DOE's technical review are:

1. **Technical Relevance and Merit:** DOE will evaluate the extent to which the Project will enhance the use of Advanced Nuclear Energy Projects on a national, state, regional, or local basis, including:
 - a) the technical readiness of the proposed innovation for near-term commercial application;
 - b) the projection for long-term applicability of the technology proposed; and
 - c) the innovativeness of the technology application or proposed process when compared to established commercial systems.
2. **Capabilities of the Project Team:** DOE will evaluate the experience and abilities of the Applicant and primary Project participants, including the:
 - a) relevance and depth of prior experience of the Applicant and key Project partners in developing, constructing, and operating projects of similar size, scope and complexity; competencies, strengths and experiences of key partners such as equipment suppliers, engineering, architectural, and design agents or consultants, and vendors providing essential support or services to the Project; and
 - b) whether the Project has obtained access to intellectual property needed to support the Project including key technical components, processes, designs, feedstock, and catalysts through licenses, procurements, or patents.
3. **Technical Approach/Work Plan:** Projects will be evaluated based on the strength of the Project management plans to be used to achieve the stated cost, schedule, and technical performance objectives and milestones, including:
 - a) scope, maturity, and completeness of pre-construction systems analysis, design detail and prototype testing, including the level and maturity of front end engineering and design;
 - b) relevance, scope, and maturity of the plans for Project execution and performance measurement including integrated Project schedules;
 - c) progress implementing and executing these plans, including achievements attained to date; and
 - d) relevance, scope, and maturity of Project risk management and mitigation plans.
4. **Construction Plan:** DOE will evaluate the strength and completeness of the construction plan for the Project, including:

¹⁸ Formerly Section 609.6.

- a) progress in the development of the Project construction management approach, whether the approach is through an engineering, procurement, and construction contract, or other general contracting arrangements;
- b) schedule and progress in securing contracts and services for Project execution including the extent to which equipment, commodities, or services costs have been identified, negotiated, and assigned and extent to which such costs are fixed or still variable; and
- c) whether necessary construction rights and federal, state and local permits have been identified, obtained, approved, or scheduled.

F. Review of Programmatic Factors (Weighting: 20%)

1. **Legal Review** (Weighting: 10%): As part of the Part II programmatic review, DOE will review the Project's legal structure and risks. This review may involve analysis of legal documents among the parties, including equity owners, entities providing other forms of financing, engineers and construction contractors, operation and maintenance contractors, equipment suppliers, host communities, and any other counterparties of interest. DOE also will analyze the intellectual property rights of all relevant parties in the Project. In addition, DOE will evaluate the Project's capacity to mitigate risk from potential legal and regulatory issues that could jeopardize the success of the Project. Areas of review will include any pending or threatened litigation involving the Project or any Project participant.
2. **Environmental Review** (Weighting: 10%): As part of the Part II programmatic review, DOE will evaluate the Project to determine the appropriate level of environmental review, including the level of NEPA review required. The Applicant must provide enough information to enable DOE to determine the scope of affected environmental aspects (biological, physical, and socio-cultural resources affected) and the level of NEPA review that would be required if the Applicant were selected to begin negotiations with DOE. More information on the NEPA process and examples of environmental data that should be included in each Application may be found in Attachment B.

G. Review of Policy Factors

DOE will evaluate the extent to which an Application for a Project that scores highly enough to continue to the competition based on Policy Factors, achieves policy objectives.

1. Assess to what measurable extent the Project avoids, reduces, or sequesters anthropogenic emissions of greenhouses gases;
2. Assess to what extent the New or Significantly Improved Technology to be employed in the Project, as compared to Commercial Technology in general use in the United States, is ready to be employed commercially in the United States, yields a commercially viable project or service in the use proposed in the Project, and is or will be available for further commercial use in the United States;
3. Compare the percentage of guaranteed funds to total project costs relied upon by the Application to the percentage of the guaranteed funds to total projects costs relied upon by other Applications, with greater weight being given to Applications that rely upon a smaller percentage of guaranteed funds;

4. Assess the extent to which the Applicant and the Project Sponsor are prepared to proceed to Conditional Commitment and Closing with greater weight being given to Applications for which the Applicant and the Project Sponsor are prepared to proceed more expeditiously than other Applicants and Project Sponsors;
5. Assess the extent to which the New or Significantly Improved Technology to be employed in the Project can be replicated, the benefits for the United States based on such replication, and the extent to which successful deployment of the Project will accelerate the process of replication; and
6. Assess to what extent (i) the New or Significantly Improved Technology used in the Project constitutes an important improvement in technology, as compared to Commercial Technology, used to avoid, reduce, or sequester anthropogenic emissions of greenhouse gases, and (ii) the Applicant has a plan to advance or assist in the advancement of that technology into the commercial marketplace.

H. Review and Determination to Proceed

In reviewing completed Applications, and in prioritizing and selecting Projects for due diligence review, DOE will apply the criteria set forth in Title XVII, the 1703 Regulations, and this Solicitation. For each round of review, submissions will be considered in a competitive process (i.e., each submission will be evaluated against all other submissions responsive to this Solicitation that are filed during the corresponding round of review). DOE will consult with the Secretary of the Treasury regarding the terms and conditions of a potential loan guarantee.

Pursuant to Section 609.5(c)¹⁹ of the 1703 Regulations, if DOE reviews a submission and decides not to proceed, DOE will inform the Applicant in writing of the reason(s) for not moving forward. If at any time after DOE invites an Applicant to file a Part II submission, DOE decides not to proceed further with due diligence review or negotiation of a Term Sheet, DOE will inform the Applicant in writing of the reason(s). The discontinuation of due diligence by DOE will not prejudice the Applicant from applying for a loan guarantee pursuant to the terms of any existing Solicitation that is accepting Applications. DOE's decision not to proceed further with the issuance, due diligence review, or negotiation of a Term Sheet shall be final and non-appealable.

I. Notification

Selection of Projects for continued due diligence review will be made after the closing of each round of Part II review. If DOE determines that a Project may be suitable for a loan guarantee, DOE will notify the Applicant in writing, will continue its due diligence and, when appropriate, begin negotiating a Term Sheet. There can be no assurance that any Project will be selected for continued due diligence review or offered a Term Sheet.

J. Government Right to Reject or Negotiate

DOE reserves the right, without qualification, to reject any or all Applications received in response to this Solicitation or select any Application for negotiation of a Term Sheet.

¹⁹ Formerly Section 609.7(d).

V. Application Schedule and Instructions

In order to encourage submissions of complete Applications as early as possible after the date of this Solicitation, Part II submissions will be systematically reviewed on a continuous basis as soon as they are received. However, final selection of qualified Applicants will not occur until after all Part II submissions are competitively evaluated against all others submitted during the corresponding round of review.

A. Application Submission Schedule²⁰

The following are the Part I and Part II Application due dates:

Round	Part I Date	Part II Date
1	1/15/2020	1/15/2020
2	2/12/2020	2/12/2020
3	3/18/2020	3/18/2020
4	4/15/2020	4/15/2020
5	5/13/2020	5/13/2020
6	6/17/2020	6/17/2020
7	7/15/2020	7/15/2020
8	8/12/2020	8/12/2020
9	9/16/2020	9/16/2020
10	10/14/2020	10/14/2020
11	11/18/2020	11/18/2020
12	12/16/2020	12/16/2020
13	1/13/2021	1/13/2021
14	2/17/2021	2/17/2021
15	3/17/2021	3/17/2021
16	4/14/2021	4/14/2021
17	5/12/2021	5/12/2021
18	6/16/2021	6/16/2021
19	7/14/2021	7/14/2021
20	8/18/2021	8/18/2021
21	9/15/2021	9/15/2021
22	10/13/2021	10/13/2021
23	11/17/2021	11/17/2021
24	12/15/2021	12/15/2021
25	1/12/2022	1/12/2022
26	2/16/2022	2/16/2022
27	3/16/2022	3/16/2022

Additional rounds may be announced in a supplement to this Solicitation.

²⁰ As amended by the Eighth Supplement.

B. Electronic Application Submissions

Applicants must file Part I and Part II submissions in electronic form via the DOE Loan Program's online Application portal ("**Application Portal**"). Supporting documents for Applications will be accepted only in the following formats: Microsoft Excel or Adobe PDF. Do not encrypt, compress, or zip any files. For an Application to be considered under this Solicitation:

- Part I must be submitted electronically no later than 11:59 pm Eastern Time, on the due date for the respective Part I round of review.
- To be considered for a particular Part II round of review, Applicants must file their Part II submission no later than 11:59 pm Eastern Time on the corresponding due date for that round of Part II submissions.

