

REQUEST FOR INFORMATION AND EXPRESSIONS OF INTEREST

Next Generation Nuclear Plant

SUMMARY OF REQUEST:

The Department of Energy (DOE or Department) is requesting comments and expressions of interest from all interested parties on its Next Generation Nuclear Plant (NGNP) Project. DOE is soliciting comments on two aspects of the NGNP Project: (1) the strategy to proceed with the technology research and development; and the design, construction, licensing and operation of the proposed NGNP prototype demonstration plant; and (2) the structure, management, and funding of the public/private cost-share agreements that are necessary to proceed with the NGNP Project.

NGNP Project:

Statutory Authorization:

The Energy Policy Act of 2005 (EPAcT 2005), Public Law 109-58, established the framework for research, development, design, construction, and operation of a prototype advanced nuclear plant that will demonstrate the effective production of electricity and/or hydrogen. Sections 641 through 645 of EPAcT 2005 established the framework for the NGNP Project. Central to this framework is the development of a public-private partnership that is open to both domestic and international participation for sharing the cost and risks associated with the commercialization of this technology. Section 988 of EPAcT 2005 provides the overall formulation and considerations for cost-sharing.

The provisions of EPAcT 2005 establish two distinct phases for the NGNP Project. In Phase I, the Department is directed to select the hydrogen production technology and develop initial reactor design parameters for use in Phase II. Phase I is the research and planning part of the initiative, and it is the phase in which DOE is currently engaged. Phase I, to be completed by 2011, will result in an evaluation of available technology and potential design concepts for the NGNP prototype facility. In Phase II, EPAcT 2005 directed DOE to complete the design and construction of a prototype plant at the Idaho National Laboratory (INL) by 2021 based on the selected design concept in Phase I. EPAcT 2005 also established expectations for NGNP program execution, including industry participation and cost-share, international collaboration, NRC licensing, and review by the Nuclear Energy Research Advisory Committee, now called the Nuclear Energy Advisory Committee (NEAC).

DOE NGNP Project Background:

Consistent with EPAct 2005, the Department established the NGNP Project to provide the basis for commercialization of a new generation of advanced nuclear plants that utilize high-temperature gas-cooled reactor (HTGR) technology. The NGNP Project, as authorized by EPAct 2005, will result in a NGNP prototype facility that will operate to demonstrate the safety, reliability and economics of HTGR technology as applied to process heat, electricity and hydrogen production. The NGNP prototype facility will be licensed by the U.S. Nuclear Regulatory Commission (NRC) and will establish a licensing framework that can be used by future commercial HTGRs and other advanced reactor designs.

Goal and Objectives:

The strategic goal of the NGNP Project is to broaden the environmental and economic benefits of nuclear energy technology by demonstrating its applicability to industry sectors not currently served by commercial light water reactors. DOE will pursue the following objectives in the execution of the NGNP Project:

- Develop the HTGR technology, design and licensing strategy through a public/private partnership resulting from a competitive selection process.
- Demonstrate the basis for commercialization through construction and reliable operations of an HTGR prototype facility and associated technologies.
- Demonstrate readiness and capacity of U.S. nuclear manufacturing, design, and construction infrastructure for HTGR.

Requested Information on the NGNP Project:

The Department is seeking information and recommendations on how best to effectively meet the goals and objectives of both Phase I and II of the NGNP Project through a public-private partnership. We are inviting comments on the full scope of the program including cost, schedule, project management, regulatory strategy, HTGR design concepts, competition or commercial strategy, intellectual property and other issues. The Department also is requesting specific comments on what barriers, if any, exist in the provisions of EPACT 2005 to support the NGNP Project in terms of its cost, schedule or benefits. This request is intended, in part, to elicit information to support the Department's future critical decisions in accordance with DOE program and project management directives for capital asset acquisitions.

Responses to this request will constitute a collection of recommendations and alternatives that will inform the project's acquisition strategy for implementation in a Funding Opportunity Announcement (FOA) later this calendar year. Comments should be organized in accordance with the project phases described in EPAct 2005 or in format consistent with a proposal of how the project should be implemented.

NGNP Cost-Share Agreements:

Overview:

As noted previously, EAct 2005 requires that the NGNP Project be established, managed and funded through a public-private partnership. DOE is considering using a cooperative agreement as described in 10 CFR Part 600 or a technology investment agreement as described in 10 CFR Part 603 to enter into cost-sharing agreement(s) with industry. The agreement(s) would be structured in a manner that allows the Department to evaluate, through the review of required deliverables, the programmatic and technical merit in proceeding to each phase of work.

