# FINANCIAL ASSISTANCE FUNDING OPPORTUNITY ANNOUNCEMENT



# **U.S. Department of Energy**

# **Idaho Operations Office**

# Feasibility Study of Hydrogen Production at Existing Nuclear Power Plants

Funding Opportunity Number: DE-PS07-06ID14759

**Announcement Type:** Initial

**CFDA Number:** 81.121

Letter of Intent Due Date: 05/19/2006

Issue Date: 04/07/2006

**Pre-Application Due Date:** 

**Application Due Date:** 06/05/2006

This announcement will remain open until the Application Due Date. Applications may be submitted any time before the announcement closes.

# NOTE: NEW REQUIREMENTS FOR GRANTS.GOV

Where to Submit: Applications must be submitted through Grants.gov to be considered for award.

**Registration Requirements:** There are several one-time actions you must complete in order to submit an application through Grants.gov (e.g., obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number, register with the Central Contract Registry (CCR), register with the credential provider, and register with Grants.gov). See <a href="www.grants.gov/GetStarted">www.grants.gov/GetStarted</a>. Use the Grants.gov Organization Registration Checklist at <a href="www.grants.gov/assets/OrganizationRegCheck.doc">www.grants.gov/GetStarted</a>. Use the Grants.gov Organization Registration Checklist at <a href="www.grants.gov/assets/OrganizationRegCheck.doc">www.grants.gov/assets/OrganizationRegCheck.doc</a> to guide you through the process. Designating an E-Business Point of Contact (EBiz POC) and obtaining a special password called an MPIN are important steps in the CCR registration process. Applicants, who are not registered with CCR and Grants.gov, should allow at <a href="least 14 days">least 14 days</a> to complete these requirements. It is suggested that the process be started as soon as possible.

**Questions:** Questions relating to the registration process, system requirements, how an application form works, or the submittal process must be directed to Grants.gov at 1-800-518-4726 or <a href="mailto:support@grants.gov">support@grants.gov</a>. Part VII of this announcement explains how to submit other questions to the U.S. Department of Energy.

# **Application Receipt Notices**

After an application is submitted, the Authorized Organization Representative (AOR) will receive a series of four e-mails. It is extremely important that the AOR <u>watch</u> for and <u>save</u> each of the emails. It may take up to two (2) business days from application submission to receipt of email Number 2. You will know that your application has reached DOE when the AOR receives email Number 4. You will need the Submission Receipt Number (email Number 1) to track a submission. The titles of the four e-mails are:

Number 1 - Grants.gov Submission Receipt Number

Number 2 - Grants.gov Submission Validation Receipt for Application Number

Number 3 - Grants.gov Grantor Agency Retrieval Receipt for Application Number

Number 4 - Grants.gov Agency Tracking Number Assignment for Application Number

After receipt of email Number 4, you can view your application at DOE's e-Center, <a href="http://e-center.doe.gov">http://e-center.doe.gov</a>. A User Id and password are required. If you already have a User Id and password you do not need to re-register.

**VERY IMPORTANT – Download PureEdge Viewer:** In order to download the application package, you will need to install PureEdge Viewer. This small, free program will allow you to access, complete, and submit applications electronically and securely. For a free version of the software, visit the following web site: <a href="www.grants.gov/DownloadViewer">www.grants.gov/DownloadViewer</a>.