1. Application Portal Submission Process:

- a) Applicants may access the Application Portal from the Program Website, <https://www.energy.gov/lpo/title-xvii>. The information requested in Part I Section A is to be entered directly into the text fields provided in the Application Portal. The information requested in Part I Sections B through H and in Part II is to be provided on PDF or Excel documents uploaded through the Application Portal. Uploaded documents must indicate clearly the section and subsection of the Part I or Part II requirement to which the information on the documents pertains.
- b) The Application Portal provides a process for making corrections to an Application if an Application requires substantive changes or additions after it has been submitted and prior to a submission deadline.
- c) DOE will calculate the time of delivery for Part I or Part II of an Application as provided by the time stamp for such submission as given by the Application Portal.
- d) Prior to the applicable due date and time for the Part I and Part II submissions, it is the responsibility of the Applicant to verify that each submission was successfully transmitted and that DOE has received each such submission. This may be done by printing the confirmation page provided to the Applicant from the Application Portal.

C. Registrations

To apply electronically via the Application Portal, Applicants must complete the following:

1. obtain a Dun and Bradstreet Data Universal Numbering System ("**DUNS**") number (plus 4 digit extension if applicable);
2. obtain a North American Industry Classification System ("**NAICS**") code; and
3. register with the System for Award Management ("**SAM**").

If you do not know or do not have a DUNS number, you can search for it or request one at: <http://fedgov.dnb.com/webform/displayHomePage.do>.

If you do not know or do not have a NAICS code, you can search for it or request one at: <http://www.census.gov/eos/www/naics/>.

If you are not registered with SAM, register at <https://www.sam.gov/SAM/>. The SAM registration must be completed and active before a payment can be made.

D. Additional Application Submission Media

1. In addition to, but not in lieu of, completing the Application using the Application Portal, Applicants may also submit the Application via CD-Rom:
 - a) Part I on no more than two (2) CDs; and
 - b) Part II on no more than two (2) CDs.

All non-electronic submissions should be sent to the address listed below. Such media should arrive by express mail no later than two (2) business days after the due date for the corresponding Part I or Part II submission.

U.S. Department of Energy, Loan Programs Office
Attn: Advanced Nuclear Energy Projects Applications
1000 Independence Avenue, SW
Washington, DC 20585

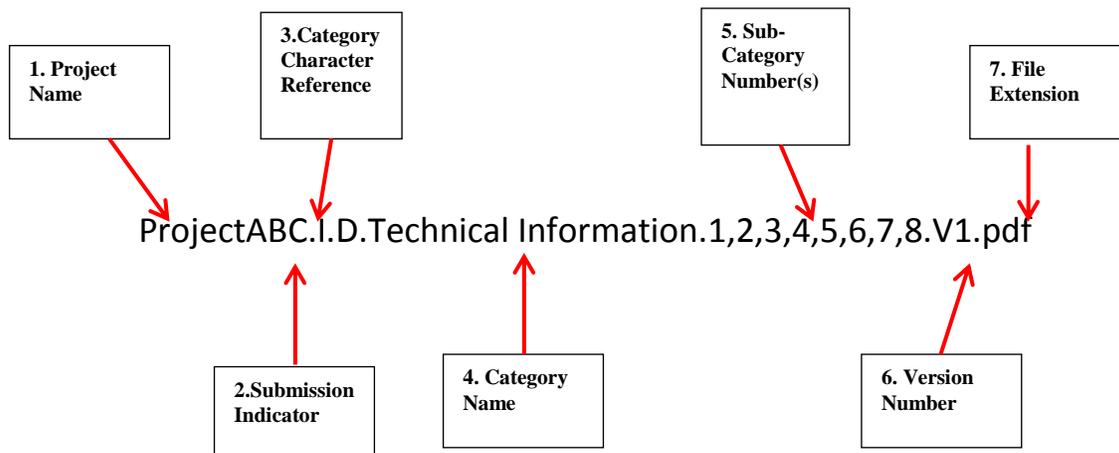
E. Formatting Instructions

Applicants must provide all requested information in the following format:

1. Documents supporting and forming any part of an Application must:
 - a) Be typed in Times New Roman 11 point font;
 - b) Use single-spaced paragraphs;
 - c) Adhere to a format consisting of standard 8.5" x 11" paper; and
 - d) Have 1" margins (top, bottom, left and right) with exceptions for charts, graphics, and similar materials.
2. Applicants should provide a "short name" or other identifier that will allow for easy identification of the Project.
3. The file naming standard that DOE will use for uploaded files is specified in Table 1. Certain documents uploaded through the Application Portal will be renamed automatically to conform to this convention, as shown in the example that follows Table 1.

Table 1			
Order #	File Name Identifier	Identifier Specified as	Following separator
1	Project Name	Project Name	Period
2	Part I or Part II Submission Indicator	Roman numeral	Period
3	Category Character Reference	Capital letter identifier for the section in the Solicitation specifying the document category	Period
4	Category name	Name of the section in the Solicitation specifying the document category	Period
5	Sub-category Number(s)	Number identifier for the sub-section in the Solicitation specifying the document sub-category. If multiple sub-categories apply, list the sub-categories as a comma-separated list in ascending numeric order.	Period
6	Version Number	Capital 'V' followed by the next consecutive version number in the system. The first version of any document is specified as 1.	Period
7	File Extension	File extension representing the file type	NONE

Example:



F. Multiple Applications

Applicants may apply more than once under this Solicitation, but a Project Sponsor or Applicant may only submit one Application for a Project using a particular technology. A Project Sponsor or Applicant, in other words, may not submit an Application for multiple Projects using the same technology.

G. Required Certification

The following certification must be included with each Application:

“The undersigned certifies that the data and information submitted and the representations made in this Application and any attachments to this Application are true and correct, to the best of the Applicant’s knowledge and belief after due diligence, and that the Applicant has not omitted any material facts.

The undersigned further certifies that [s]he has full authority to bind the Applicant.

Applicant (Organization Name)

Name of Applicant’s Authorized Officer
(will fulfill on-line certification)

Signature of Authorized Officer
(for paper copy only)

Title of Authorized Officer

Date”

VI. Fees, Costs, and Expenses

A. Fees

Certain fees are required as part of a complete Application. These fees defray the administrative costs associated with DOE conducting its internal technical and financial review of the Project. Section 1702(h) of Title XVII requires DOE to “charge and collect fees for guarantees in the amounts the Secretary determines are sufficient to cover applicable administrative expenses” of the Loan Guarantee Program. Section IV.B specifies each stage of the loan guarantee process at which Applicants must pay the Administrative Cost of Issuing a Loan Guarantee. Non-refundable fees due to DOE during the course of the Application and loan guarantee process must be paid directly to Treasury and are specified below:

1. **Application Fee:** Applicants must pay a non-refundable Application fee (the “**Application Fee**”). The Application Fee will be payable as follows:
 - a) Fifty Thousand Dollars (\$50,000) must be paid on or prior to the date on which an Applicant submits Part I of its Application. This first payment must be wired to Treasury no later than 11:59 pm Eastern Time on the due date for the Applicant’s desired round of Part I submissions.

- b) The remainder of the Application Fee must be paid on or prior to the date on which an Applicant submits Part II of its Application. This second payment must be wired to Treasury no later than 11:59 pm Eastern Time on the due date for the Applicant’s desired round of Part II submissions. The remainder of the Application Fee is \$350,000, except as described below.

Applicants requesting an amount that does not exceed \$150,000,000 as the principal amount of the Guaranteed Obligation pay \$100,000 on or prior to the date on which an Applicant submits Part II of its Application. Applicants requesting an amount that exceeds \$150,000,000 as the principal amount of the Guaranteed Obligation pay \$350,000 on or prior to the date on which an Applicant submits Part II of its Application.

2. **Facility Fee:** All Applicants must pay a non-refundable facility fee (the “**Facility Fee**”) in an amount equal to 1.0% for the portion of the principal amount of the Guaranteed Obligation that does not exceed \$150,000,000. For applications as to which the principal amount of the Guaranteed Obligation exceeds \$150,000,000, Applicants pay an amount equal to 1% for the portion of the principal amount of the Guaranteed Obligation that does not exceed \$150,000,000 plus, for the portion of the Guaranteed Obligation that exceeds \$150,000,000, an additional .60%. For example, an Applicant for a Guaranteed Loan in the principal amount of \$250,000,000 would pay \$1,500,000 (1.0% of the first \$150,000,000) plus \$600,000 (.60% of the amount over \$150,000,000) for a total Facility Fee of \$2,100,000. The Facility Fee will be payable as follows:

- a) Twenty-five percent (25.0%) of the Facility Fee must be paid on or prior to the date on which the Applicant executes a DOE-approved Term Sheet.
- b) Seventy-five percent (75.0%) of the Facility Fee must be paid prior to the financial closing date for a Loan Guarantee Agreement.