The RFI seeks industry input on the proper scale and scope of the prototype, and industry's best cost estimates for that scale prototype that will maximize the taxpayer return and the probability that the prototype will be commercialized. Overall, EAct 2005 requires a 50/50 cost share between Government and industry. Comments are requested on how to structure and sequence the cost-share agreements to provide value to both the public and the private partners.

DOE expects any agreement(s) to cover all activities related to this project including coordination with DOE on research and development in Phase I; and design, licensing, construction, and operation activities in Phase II. The agreement(s) also would address issues such as technology rights and private ownership of the NGNP capital assets. The Department expects to engage in negotiations with future partners to determine the appropriate level and phasing of cost-share as the project moves through its scope from research/development into design, licensing and construction.

The Department recognizes the possibility that several companies may team as a consortium to partner with DOE. One or more consortia may propose to partner in one or both phases of the project. Under standard DOE Intellectual Property policies and provisions, Intellectual Property Rights (IPR) may be fragmented among prime contractors and subcontractors. In this regard, the Department seeks comments on how to manage IPR. DOE may support the agreement with patent waivers and exceptional circumstance determinations, as necessary and determined appropriate by the Department, to assist future partners in consolidating and/or pooling the IPR. Furthermore, the Department may wish to obtain appropriate rights in our partners' IPR to assure continuation of the project in the event a partner withdraws.

Evaluation Criteria:

The Department seeks comments on criteria that the Department may use in evaluating proposals for the competitive award of cost-shared agreement(s). These criteria could include (but may not be limited to) the following:

1. A technology offering that clearly meets or exceeds the requirements for the NGNP prototype facility or a comprehensive plan for acquiring a technology that meets or exceeds the requirements for the NGNP;
2. A demonstrated capability to successfully manage and complete recent projects (especially nuclear projects) of similar size, scope and complexity and provide qualified project personnel with demonstrated capability, experience and certifications;
3. A demonstrated capability to manage and integrate the research, development, design, construction, licensing and operation of the NGNP;
4. A demonstrated capability to negotiate all business agreements including technology licenses, cooperative sub-agreements, and any other contractual instruments necessary to allow the construction and operation of the resultant design;
5. A demonstrated capability to lead the licensing and commercial deployment of the resultant design in the United States, and
6. A commitment and a summary of potential resources to share in the cost of the project.

CONTACT INFORMATION

The Department seeks public comment from all interested parties regarding its plans to enter into an agreement(s) with private industry to carry out the NGNP Project. Comments are sought that address all aspects of the proposed strategy including any input regarding scope of work, project strategy, project management, cost share, intellectual property rights, capital asset ownership, and evaluation criteria. Persons or entities that comment should identify themselves, their company or organization, their interest in the project (e.g., reactor vendor, potential industrial partner, construction subcontractor, component supplier, etc.), and contact point.

In addition, U.S. and/or foreign owned companies or consortia of companies that are interested in sharing the costs and benefits of the NGNP Project are invited to submit Expressions of Interest and comments on any aspect of the strategy detailed herein. Expressions of Interest shall be limited to 10 pages and include (a) the name, telephone

number, mailing address, and email address of the company or companies, (b) a designated point of contact within the firm(s), (c) a statement of interest in participating in the NGNP Project, and (d) evidence of the experience, technical and financial ability, and commitment to pursue the NGNP Project.

Confidential or business sensitive information contained within a submission must be identified and marked accordingly. The Department will protect this information from public disclosure to the extent permitted by law.

Interested parties may submit their comments by e-mail or by regular mail to Trevor Cook, Office of Nuclear Energy, U.S. Department of Energy, 1000 Independence Avenue, SW, Washington DC, 20585, E-mail address: NGNPEOI@NUCLEAR.ENERGY.GOV.

Written responses to this request for information and expression of interest must be received by DOE no later than 5:30 pm eastern time on June 10, 2008.

DOE may conduct one-on-one meetings with companies that respond to this request as a potential industry partner. The goal of one-on-one meetings would be to improve the companies' understanding of DOE's strategy and DOE's understanding of the comments provided. If DOE decides to hold one-on-one meetings, interested companies will be contacted. The Decision to meet with a company one-on-one has no bearing on the worthiness of its EOI submittal or on any future offerings.

Disclaimer: The information obtained through this request for information will be applied in the implementation of the Department's formal project management process via DOE Order 413A, *Program and Project Management for the Acquisition of Capital Assets*. This document, which is intended to elicit information and comments on the Department's strategy to develop the NGNP concept, does not represent a commitment by the Government to enter into a financial assistance instrument for the work described herein. Neither is this document intended as a formal solicitation of competitive financial assistance applications. No costs associated with responding to this Request or participating in any subsequent meetings will be borne by the Government.