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# PART I - FUNDING OPPORTUNITY DESCRIPTION

A. The U.S. Department of Energy (DOE), Idaho Operations Office (ID) is seeking applications for cost shared feasibility studies of nuclear energy based production of hydrogen using available technology. The objective of this activity is to select and conduct project(s) that will utilize hydrogen production equipment and nuclear energy as necessary to produce data and analysis on the economics of hydrogen production with nuclear energy. As part of this activity, the awardee(s) shall also perform analysis of the regulatory requirements and environmental impacts of commercial hydrogen production demonstrations at nuclear power plants. The feasibility study results must be suitable for widespread dissemination. The objective of this small-scale feasibility study is to produce valid information that might be useful in the "Economic Analysis" required in Section 634(b) of the Energy Policy Act of 2005. Hydrogen production technology demonstration projects already underway that utilize nuclear energy may apply to expand the analysis tasks of their project. The projects are to address the data collection, analysis and dissemination needs identified by the U.S. DOE Nuclear Hydrogen Initiative. (The Nuclear Hydrogen Initiative can be found at:

http://www.ne.doe.gov/infosheets/hydrogenfactmarch2003.pdf)

This is an innovative, public/private endeavor that will require industry's creativity, cooperation and partnership. DOE is very interested in funding innovative, cost effective projects that demonstrate the capability of hydrogen production technologies that utilize nuclear energy, and in disseminating that information to the developing hydrogen industry and to the public.

Section 634 (b) of the Energy Policy Act of 2005 requires the Secretary of Energy to "determine whether the use of existing nuclear power plants is a cost effective means of producing hydrogen." The Department of Energy's Office of Nuclear Energy (NE) is responsible for executing this analysis. NE's approach to implementing the requirements of this section of the Act in NE's programs, is to start with this feasibility study, then in a separate, future funding opportunity, subject to the results from this study and the availability of funding, establish two (2) projects "to demonstrate the commercial production of hydrogen at existing nuclear power plants." The economic projections from this feasibility study and the presence of industry interest will provide input to support the Department's subsequent decision to solicit and award commercial-scale hydrogen production demonstration projects.

The team proposed by the applicant must include a nuclear utility company with appropriate participation from hydrogen production equipment vendors. Applications that do not include a nuclear utility company as a team member will not be considered for award. Project teams are strongly encouraged to include DOE national laboratories (FFRDC contractors) as project partners.

#### PART II - AWARD INFORMATION

# A. TYPE OF AWARD INSTRUMENT.

DOE anticipates awarding cooperative agreements under this program announcement (See Section VI.B.2 Statement of Substantial Involvement)

#### B. **ESTIMATED FUNDING.**

Approximately \$ 200,000 - 1,600,000 is expected to be available for new awards under this announcement.

#### C. MAXIMUM AND MINIMUM AWARD SIZE

Ceiling (i.e., the maximum amount for an individual award made under this announcement): \$2,000,000

Floor (i.e., the minimum amount for an individual award made under this announcement): None

#### D. EXPECTED NUMBER OF AWARDS.

DOE anticipates making 1-3 awards under this announcement depending on the size of the awards.

#### E. ANTICIPATED AWARD SIZE

While the maximum award size (i.e., the ceiling) is \$2,000,000, DOE anticipates that awards will be in the \$300,000 - \$800,000 range for the total project period.

#### F. PERIOD OF PERFORMANCE.

DOE anticipates making awards that will run for up to 3 years.

#### G. TYPE OF APPLICATION.

DOE will accept new applications under this announcement.

#### PART III – ELIGIBILITY INFORMATION

## A. ELIGIBLE APPLICANTS.

All types of domestic applicants are eligible to apply, except other Federal agencies, Federally Funded Research and Development Center (FFRDC) Contractors, and nonprofit organizations described in section 501(c)(4) of the Internal Revenue Code of 1986 that engaged in lobbying activities after December 31, 1995.

#### B. COST SHARING.

The cost share must be at least 20% of the total allowable costs of the project (i.e., the sum of the Government share, including FFRDC contractor costs if applicable, and the recipient share of allowable costs equals the total allowable costs of the projects) and must come from non-Federal sources. (See 10 CFR part 600 for the applicable cost share requirements.)