3. **Maintenance Fee:** Applicants must pay a non-refundable annual maintenance fee (the “**Maintenance Fee**”) to cover DOE’s administrative expenses, other than Extraordinary Expenses, in servicing and monitoring the Loan Guarantee Agreement from the execution of the Loan Guarantee Agreement by the Borrower through payment in full of the Guaranteed Obligation in connection with such Loan Guarantee Agreement. The amount of the Maintenance Fee is expected to be \$500,000 per calendar year. The Maintenance Fee shall be paid each year in advance, commencing with payment of a pro-rated annual payment prior to the financial closing date of the Loan Guarantee Agreement, on or prior to the date and in the amount specified in the Loan Guarantee Agreement.

4. **Treasury Wiring Instructions:** Application Fees, Facility Fees, and Maintenance Fees will only be credited by wire transfers to the following address:

Receiving Financial Institution	U.S. Department of Treasury
Address	Federal Reserve Bank of New York 33 Liberty Street New York, NY 10045
Receiver ABA Number	021030004
Receiver ABA short name	TREAS NYC
Business Function Code	CTR (or CTP)
Account (BNF/AC)	89000001

Beneficiary Name	DEPARTMENT OF ENERGY
Originator to Beneficiary Information	Insert Solicitation name, type of fee and applicant name

No funds for the payment of these fees may be obtained from the federal government or from a loan or other debt obligation guaranteed by the federal government.

B. Loan Guarantee Credit Subsidy Cost

The Credit Subsidy Cost is the net present value of the estimated long-term cost to the U.S. government of a loan guarantee as determined under the applicable provisions of the Federal Credit Reform Act of 1990, as amended (“**FCRA**”). Section 1702(b) of Title XVII provides that no guarantee shall be made unless (1) an appropriation for the cost of the guarantee has been made, (2) the Secretary has received from the Borrower a payment in full for the cost of the guarantee and deposited the payment into the Treasury, or (3) a combination of one or more appropriations under (1) and one or more payments from the Borrower under (2) has been made that is sufficient to cover the cost of the guarantee.

DOE does not expect to request or receive any appropriated amounts from Congress to cover the Credit Subsidy Costs associated with the potential loan guarantees issued under this Solicitation. Therefore DOE anticipates that successful Applicants under this Solicitation will be required to directly pay the non-refundable Credit Subsidy Cost prior to, or at the time of, closing. The Applicant may not finance the payment of the Credit Subsidy Cost through funds obtained from the federal government or through a loan made or guaranteed by the federal government, unless otherwise explicitly authorized by Congress. In accordance with FCRA and this Solicitation, DOE must consult with OMB and obtain OMB’s approval of DOE’s calculation of the Credit Subsidy Cost for each proposed loan guarantee prior to issuing any loan guarantee.

C. Independent Consultants and Outside Counsel to DOE

Each Applicant shall be responsible for paying the fees and expenses incurred by DOE’s independent consultants and outside legal counsel in connection with such Applicant’s Project under all circumstances. Upon making the determination to engage independent consultants or outside counsel with respect to an Application, DOE will proceed in evaluating and processing an Application only upon a Project Sponsor’s entering into an agreement satisfactory to DOE agreeing to pay the fees and expenses of the applicable independent consultant and/or outside counsel. Applicants are advised that such services shall be rendered for the benefit of DOE in connection with an Applicant’s Project and that DOE, not the Project Sponsor, is the client of such independent consultants and outside counsel. In some cases, a retainer to cover such fees and expenses may be required. In the event that a Project Sponsor fails to comply with the provisions of such payment agreement, DOE may stop work on the Application and/or reject an Application.

DOE shall not be financially liable to any independent consultant or outside counsel for services rendered in connection with an Application under any circumstances whatsoever.

D. Extraordinary Expenses

In the event that a Project experiences difficulty relating to technical, financial, or legal matters or other events (e.g., engineering failure or financial workouts) which require DOE to incur time or expenses beyond standard monitoring (“**Extraordinary Expenses**”), DOE will be entitled to payment in full from the Borrower of additional fees in an amount determined by DOE and of related fees and expenses of its independent consultants and outside counsel, to the extent that such fees and expenses are incurred directly by DOE and to the extent such third parties are not paid directly by the Borrower or Project Sponsor. In

accordance with Section 1702(h) of Title XVII, DOE may charge the Applicant/Borrower additional fees to cover DOE's Extraordinary Expenses in addition to all other fees and expenses mentioned in this Solicitation.

VII. Additional Provisions

A. Commitment of Public Funds

DOE shall not be bound by oral representations made during the Application stage or during any negotiations. No binding commitment, agreement, obligation, or right of any kind may be assumed or enforced by any Applicant or Project Sponsor against DOE other than in accordance with a duly and validly executed Loan Guarantee Agreement.

B. Procurement or Financial Assistance Award

Neither a procurement action under Title 48 of the CFR nor a financial assistance award under 10 CFR Part 600 is contemplated by this Solicitation.

C. Warning

It is a crime to knowingly make false statements to a federal agency. Misrepresentation of material facts may be the basis for denial of an Application for a loan guarantee from DOE. Penalties upon conviction may include fine and imprisonment. For details, please refer to 18 U.S.C. §1001.

D. Restrictions on Disclosure and Use of Information

Title XVII authorizes the collection of the information requested in this Solicitation. This information will aid DOE in its review of Applications for loan guarantees pursuant to Title XVII. Disclosure of this information may be made as required by law, including the Freedom of Information Act, 5 U.S.C. §552 ("**FOIA**").

Patentable ideas, trade secrets, proprietary and confidential commercial or financial information, disclosure of which may harm the Applicant, should be included in an Application only to the extent that such information is necessary to convey an understanding of the Project. The use and disclosure of such data may be restricted, to the extent consistent with applicable law, provided the Applicant specifically identifies and marks such data in accordance with 10 CFR 600.15 described below:

1. Upload the following legend on a separate page in response to Section B of Part I and/or Section A of Part II of the Application, respectively (be sure to specify the section number(s) from the Application that contain(s) such data):

“Applicant hereby certifies that Section(s) [___] of this Application may contain trade secrets or commercial or financial information that is privileged or confidential and is exempt from public disclosure. Such information shall be used or disclosed only for evaluation purposes or in accordance the loan guarantee agreement, if any, entered in response to this Application. If this Applicant is issued a loan guarantee under Title XVII of the Energy Policy Act of 2005, as amended, as a result of, or in connection with, the submission of this Application, DOE shall have the right to use or disclose the data contained herein, other than such data that have been properly declared in the loan guarantee agreement to be trade secrets or commercial or financial information that is privileged or confidential and is exempt from public disclosure.”

2. Include the following legend on the first or cover page of each document or electronic file submitted that contains such data (be sure to specify the page numbers from such document or electronic file that contains such data):

“Notice of Restriction on Disclosure and Use of Data

Pages [___] of this document may contain trade secrets or commercial or financial information that is privileged or confidential and is exempt from public disclosure. Such information shall be used or disclosed only for evaluation purposes or in accordance with a financial assistance or loan agreement between the submitter and the Government. The Government may use or disclose any information that is not appropriately marked or otherwise restricted, regardless of source.”

3. Include the following legend on each page containing trade secrets or commercial or financial information that is privileged or confidential:

“May contain trade secrets or commercial or financial information that is privileged or confidential and exempt from public disclosure.”

4. In addition, each line or paragraph containing trade secrets or commercial or financial information that is privileged or confidential must be marked with brackets or other clear identification, such as highlighting.

E. Burden Disclosure Statement

This data is being collected to support Applications for loan guarantees from the Department of Energy under Title XVII of the Energy Policy Act of 2005, as amended (42 U.S.C. §16511, et seq.). The data you supply will be used for the review of Applications for loan guarantees under Title XVII.

Public reporting burden for this collection of information is estimated to average 130 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of the Chief Information Officer, Records Management Division, IM-23, U.S. Department of Energy, 1000 Independence Ave SW, Washington, DC, 20585-1290; and to the Office of Management and Budget, OIRA, Washington, DC 20503.

Notwithstanding any other provision of the law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB control number. The OMB Control Number for this collection of information is 1910-5134. The OMB expiration date for this collection of information is March 31, 2022.

Submission of this data is required to obtain a guarantee of the repayment of principal and interest on loans relating to Projects that qualify for such guarantees under Title XVII of the Energy Policy Act of 2005 (42 U.S.C. §16511, et seq.).

F. **Questions**²¹

The name and address of the DOE representative whom a potential Project Sponsor may contact to receive a copy of this Solicitation is:

Investment Officer
U.S. Department of Energy, Loan Programs Office
Attn: Advanced Nuclear Energy Projects Applications
1000 Independence Avenue, SW
Washington, DC 20585

You may send questions to LPO.NuclearSolicitation.Questions@hq.doe.gov. DOE will respond to questions as appropriate. Please include "RE: Advanced Nuclear Energy Projects Question -" and a few words describing the question in the subject line. If DOE decides to begin negotiations with an Applicant, DOE will assign a single point of contact for all subsequent questions and/or discussions on matters relevant to the corresponding Application.

VIII. **References**

The Program Website is located at <https://www.energy.gov/lpo/title-xvii>. Statutes and regulations for which a link is not provided below may be found at the Program Website.

This Solicitation was developed pursuant to the following statutes and regulations:

- b. Energy Policy Act of 2005, 42 U.S.C. §§16511-16516 (August 8, 2005), as amended
- c. 10 CFR Part 609 Loan Guarantees for Projects That Employ Innovative Technologies (December 4, 2009)²²
- d. Omnibus Appropriations Act, 2009, P.L. No. 111-8, Division C, Title III (<http://www.gpo.gov/fdsys/pkg/PLAW-111publ8/html/PLAW-111publ8.htm>), as amended by Section 408 of the Supplemental Appropriations Act, 2009, P.L. No. 111-32 (<http://www.gpo.gov/fdsys/pkg/PLAW-111publ32/html/PLAW-111publ32.htm>)
- e. Revised Continuing Appropriations Resolution, 2007, P.L. 110-5 (<https://www.govinfo.gov/app/details/PLAW-110publ5>)²³
- f. Davis-Bacon Act and related acts located at <http://www.dol.gov/whd/govcontracts/dbra.htm>
- g. OMB Circulars No. A-11 and A-129, <https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/assets/OMB/circulars/index.html>
- h. Council for Environmental Quality (CEQ) Regulations at 40 CFR 1500-1508 located at: <https://ceq.doe.gov/laws-regulations/regulations.html>

²¹ As amended by the Eighth Supplement.

²² Superseded by 10 CFR Part 609 Loan Guarantees for Projects That Employ Innovative Technologies (December 15, 2016).

²³ Amended by the Eighth Supplement.

- i. CEQ Guidance, “Forty Most Asked Questions Concerning CEQ’s NEPA Regulations,” Question No. 11 (March 23, 1981) located at <https://ceq.doe.gov/docs/laws-regulations/FR-1985-08-09-50-FR-32238-CEQ-NEPA-Regulations-NOPR-amending-1502-22.pdf>
- j. Freedom of Information Act, 5 U.S.C.§552; located at <http://www.foia.gov/index.html>

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ATTACHMENT A – PART I SUBMISSION

The Application is divided into a Part I submission and a Part II submission. Part I of the Application provides DOE with a description of the Project, technical information, expected environmental effects, background information on management, financing strategy, and progress to date of critical path schedules. This information will be used as a basis for determining the overall eligibility of the Project and the Project's readiness to proceed. DOE will evaluate each Part I submission based upon the factors summarized herein, however, DOE may require that Applicants provide additional certifications or supporting documentation as part of the Project evaluation process. If an Applicant is invited to submit a Part II submission, to the extent that there are any material deviations from the information provided to DOE in the Part I submission, the Applicant must update the information.

The information requested in Part I Section A is to be entered directly into the text fields provided in the Application Portal. The information requested in Part I Sections B through H is to be provided on PDF or Excel documents uploaded through the Application Portal. **Uploaded documents must indicate clearly the section and subsection of the Part I requirement to which the information on the documents pertains.**

Part I Submission

A. Application Information

1. **Project Information:** Enter the Project name, select the applicable technology category or categories (_____), and enter the Project/generation capacity (in Megawatts, Gallons per Year, Tons per Year, or Other).
2. **Project Location:** Enter the following information regarding one or more Project locations: address, city, state, zip code.
3. **Project Sponsor(s):** Enter the following information for each Project Sponsor with equity of five percent (5.0%) or more: indicate whether lead sponsor (must have one lead sponsor), entity name, website address, mailing address, city state, postal code, contact first name, contact last name, contact title/position, contact phone, and contact email.
4. **Applicant Information:** Enter the following information for the Applicant: Applicant entity name, website address, mailing address, city, state, postal code, DUNS number, NAICS code, primary contact information including first name, last name, title/position, phone, and email.
5. **Preliminary Questions:** Answer the following questions. If the answer to any of these questions is "No" include a detailed explanation of the circumstances that cause the answer to be "No" in the space provided.
 - a) Do you confirm you have read and understand the Loan Guarantee Solicitation Announcement from the U.S. Department of Energy Loan Programs Office regarding Federal Loan Guarantees for Advanced Nuclear Energy Projects?
 - b) Is the Applicant legally authorized to enter into loan guarantee transactions and in good standing with the U.S. Department of Energy and/or any other federal agency loan guarantee program?

- c) Is the Applicant current on payment of all amounts owed to the federal government?
 - d) Will the Project be built and operated entirely within the United States or its territories?
 - e) Do you confirm that to the best of the Applicant's knowledge, after making diligent inquiry, that no Project participant has been charged with or convicted of a misdemeanor or felony (other than routine traffic violations) or been involved in any securities litigation?
6. **Summary of Loan Guarantee Request:** Enter the following information regarding the Applicant's loan guarantee request: requested period of guarantee (years), total Project Costs, proposed guarantee amount, debt, and equity. The sum of the amount entered for debt and the amount entered for equity should equal the amount entered for total Project Costs. The amount entered for the proposed guarantee amount should not be more than the amount entered for debt. On the basis of the above entered amounts, calculations will be made to determine the following amounts: debt to equity ratio, proposed guarantee amount to debt percentage, and proposed guarantee amount to total Project Costs percentage.

B. Option to Restrict Disclosure and Use of Certain Data

Section VII.D of the Solicitation sets forth the steps an Applicant must take in order to restrict the use and disclosure of certain data submitted in the Application. In order to restrict the use and disclosure of certain data submitted in Part I of the Application (to the extent permitted by applicable law) the Applicant must upload a separate page containing the legend set forth in Section VII.D.1 of the Solicitation. If the Applicant does not want to restrict the use and disclosure of any data submitted in the Application the Applicant must upload a separate page containing the following statement: "Applicant does not identify any data the use and disclosure of which is to be restricted."

C. Organization (Corporate and Personnel)

- 1. **Organizational Chart:** Provide a current corporate organizational chart showing the Applicant's relationship to any subsidiaries, affiliates, parent organizations, or joint ventures associated with the Project. Show the Applicant's relationship to each Principal. For the purpose of this Solicitation, a "**Principal**" is any person who owns or will own five or more percent of the Project.
- 2. **Key Staff:** List the full names (including middle name or initial) of key staff to be involved with the Project.
- 3. **Evidence of Authority:** Submit evidence that the signatory of the Application has authority to bind the Project Sponsor to the commitments and representations made in the Application and attests as to the accuracy of the information provided in the Application process.