#### C. OTHER ELIGIBILITY REQUIREMENTS.

FFRDC applicants are not eligible for an award under this announcement, but they may be proposed as a team member subject to the following guidelines:

<u>Authorization for non-DOE/NNSA FFRDCs.</u> The Federal agency sponsoring the FFRDC contractor must authorize in writing the use of the FFRDC contractor on the proposed project and this

authorization must be submitted with the application. The use of a FFRDC contractor must be consistent with the contractor's authority under its award and must not place the FFRDC contractor in direct competition with the private sector.

<u>Authorization for DOE/NNSA FFRDCs.</u> The cognizant contracting officer for the FFRDC must authorize in writing the use of a DOE/NNSA FFRDC contractor on the proposed project and this authorization must be submitted with the application. The following wording is acceptable for this authorization.

"Authorization is granted for the \_\_\_\_\_\_ Laboratory to participate in the proposed project. The work proposed for the laboratory is consistent with or complimentary to the missions of the laboratory, will not adversely impact execution of the DOE/NNSA assigned programs at the laboratory, and will not place the laboratory in direct competition with the domestic private sector."

<u>Value/Funding.</u> The value of, and funding for, the FFRDC contractor portion of the work will not normally be included in the award to a successful applicant. Usually, DOE/NNSA will fund a DOE/NNSA FFRDC contractor through the DOE field work proposal system and other FFRDC contractors through an interagency agreement with the sponsoring agency.

<u>Cost Share.</u> The applicant's cost share requirement will be based on the total cost of the project, including the applicant's and the FFRDC contractor's portions of the effort.

# FFRDC Contractor Effort:

The FFRDC contractor effort, in aggregate, shall not exceed 50 % of the total estimated cost of the project, including the applicant's and the FFRDC contractor's portions of the effort.

**Responsibility.** The applicant, if successful, will be the responsible authority regarding the settlement and satisfaction of all contractual and administrative issues, including but not limited to, disputes and claims arising out of any agreement between the applicant and the FFRDC contractor.

Applicant's Team Composition

The team proposed by the applicant must include a nuclear utility company with appropriate participation from hydrogen production equipment vendors. Applications that do not include a nuclear utility company as a team member will not be considered for award. Project teams are strongly encouraged to include DOE national laboratories (FFRDC contractors) as project partners.

# PART IV - APPLICATION AND SUBMISSION INFORMATION

#### A. ADDRESS TO REQUEST APPLICATION PACKAGE.

Application forms and instructions are available at Grants.gov. To access these materials, go to <a href="http://www.grants.gov">http://www.grants.gov</a>, select "Apply for Grants", and then select "Download Application Package". Enter the CFDA and/or the funding opportunity number located on the cover of this announcement and then follow the prompts to download the application package. NOTE: You will not be able to download the Application Package unless you have installed PureEdge Viewer (See: <a href="http://www.grants.gov/DownloadViewer">http://www.grants.gov/DownloadViewer</a>).

#### B. LETTER OF INTENT AND PRE-APPLICATION.

# 1. Letter of Intent.

Applicants are requested to submit a letter of intent by May 19, 2006 this letter should include the name of the applicant, the title of the project, the name of the Project Director/Principal Investigator

(s), the amount of funds requested, and a one-page abstract. Letters of intent will be used to organize and expedite the merit review process. Failure to submit such letters will not negatively effect a responsive application submitted in a timely fashion. The letter of intent should be sent by E-mail to foggjc@id.doe.gov.

# 2. Pre-application.

Pre-applications are not required.

# C. CONTENT AND FORM OF APPLICATION – SF 424 (R&R)

You must complete the mandatory forms and any applicable optional forms (e.g., SF-LLL- Disclosure of Lobbying Activities) in accordance with the instructions on the forms and the additional instructions below. Files that are attached to the forms must be in Adobe Portable Document Format (PDF) unless otherwise specified in this announcement.