D. Project Description

1. **Executive Summary:** Provide a description of the nature and scope of the Project, including the technology, site, environmental resources affected, purpose, size, capacity, design features, key metrics, and key milestones. Describe the commercial feasibility of the technology(ies) and how you intend to employ such technology(ies) in the Project and how you assure, to the extent possible, the further commercial availability of the technology(ies) in the United States. Include target dates for:
 - a) financial close of the Loan Guarantee Agreement;
 - b) commencement of site preparation and construction;
 - c) commercial operation; and
 - d) marketing the output.
2. **Project Eligibility:** Provide a detailed explanation of how and to what extent the Project will qualify as an Eligible Project. DOE will base its determination that the Project is an Eligible Project on the information the Applicant furnishes in its Part I submission. Applicants are encouraged to be thorough in their explanations of a Project's qualification as an Eligible Project, including a discussion of the threshold determinations set forth in Section 609.5(a)²⁴ of the 1703 Regulations, all of the eligibility requirements of Title XVII of the 1703 Regulations, and all of the eligibility requirements listed in Section II of the Solicitation, "Eligibility Information".
3. **Project Sponsors' and Principals' Capabilities:** Describe each Project Sponsor's and each Principal's capabilities, financial strengths, investment in the venture to date and as anticipated during the construction and operation phases of the venture (i.e., continuing financial support) and proposed equity investment in the Project, as well as the Project's strategic significance to each Project Sponsor and Principal.
4. **Prior Experience:** Summarize the prior experience of each venture participant as it relates to carrying out undertakings similar to the one being proposed. Include a detailed description of current and previous experience with Advanced Nuclear Energy Projects. Applicants must, at a minimum, describe (a) examples of at least two projects in the Advanced Nuclear Energy Projects sector similar in nature and scope (whether innovative or not) to the Project being proposed that have been completed (developed, financed, and managed construction) by the Applicant's organization or its Principals, and (b) examples of at least two projects in the Advanced Nuclear Energy Projects sector for which the Applicant's organization or Principals raised equity and secured debt for project financing, and (c) examples of at least two projects in the Advanced Nuclear Energy Projects sector for which the Applicant's organization was responsible for managing the operations and maintenance of a project for a minimum of two years. Each project example must be a project for which construction has been completed. Applicants that are not able to include examples of two projects in their description of current and previous experience in the Advanced Nuclear Energy Projects sector should provide a detailed description of the facts that they believe are sufficient to demonstrate to DOE that they have the expertise that would be evidenced in current or previous experience in the Advanced Nuclear Energy

²⁴ Formerly Section 609.7(a).

Projects sector by examples of two projects. DOE will determine, in its sole and final judgment, whether the experience described shows sufficient expertise.

5. **Project Costs:** Provide the estimated total Project Costs, as defined in Sections 609.2 and 609.10²⁵ of the 1703 Regulations, and a summary detailing key assumptions and the methodology used to calculate the Project Costs. Include all eligible costs that you have paid and expect to pay and that are directly related to the Project. Also include costs for escalation and contingencies in this calculation. Distinguish between eligible and ineligible Project Costs as set forth in Section 609.10²⁶ of the 1703 Regulations.
6. **Letters of Interest:** Provide a letter of interest for all parties named in Section I.A.

E. Technical Information

Provide a top-level technical Project description, including the design, engineering, construction, and operations and maintenance phases of the Project, including:

1. **Description of Project Design:** A description of the basic processes involved in the Project design.
2. **Description of New or Significantly Improved Technology:** A detailed description of the New or Significantly Improved Technology to be used in the Project, and a description of how and why the technology is new or significantly improved compared to technology already in general use in the commercial marketplace in the United States.
3. **Sketches:** Conceptual level sketches and details outlining general plant layout, process and materials flows, and operating parameters and throughputs for key processes.
4. **Critical Path Agreements Status:** The status of critical path contracts and agreements, such as a Front-end engineering agreement, technology license and teaming agreements, Engineering, Procurement and Construction (“**EPC**”) contract, long-lead contracts, feedstock agreements, and plant off-take or sales agreements.
5. **Planning Documents:** Key planning documents for the Project such as the construction plan, operation and maintenance plan, waste disposal plan, and preliminary risk management plan.
6. **Acquisition Strategies:** Raw material, equipment, and component supply chain acquisition strategies.
7. **Attachment C:** A completed copy of Attachment C, Summary Lifecycle GHG Emissions Data Worksheet.

F. Legal and Regulatory Information

1. **Timelines for Regulatory Approval:** Provide timelines for receipt of all required regulatory approvals.

²⁵ Formerly Section 609.12.

²⁶ Formerly Section 609.12.

2. **Status of Required Permits, etc.:** Provide the status of any required federal, state, or local environmental permits, approvals, or reviews.
3. **Pending Investigations:** Provide a summary of any pending or threatened (in writing) action, suit, proceeding, or investigation by a governmental authority, of any kind, including any action or proceeding by or before any governmental authority, that relates to the Project or to the Applicant, any Project Sponsor, any Principal, or the anticipated Borrower, and the status of any appeals.

G. Business and Financial Plans

1. **Business Plan:** Provide a description of the following elements of the Applicant's business plan for the Project:
 - a) Market analysis;
 - b) Feedstock (if applicable);
 - c) Off-take or sales agreements; and
 - d) Estimate of the number of construction jobs and permanent jobs expected to be created or retained in the United States if the Project were to proceed as proposed in the Application.
2. **Financial Plan:** Provide a description of the following elements of the Applicant's proposed financial plan for the Project:
 - a) The term sheet for the Guaranteed Obligation;
 - b) The amount of expected equity investments (identify participants and level of participation, if applicable);
 - c) The preliminary funding plan for the Guaranteed Obligation, including the total amount for (i) working capital financing, (ii) medium-term financing for machinery and equipment and (iii) longer-term financing for the site and facility;
 - d) The timing of expected equity contributions and debt funding;
 - e) The timing of repayment of expected debt funding;
 - f) Whether the Project will benefit directly or indirectly from certain other forms of federal support, such as grants or other loan guarantees from federal agencies or entities, including DOE, federal agencies or entities as a customer or off-taker of the Project's products or services, or other federal contracts, including acquisitions, leases and other arrangements, that support the Project; and
 - g) Other non-federal governmental (including state) incentives or other assistance on which the Project relies, including grants, tax credits and other loan guarantees to support the financing, construction and operation of the Project. Indicate whether any such incentives or assistance are subject to clawback and the circumstances under which a clawback could occur.

H. Application Certifications

1. **Lobbying, Debarment, and Related Certifications and Assurances:** In submitting an Application for a loan guarantee under Title XVII, Applicants must provide certain certifications and assurances contained in the form entitled “Certifications for Use with Applications for Department of Energy Loan Guarantees under title XVII of the Energy Policy Act of 2005” which form may be downloaded from the Program Website: <http://energy.gov/sites/prod/files/Certifications%20for%20Use%20with%20Doe%20Loan%20Guarantees.pdf>
2. **Applicant Validation Statement:** Provide a written statement that, based on the Project information provided by the Applicant, the Applicant attests that there is a reasonable prospect that the guaranteed portion of the Guaranteed Obligation and any other Project debt will be repaid on time and in full (including interest) from Project cash flow according to the terms proposed in the Application.
3. **Letter of Commitment:** For an Application to be considered under this Solicitation, Part I must include a letter of commitment signed by an authorized representative of the Applicant in the form set forth on the final page of Attachment A – Part I Submission.
4. **Penalty of Perjury Statement:** The following certification must be included with each Application:

“The undersigned certifies that the data and information submitted and the representations made in this Application and any attachments to this Application are true and correct, to the best of the Applicant’s knowledge and belief after due diligence, and the Applicant has not omitted any material facts. The undersigned further certifies that [s]he has full authority to bind the Applicant.

Applicant (Organization Name)

Name of Applicant’s Authorized Officer
(will fulfill on-line certification)

Signature of Authorized Officer
(for paper copy only)

Title of Authorized Officer
Applicant (Organization Name)

Date”

[SAMPLE LETTER OF COMMITMENT]

[DATE]

Executive Director
U.S. Department of Energy, Loan Programs Office
Attn: Advanced Nuclear Energy Projects Applications
1000 Independence Avenue, SW
Washington, DC 20585

Dear Director:

This letter confirms our intent to seek a loan guarantee pursuant to Solicitation No. DE-SOL-0007791, dated December 10, 2014 (the "**Solicitation**"). We have met all mandatory requirements as specified in the Solicitation including all attachments. Our Part I submission Application Fee was wired as per your instructions on xx/xx/201_.

We intend to submit our complete Part II submission on or before the due date for the [specify round by number and/or Part II submission due date] round of Part II reviews as set forth in Section IV.A of the Solicitation. Based on the Application process described in the Solicitation, we are prepared to close the financing on or about xx/xx/201_.

If we decide to withdraw from consideration for a loan guarantee at any time, we will notify DOE in writing of that decision as soon as possible.

Sincerely,

Signature of Authorized Officer
[Name]

ATTACHMENT A – PART II SUBMISSION

Subject to the due dates set forth in Section V.A of the Solicitation, the Part II submission may be filed at any time after DOE invites an Applicant to submit its Part II submission. The Part II submission consists of the items summarized herein and in Attachment B as well as other information that may be requested to facilitate DOE's continued due diligence review. Projects eliminated by any of the requirements set forth in Part II of this Attachment A will not receive any further consideration.