# 1. SF 424 (R&R).

Complete this form first to populate data in other forms. Complete all the required fields in accordance with the pop-up instructions on the form. To activate the instructions, turn on the "Help Mode" (Icon with the pointer and question mark at the top of the form). The list of certifications and assurances referenced in Field 18 can be found on the Applicant and Recipient Page at <a href="http://grants.pr.doe.gov">http://grants.pr.doe.gov</a>.

#### 2. NA

# 3. RESEARCH AND RELATED Other Project Information.

Complete questions 1 through 5 and attach files. The files must comply with the following instructions:

# **Project Summary/Abstract (Field 6 on the Form)**

The project summary/abstract must contain a summary of the proposed activity suitable for dissemination to the publication. It should be a self-contained document that identifies the name of the applicant, the project director/principal investigator(s), the project title, the objectives of the project, a description of the project, including methods to be employed, the potential impact of the project (i.e., benefits, outcomes), and major participants (for collaborative projects). This document must not include any proprietary or sensitive business information as the Department may make it available to the public. The project summary must not exceed 1 page when printed using standard 8.5" by 11" paper with 1" margins (top, bottom, left and right) with font not smaller than 11 point. To attach a Project Summary/Abstract, click "Add Attachment."

# **Project Narrative (Field 7 on the form)**

The project narrative must not exceed 50 pages, including charts, graphs, maps, photographs, and other pictorial presentations, when printed using standard 8.5" by 11" paper with 1 inch margins (top, bottom, left, and right). EVALUATORS WILL ONLY REVIEW THE NUMBER OF PAGES SPECIFIED IN THE PRECEDING SENTENCE. The font must not be smaller than 11 point. Do not include any Internet addresses (URLs) that provide information necessary to review the application, because the information contained in these sites will not be reviewed. See Part VIII.D for instructions on how to mark proprietary application information. To attach a Project Narrative, click "Add Attachment."

The project narrative must include:

# Project Objectives.

This section should provide a clear, concise statement of the specific objectives/aims of the proposed project.

#### Merit Review Criterion Discussion.

The section should be formatted to address each of the merit review criterion and sub-criterion listed in Section V. A. Provide sufficient information so that reviewers will be able to evaluate the application in accordance with these merit review criteria. DOE/NNSA WILL EVALUATE AND CONSIDER ONLY THOSE APPLICATIONS THAT ADDRESS SEPARATELY EACH OF THE MERIT REVIEW CRITERION AND SUB-CRITERION.

# Project Timetable:

This section should outline as a function of time, year by year, all the important activities or phases of the project, including any activities planned beyond the project period. Successful applicants must use this project timetable to report progress.

#### **Evaluation Phase:**

This section must include a plan and metrics to be used to assess the success of the project.

# **Project Performance Site:**

Indicate the primary site where the work will be performed. If a portion of the work will be performed at any other sites, identify those sites, also.

# **Project Performance Site:**

Indicate the primary site where the work will be performed. If a portion of the work will be performed at any other sites, identify those sites, also.

Third Parties Contributing to Cost Sharing Appendix: At the time you submit your application, you must have a letter from each third party (i.e., a party other than the organization submitting the application) letter must state that the third party is committed to providing a specific minimum dollar amount of cost sharing. By submitting your application, you are providing assurance that you have signed letters of commitment. In an appendix to your Project Narrative, you must identify the following information for each third party contributing to cost sharing: (1) the name of the organization; (2) the proposed dollar amount to be provided; (3) the amount as a percentage of the total project cost; and (4) the proposed cost sharing – cash, services, or property. This appendix will not count in the project narrative page limitation. Successful applicants must provide the signed letters of commitments within the number of days specified in Part IV.D, Submissions from Successful Applicants.

# Bibliography & References Cited (Field 8 on the form)

Provide a bibliography of any references cited in the Project Narrative. Each reference must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers, and year of publication. Include only bibliographic citations. Applicants should be especially careful to follow scholarly practices in providing citations for source materials relied upon when preparing any section of the application. In order to reduce the number of files attached to your application, please provide the Bibliography and References Cited information as an appendix to your project narrative. Do not attach a file in field 8.