At any time after delivery of a Part II submission, to the extent that there are any material deviations from the information provided to DOE in such Part II submission, the Applicant must notify DOE no later than three (3) business days after becoming aware of any such change by requesting approval from DOE to update their Part II submission via the Application Portal. Applicant must provide DOE with updated information via the Application Portal no later than ten (10) business days after receiving notice from DOE to Applicant of approval to re-open Applicant's Application.

Responses are to be provided on PDF or Excel documents uploaded through the Application Portal. **Uploaded documents must indicate clearly the section and subsection of the Part II requirement to which the information on the documents pertains.**

Part II Submission

A. Option to Restrict Disclosure and Use of Certain Data

Section VII.D of the Solicitation sets forth the steps an Applicant must take in order to restrict the use and disclosure of certain data submitted in the Application. In order to restrict the use and disclosure of certain data submitted in Part II of the Application (to the extent permitted by applicable law) the Applicant must upload a separate page containing the legend set forth in Section VII.D.1 of the Solicitation. If the Applicant does not want to restrict the use and disclosure of any data submitted in the Application the Applicant must upload a separate page containing the following statement: "Applicant does not identify any data the use and disclosure of which is to be restricted."

B. Updates, Changes, and Additions to Part I Submission

Update the information in the Part I submission to the extent and information in the Part I submission has changed from the information previously submitted. Provide a detailed description of all material amendments, modifications, and additions to the information provided in Part I of the Application, including any changes in the Project's financing structure or other terms, the rationale for such changes and the expected impact on the Project. Provide any and all updated audited financial statements since the submission of Part I of the Applicant and Project Sponsors (including new parties joining the Project since the Part I submission).

C. Submission Index

Provide an index of all of the requirements contained in this Solicitation and in Section 609.4²⁷ of the 1703 Regulations and where in your Application submissions, including Parts I and II, these requirements are addressed.

²⁷ Formerly Section 609.6.

D. Project Description

1. **Detailed Total Cost:** Provide a detailed estimate of Project Costs in accordance with generally accepted accounting principles and practices. Include a breakdown by cost category, year of expenditure and basis for amounts, and include a description of the methodology and key assumptions used to make each estimate. Also include costs for escalation and contingencies, and indicate whether each cost is firm or subject to change. Distinguish between eligible and ineligible Project Costs as set forth in Section 609.10²⁸ of the 1703 Regulations.
2. **State and Local Support:** Describe the status of potential and actual forms, amounts, and conditions of state and local support for the Project. Provide timelines for such assistance.
3. **Project Location:** Identify the proposed location in the United States and the rationale for the site location. An Applicant proposing more than one location for a Project must set forth in its Application its justification for siting the Project in more than one domestic location.
4. **Effect on Anthropogenic Emissions:** Describe how and to what measurable extent the Project avoids, reduces, or sequesters anthropogenic emissions of greenhouse gases, including how to measure and verify those benefits.

E. Technical Information

1. **Key Contracts and Agreements:** Provide a top-level description, schedule, current status, and drafts or executed copies of all critical path contracts and agreements relevant to the investment, design, engineering, financing, construction, startup, commissioning, shakedown, operation, and maintenance of the Project, including:
 - a) EPC contract(s);
 - b) Long-term contracts for materials, components and equipment to be used in the Project;
 - c) Any leases, operating, or maintenance contracts; and
 - d) Any additional relevant agreements or commitments.

If drafts or executed copies of any of the foregoing contracts and agreements are unavailable, provide a detailed description of such contracts and agreements, including all key terms and counterparties, and indicate when copies of such contracts and agreements will be available.

2. **Engineering and Construction Plans:** A detailed description of the engineering and design contractor(s), EPC contractor(s), equipment supplier(s), and construction schedules for the Project.
 - a) For each engineering and design contractor, EPC contractor and equipment supplier to be involved in the Project, describe their major activities as linked to specified cost milestones and performance guarantees, as well as performance guarantees, performance bonds, liquidated damages provisions, and equipment warranties to be provided.
 - b) Describe the following:
 - (i) The extent to which all required contractors are engaged; and

²⁸ Formerly Section 609.12.

- (ii) The extent to which pre-construction design has been completed.
- c) Describe each contractor or supplier's experience and qualifications as related to the Project.
- 3. **Key Site Components:** Describe the key site components of the Project and risks associated with their availability (e.g., water, electricity, gas, or other utilities). Describe site access (roads, highway, and rail) including rights-of-way, easements, and logistical considerations.
- 4. **Operation Costs:** Provide an estimate of operation costs on an annual basis.
- 5. **Project Plan:** Provide a comprehensive Project plan that will guide design, engineering, and construction of the Project, including a description of:
 - a) Prior successful implementation of similar project plans for projects of this scale by the Applicant or any Project Sponsor (Applicants that are not able to include examples of successful implementation of similar project plans for projects of this scale should provide a detailed description of the facts that they believe are sufficient to demonstrate to DOE that they have the expertise that would be evidenced in examples of successful implementation of similar project plans for projects of this scale. DOE will determine, in its sole and final judgment, whether the experience described shows sufficient expertise);
 - b) Each step of the proposed process;
 - c) Fully sourced or cited material and energy balance, including system simulation for processes, using industry standard software;
 - d) The process for selecting an EPC firm, if applicable, or the internal resources used to serve this function;
 - e) Equipment requirements;
 - f) Rights or licenses to use processes proposed;
 - g) An integrated schedule or Project work plan that encompasses time periods for design, procurement (including long-lead procurements), construction (including mobilization, testing and start-up), and commissioning. The Project shall identify any Project dependencies such as the timing of land-use agreements, environmental permits, or licenses, or physical improvements such as utility tie-ins.
 - h) Minimum design specifications in which process flow diagrams are coupled to preliminary cost estimates.
 - i) Project management tools, including Gantt charts, resource-based scheduling or other methods to assess and track progress;
 - j) Staffing plans, including identification of costs and resources to design, engineer, construct, and operate the Project;
 - k) Project risks and mitigation strategies, including risk related to scale-up, construction, performance, etc. and the potential Project impact and mitigation of such risks; and
 - l) Contingency plans to address cost overruns and schedule slippage.

6. **Operating and Maintenance Plans:** Provide the following:
 - a) The plant operating plan, proposed providers, expected staffing requirements, anticipated parts inventory, major maintenance schedules, estimated annual downtime and any performance guarantees and related liquidated damages provisions;
 - b) A description of the plans for commissioning and initial operations, taking into account the construction schedule, the establishment of material supply chains, the hiring, and training of management and operating personnel, logistics, potential bottlenecks, and delays, financing for contingencies and working capital;
 - c) A description of any plans for expanding capacity over initial operations and the Applicant or the Project Sponsor's experience with comparable ramp-ups; and
 - d) A description of the operations and maintenance plans for the Project, including acquisition of critical spares, inventory sources, operations and maintenance procedures, and associated risks.

7. **Engineer's Report:** Provide an independent engineer's report that includes a review, evaluation, analysis, and recommendations in the following areas:
 - a) base technology,
 - b) Project feasibility;
 - c) engineering and design approach;
 - d) integrated Project schedule, including the schedule for completion;
 - e) cost estimates and technical input to the financial model;
 - f) contractual requirements and arrangements;
 - g) proposed supply chain;
 - h) Project risks, including mitigation activities and milestones;
 - i) direct labor requirements during construction and operation;
 - j) siting and permitting;
 - k) testing and commissioning;
 - l) operation and maintenance; and
 - m) decommissioning plan and costs.

8. **Decommissioning Plan:** Provide a detailed description of the Project decommissioning, deconstruction, and disposal plans (including any hazardous waste disposal plans), including anticipated costs and arrangements that have been made to ensure that funding will be available as necessary.

F. Legal and Regulatory Information

1. **Legal Opinions/Material Reports:** Provide a copy of all applicable legal opinions, and other material reports, analyses and reviews concerning the Project.
2. **Permits and Approvals:** Provide a complete list of federal, state, and local permits, licenses, and approvals required to site, construct, implement, and operate the Project, including environmental authorizations or reviews necessary to commence construction. For permits and approvals already received, provide the filing and approval dates and parties involved. For all remaining required permits and approvals, provide documentation validating the filing date and the expected date(s) for obtaining them and describe all additional actions required to obtain such permits and approvals. Explain whether governmental entities (other than DOE) are required to approve the activities of the Applicant contemplated by this Solicitation or described in the Application.
3. **Background and Legal Structure:**
 - a) Describe the organizational history, ownership chain, and legal structure (e.g., corporation, partnership, or LLC) of the Applicant and each Project Sponsor.
 - b) Include copies of the statutory authorities under which the Applicant and each Project Sponsor were created and copies of the good standing certificates for each such entity.
 - c) Provide a current organizational chart showing the Applicant's relationship to each Project Sponsor, the venture and to any subsidiaries or affiliates. Advise if there are any proposed changes to the current organizational structure of the Applicant.
 - d) Describe whether the Project will be owned by a subsidiary of the Applicant or directly by the Applicant.
4. **Legal Authority:** Describe the legal authority of the Applicant to carry out the Project activities. Provide supporting documentation.
5. **Litigation and/or Conflicts:** Disclose any current, threatened (in writing), or pending litigation involving the Applicant, a Principal, or, to the Applicant's knowledge, any other relevant party, related to permitting, public involvement, environmental issues, construction defects, fraud, securities fraud, conflict of interest, failure to perform under a local, state or federal contract, or other charges which may reflect on the Applicant's, Principal's, or any Project Sponsor's reputation, financial position or ability to complete the Project.
6. **Potential Environmental Impacts:** Submit a report containing the status of all state and local environmental reviews and an analysis of the potential environmental impacts and risks of the Project in sufficient detail to enable DOE to assess the significance of the environmental impacts and risks and to determine the level of environmental review that will be required. See Attachment B for guidance regarding required environmental information for the NEPA review process.

G. Business Plan

Provide a business plan that demonstrates the Applicant's expertise, financial strength, and management capability to undertake and operate the Project as proposed.

1. **Output:** Provide a detailed description of the Project's output.

2. **Applicant's Capability:** Describe in detail the capabilities and experience of the Applicant and each Project Sponsor, Principal, contractor, and every other counterparty that the Applicant believes will enable the Project to be successful.
3. **Market Analysis:**
 - a) Include an analysis of the current and projected market for the Project's output. Discuss the prevailing economic and demographic trends in the target market, both on a macroeconomic basis and for the Project's output. Identify the market's dependency on tax benefits or other government policy. Provide a justification for revenue projections (price and volume) and costs. Describe the Project's projected customer base and suppliers.
 - b) Describe the Applicant's current and potential competitors for the Project's output.
 - c) Provide a detailed description of any competitive advantages.
4. **Operating and Market-Related Risks and Mitigation Strategies:** Provide a detailed analysis of the operating and market-related risks associated with the Project (e.g., market factors, price volatility, etc.) and mitigation strategies to be employed (e.g., sales contracts and reserves).
5. **Management Plan:**
 - a) Provide a staffing chart indicating the individuals (including position and qualifications) proposed to operate the Project. Provide a description of the management plan of operations to be employed in carrying out the Project, and information concerning the management experience of each officer or key person associated with the Project; and
 - b) Describe the role of management in the operation of the Applicant's other businesses, if any.
6. **Supply and Sales Arrangements:**
 - a) Provide a detailed analysis of the market for the Project's feedstock and output;
 - b) Provide a detailed description of the Project's plans for ensuring an adequate supply of materials, equipment, and components as needed for successful operation. Provide drafts or executed copies of all material supply contracts for the Project;
 - c) Provide the Project's forecast for sales capacity and feedstock (availability and costs);
 - d) Provide drafts or executed copies of all feedstock agreements and sales contracts or other revenue-generating agreements that will provide revenue for the Project. Provide an analysis of the creditworthiness of counterparties who are party to such agreements; and
 - e) Provide copies and detailed summaries of all other material sales and revenue contracts.
7. **Insurance Coverage:** Provide a detailed description of the proposed insurance coverage for the Project, together with a report from an insurance consultant that addresses the appropriateness and adequacy of such coverage.
8. **Growth Plan:** Describe any proposals for expanding the business enterprise beyond the Project.
9. **Jobs Created/Retained:** Provide a brief description of the number and types of jobs expected to be created or retained in the United States if the Project were to proceed as proposed in the

Application. The types of jobs may be expressed using job titles, broad labor categories, or the Applicant's existing practice for describing jobs provided that the descriptions so provided are commercially identifiable. The number of jobs shall be expressed as full-time equivalent, calculated cumulatively as all hours worked divided by the total number of hours in a full-time schedule, as defined by the Applicant. Applicants should include in their narrative the information used to calculate the full-time equivalent figure.

H. Financial Plan

1. **Financial Statements:** Provide unaudited financial statements for the Applicant for the past two years (or since inception of the Applicant has not been in existence for at least two years), prepared in accordance with generally accepted accounting principles in the United States ("**U.S. GAAP**"). Include all associated notes and describe business and financial interests of controlling or commonly controlled organization or persons, including parent companies, subsidiaries, and other affiliated entities or partners of the Applicant or Project Sponsors.
2. **Project Financial Model and Analysis:**
 - a) Include a working financial model (with formulas) with pro-forma financial statements for the Project. List the major assumptions in a separate worksheet within the model.
 - (i) Include assumptions and calculations for the proposed tenor of the Guaranteed Obligation, plus two (2) years.
 - (ii) Include detailed income statements, balance sheets, cash flow statements, and waterfall statements.
 - (iii) Include financial ratios (e.g., interest coverage ratios, fixed charge coverage ratios, debt-to-capital ratios, asset coverage ratios, and working capital ratios (including high and low points)) and other relevant terms in the proposed term sheet. Highlight those periods during construction and operation in which non-compliance with the proposed financial ratios is most likely.
 - (iv) Include sensitivity analyses that demonstrate the Project's performance under appropriate stress scenarios, including low sales prices, reduced Project performance, loss of major customers, high input material prices, and the impact of future competing technologies.
 - (v) Include cost assumptions based on compliance with the Davis-Bacon Act.
 - (vi) Include a complete description of the operational and financial assumptions and methodologies incorporated in the financial model.
 - b) The financial analysis should demonstrate that there is reasonable prospect that the Applicant will be able to repay the principal and interest on the Guaranteed Obligation and any other Project debt incurred. Discuss the principal factors that could impair the Applicant's ability to meet its debt service obligations, including the Guaranteed Obligation.
3. **Detailed Financial Plan:** Provide a detailed financial plan for the Project, prepared in accordance with U.S. GAAP.
 - a) List all proposed sources of expected equity and debt funding by provider, type, and aggregate amount, and provide a copy of the financial closing checklists for each financing, if available.

- b) Describe uses, timing, and amount of expected equity and debt funding.
 - c) For each party associated with the Project, provide a detailed description of their projected liabilities over the term of the Loan Guarantee Agreement.
 - d) Include a summary of any funding intended to be procured through the use of special purpose entities. Summarize each tranche of funding (e.g., amount, maturity, amortization schedule, the proposed loan guarantee percentage, and whether it is a fixed- or floating-rate tranche).
 - e) Include a summary of any funding that will be tax-advantaged debt to which Section 149(b) of the Internal Revenue Code may be applicable. Summarize measures that will be taken to avoid (i) effective subordination of federally guaranteed debt to tax-advantaged debt, (ii) the use of any federal guarantee as collateral to secure tax-advantaged debt, and (iii) any linkage of federally guaranteed debt with tax-advantaged debt.
 - f) Include a schedule indicating all anticipated short term financing or credit facilities required for on-going operations of the Project, including all working capital facilities, performance bonds and similar forms of financing available to or anticipated to be available to the Project. Describe the nature of the security or collateral that is intended to be made available to secure these working capital and other short term facilities.
4. **Proposed Term Sheet:** Include a proposed term sheet for the Guaranteed Obligation.
 5. **Credit History:** Provide the credit history of the Applicant and any business entity owning or controlling a five percent (5%) or greater interest in the Project or the Applicant, the offtaker(s), the feedstock supplier, if applicable, and the EPC contractor. Provide the full name of the entity, address, and date of organization.
 6. **Collateral:** Provide a listing, describe, and value all assets associated, or to be associated, with the Project and any other assets that will serve as collateral for the Guaranteed Obligations, including any intellectual property necessary for the operation of the Project. Valuations must be supported by independent, third-party appraisals for existing assets and commercial cost substantiation for assets to be constructed for the purpose of the Project, and in all cases acceptable to DOE. An appraisal of real property must be performed by a licensed or certified appraiser consistent with the Uniform Standards of Professional Appraisal Practice promulgated by the Appraisal Standards Board of the Appraisal Foundation. The appraisal should include information on the useful life of all physical assets expected to serve as collateral, including a depreciation schedule (prepared in accordance with U.S. GAAP).
 7. **Consideration of Pari-Passu Status:** Provide information and financing documents regarding any existing senior secured debt of any party providing a guarantee or other credit support.
 8. **Preliminary Credit Assessment:** Provide a preliminary credit assessment for the Project from a nationally recognized rating agency.
 - a) If the Project will be financed using a corporate financing structure or will benefit from any third-party guarantees, provide a detailed public or private credit assessment of the Borrower and Project Sponsor or such third-party guarantor. Such assessment should take into account the impact of the proposed transaction on the Borrower and Project Sponsor or such third-party guarantor's credit rating and evaluate the Project Sponsor or third-party guarantor's financial viability in the absence of a DOE loan guarantee or any other credit support.