This appendix will not count in the project narrative page limitation.

# Facilities & Other Resources (Field 9 on the form)

This information is used to assess the capability of the organizational resources, including subawardee resources, available to perform the effort proposed. Identify the facilities to be used (Laboratory, Animal, Computer, Office, Clinical and Other). If appropriate, indicate their capacities, pertinent capabilities, relative proximity, and extent of availability to the project. Describe only those resources that are directly applicable to the proposed work. Describe other resources available to the project (e.g., machine shop, electronic shop) and the extent to which they would be available to the project. In order to reduce the number of files attached to your application, please provide the Facility and Other Resource information as an appendix to your project narrative. Do not attach a file in field 9. This appendix will not count in the project narrative page limitation.

# Equipment (Field 10 on the form)

List major items of equipment already available for this project and, if appropriate identify location and pertinent capabilities. In order to reduce the number of files attached to your application, please provide the Equipment information as an appendix to your project narrative. Do not attach a file in field 10. This appendix will not count in the project narrative page limitation.

# Other Attachment (Field 11 on the form)

If you need to elaborate on your responses to questions 1-5 on the "Other Project Information" document, provide the information in a single file named "projinfo.pdf". Click on "Add Attachments" in Field 11 to attach file.

Also, attach the following files: No additional files are required.

# Budget for DOE/NNSA Federally Funded Research and Development Center (FFRDC) Contractor, if applicable.

If a DOE/NNSA FFRDC contractor is to perform a portion of the work, you must provide a DOE Field Work Proposal in accordance with the requirements in DOE Order 412.1 Work Authorization System. This order and the DOE Field Work Proposal form are available at <a href="http://grants.pr.doe.gov">http://grants.pr.doe.gov</a>. Use up to 10 letters of the FFRDC name (plus .pdf) as the file name (e.g., lanl.pdf or anl.pdf), and click on "Add Attachments" in Field 11 to attach.

# 4. RESEARCH AND RELATED Senior/Key Person.

Complete this form before the Budget form to populate data on the Budget form. Beginning with the PD/PI, provide a profile for each senior/key person proposed. A senior/key person is any individual who contributes in a substantive, measurable way to the scientific/technical development or execution of the project, whether or not a salary is proposed for this individual. Subawardees and consultants must be included if they meet this definition. For each senior/key person provide:

#### Biographical Sketch.

Complete a biographical sketch for each senior/key person and attach to the "Attach Biographical Sketch" field in each profile. The biographical information for each person must not exceed 2 pages when printed on 8.5" by 11" paper with 1 inch margins (top, bottom, left, and right) with font not smaller than 11 point and must include:

<u>Education and Training.</u> Undergraduate, graduate and postdoctoral training, provide institution, major/area, degree and year.

<u>Research and Professional Experience:</u> Beginning with the current position list, in chronological order, professional/academic positions with a brief description.

<u>Publications.</u> Provide a list of up to 10 publications most closely related to the proposed project. For each publication, identify the names of all authors (in the same sequence in which they appear in the publication), the article title, book or journal title, volume number, page numbers, year of publication, and website address if available electronically.

Patents, copyrights and software systems developed may be provided in addition to or substituted for publications.

<u>Synergistic Activities.</u> List no more than 5 professional and scholarly activities related to the effort proposed.

# **Current and Pending Support.**

Current and pending support information is not required for this program. Do not attach a Current and Pending Support file.

# 5. RESEARCH AND RELATED BUDGET (TOTAL FED + NON-FED).

Complete the Research and Related Budget form in accordance with the instructions on the form (Activate Help Mode to see instructions) and the following instructions. You must complete a separate budget for each year of support requested. The form will generate a cumulative budget for the total project period. You must complete all the mandatory information on the form before the NEXT PERIOD button is activated. You may request funds under any of the categories listed as long as the item and amount are necessary to perform the proposed work, meet all the criteria for allowability under the applicable Federal cost principles, and are not prohibited by the funding restrictions in this announcement (See PART IV, G).