- b) If the Project will be financed using a project financing structure, provide a detailed public or private credit assessment of the Project. Such assessment should evaluate the Project in the absence of a DOE loan guarantee or any other credit support.
9. **Other Financial Information:** Include any other information about the Applicant and any Project Sponsor that provides a comprehensive summary of the Applicant or Project Sponsor’s business and financial situation, including specific information relevant to analyzing historical cash flow on a secular, normalized basis.

I. Certifications

1. **Lobbying, Debarment, and Related Certifications and Assurances:** In submitting an Application for a loan guarantee under Title XVII, Applicants must provide certain certifications and assurances contained in the form entitled “Certifications for Use with Applications for Department of Energy Loan Guarantees under title XVII of the Energy Policy Act of 2005” which form may be downloaded from the Program Website:
<http://energy.gov/sites/prod/files/Certifications%20for%20Use%20with%20Doe%20Loan%20Guarantees.pdf>

2. **Applicant Validation Statement:** Provide a written statement and supporting analysis attesting that, based on the information provided to DOE, there is a reasonable prospect that all debt of the Project (including the Guaranteed Obligation) will be repaid on time and in full (including interest) from cash flow generated by the Project and in accordance with the terms proposed in the Application.

As part of the Project evaluation process, DOE may require that Applicants provide additional certifications or supporting documentation. DOE is not authorized to issue a loan guarantee to any party that is delinquent on federal debt, including federal tax debt.

3. **Penalty of Perjury Statement:** The following certification must be included with each Application:

“The undersigned certifies that the data and information submitted and the representations made in this Application and any attachments to this Application are true and correct, to the best of the Applicant’s knowledge and belief after due diligence, and the Applicant has not omitted any material facts. The undersigned further certifies that [s]he has full authority to bind the Applicant.

Applicant (Organization Name)

Name of Applicant’s Authorized Officer
(will fulfill on-line certification)

Signature of Authorized Officer
(for paper copy only)

Title of Authorized Officer

Date”

ATTACHMENT B - National Environmental Policy Act Compliance

I. Information to be Submitted to DOE in an Application

Under Section III.B of this Solicitation, an Application must include a report containing an analysis of the potential environmental impacts of the Project that will assist DOE in assessing whether the Project will comply with all applicable environmental requirements and will enable DOE to complete any necessary reviews under NEPA. Accordingly, each Applicant should submit the following information to assist DOE in determining the appropriate level of NEPA review, and in preparing an EA or EIS if necessary:

- A. Description of Project Facilities, Site, and Surrounding Location:** Describe and, as appropriate, identify and quantify:
1. Purpose of the Project facility and materials produced, including how they would be transported;
 2. Present an overall schematic process diagram that identifies all inputs and outputs;
 3. New facilities to be constructed, existing facilities to be modified, and materials and equipment to be used in construction;
 4. Size of the new and modified facilities and of the total Project site (including support facilities needed, such as parking lots and treatment facilities, and associated land uses, such as agricultural production areas);
 5. Extent of necessary site clearing and excavation;
 6. Associated construction of transport infrastructure (e.g., access roads, railroad links, docks, pipelines, and electrical transmission facilities) or waste treatment facilities;
 7. Construction milestones;
 8. Expected operating cycle and any aspects of the Project that could result in impacts that vary over time (e.g., with time of day or season of the year);
 9. Expected Project lifetime, including expansion of initial Project at the proposed site and to other sites;
 10. Project site and location, including a map;
 11. Whether a Phase 1 Environmental Site Assessment (or other measure performed to meet the INNOCENT LANDOWNERS – STANDARDS FOR CONDUCTING ALL APPROPRIATE INQUIRES rule at 40 CFR Part 312) has been completed, if so, summarize results;
 12. Ownership of or jurisdiction over the land by federal, state, regional, or local agency;
 13. Existing transportation corridors and infrastructure (e.g., electricity, natural gas, water, and wastewater);
 14. Nearby land use and features (e.g., residences, industrial facilities, and recreational areas);

15. Areas with special designation both on the Project location and nearby, including national forests, historic or culturally significant sites, wetlands, floodplains, critical habitat for designated threatened or endangered species or the presence of those species, prime and unique farmland;
16. Ambient air quality; and
17. Near-by human populations (including minority and low-income).

B. Resource Consumption Rates and Effluent Emissions Streams and Impacts:

1. For both construction and operation, describe and, as appropriate, identify and quantify:
 - a) Material resources to be used, including how they would be transported;
 - b) Source(s) and rates of water consumption and adequacy of water supply sources;
 - c) Onsite and offsite releases (air emissions, including carbon dioxide, odors; water effluents and other liquid waste streams; solid and hazardous waste), including rate and duration of such substances as criteria pollutants, wastewater, and hazardous substances;
 - d) Onsite and offsite waste treatment and disposal; and
 - e) Number of on-site workers.
2. Identify a spectrum of scenarios that could result from process upsets, accidents, human error, and intentional destructive acts.
3. Analysis of potential impacts to physical, biological, cultural, and socioeconomic resources from facility construction and operation, including any mitigating measure(s) to be used or considered to be used to reduce environmental impacts, or any adverse effects that cannot be avoided.

C. Status of other environmental and regulatory reviews: Such status reports should include, but not be limited to:

1. If the Project would require review or permitting by another federal agency or by a state, regional, or local agency, identify the required reviews and permits and tell the status of each; and
2. If an environmental impact review (e.g., NEPA documentation or agency consultations) has been prepared (or is in the process of being prepared or is anticipated) for the Project (by another federal agency or a state agency), provide a summary or copy of the review.

D. Alternative sites or operating parameters: Please identify:

1. Any other sites considered for the Project, and state whether they remain options or give the reasons for not proposing them; and
2. Any alternative operating parameters for the Project (e.g. materials or processes to be used) and state whether they remain options or give the reasons why options are not available.

E. Post-operational requirements: To the extent possible, please describe:

1. Any reasonably foreseeable future requirements, including site close-out and site restoration; and

2. Any related decontamination and decommissioning activities, including associated waste streams.

F. Other actions in the Project area: Describe existing or possible future facilities and activities that may impact the same resources as the Project in the same geographic area(s) during the same operational time frame, including those by other agencies, companies, or individuals.

ATTACHMENT C – SUMMARY LIFECYCLE GHG EMISSION DATA WORKSHEET

[https://www.energy.gov/sites/prod/files/2015/02/f19/SUMMARY GREENHOUSE GAS EMISSIONS DATA WORKSHEET JANUARY 2015.xlsx](https://www.energy.gov/sites/prod/files/2015/02/f19/SUMMARY_GREENHOUSE_GAS_EMISSIONS_DATA_WORKSHEET_JANUARY_2015.xlsx)

BURDEN DISCLOSURE STATEMENT

The OMB Control Number for this collection of information is 1910-5134. The OMB expiration date for this collection of information is March 31, 2022.

This data is being collected to support Applications for loan guarantees from the Department of Energy under Title XVII of the Energy Policy Act of 2005, as amended (42 U.S.C. §16511, et seq.). The data you supply will be used for the review of Applications for loan guarantees under Title XVII.

Public reporting burden for this collection of information is estimated to average 130 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of the Chief Information Officer, Records Management Division, IM-23, U.S. Department of Energy, 1000 Independence Ave SW, Washington, DC, 20585-1290; and to the Office of Management and Budget, OIRA, Washington, DC 20503.

Notwithstanding any other provision of the law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB control number. The OMB Control Number for this collection of information is 1910-5134. The OMB expiration date for this collection of information is March 31, 2022.

Submission of this data is required to obtain a guarantee of the repayment of principal and interest on loans relating to Projects that qualify for such guarantees under Title XVII of the Energy Policy Act of 2005 (42 U.S.C. §16511, et seq.).