# Budget Justification (Field K on the form).

Provide the required supporting information for the following costs (See R&R Budget instructions): equipment; domestic and foreign travel; participant/trainees; material and supplies; publication; consultant services; ADP/computer services; subaward/consortium/contractual; equipment or facility rental/user fees; alterations and renovations; and indirect cost type. Provide any other information you wish to submit to justify your budget request. If cost sharing is required, provide an explanation of the source, nature, amount and availability of any proposed cost sharing. Attach a single budget justification file for the entire project period in Field K. The file automatically carries over to each budget year.

# 6. R&R SUBAWARD (FED/NON-FED) BUDGET ATTACHMENT(S) FORM.

Budgets for Subawardees, other than DOE FFRDC Contractors. You must provide a separate cumulative R&R budget for each subawardee that is expected to perform work estimated to be more than \$100,000 or 50 percent of the total work effort (whichever is less). If you are selected for award, you must submit a multi-year budget for each of these subawardee (See Section IV.D for submission of Subawardees' multi-year budgets). Download the R&R Budget Attachment from the R&R SUBAWARD BUDGET ATTACHMENT(S) FORM and e-mail it to each subawardee that is required to submit a separate budget. Note: Subwardees must have installed PureEdge Viewer before they can complete the form. After the Subawardee has e-mailed its completed budget back to you, attach it to one of the blocks provided on the form. Use up to 10 letters of the subawardee's name (plus .xfd) as

the file name (e.g., ucla.xfd or energyres.xfd).

# 7. SF-LLL Disclosure of Lobbying Activities

If applicable, complete SF- LLL. Applicability: If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the grant/cooperative agreement, you must complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying."

# D. SUBMISSIONS FROM SUCCESSFUL APPLICANTS.

Successful applicants must submit the information listed below not later than 15 calendars days after notification of selection. Applicants who fail to provide the information within the required time period may be eliminated from further consideration.

What to submit	Required Form or Format
Designated Responsible Employee for complying with national policies prohibiting discrimination.	No special format. E-mail information to: foggjc@id.doe.gov
Provide organization name, project title, DOE application tracking number and the name, title, and phone number of Designated Responsible Employee for complying with national policies prohibiting discrimination (See 10 CFR 1040.5)	
Environmental Questionnaire.	The form "Environmental Checklist" can be
Environmental Questionnaire.	accessed by selecting the FA Forms link found
You must complete and submit an environmental questionnaire.	at: http://www.id.doe.gov/doeid/psd/proc-div.html

#### E. SUBMISSION DATES AND TIMES

# 1. Pre-application Due Date.

Pre-applications are not required.

# 2. Application Due Date.

Applications should be received by June 05 2006 not later than 8:00 PM Eastern Time. You are encouraged to transmit your application well before the deadline. APPLICATIONS RECEIVED AFTER THE DEADLINE WILL NOT BE REVIEWED OR CONSIDERED FOR AWARD.

#### F. GOVERNMENTAL REVIEW

This program is not subject to Executive Order 12372 – Intergovernmental Review of Federal Programs.

#### G. FUNDING RESTRICTIONS.

<u>Cost Principles.</u> Costs must be allowable in accordance with the applicable Federal cost principles referenced in 10 CFR part 600.

<u>Pre-award Costs.</u> Recipients may charge to an award resulting from this announcement pre-award costs that were incurred within the ninety (90) calendar day period immediately preceding the

effective date of the award, if the costs are allowable in accordance with the applicable Federal cost principles referenced in 10 CFR part 600. Recipients must obtain the prior approval of the contracting officer for any pre-award costs that are for periods greater than this 90 day calendar period.

Pre-award costs are incurred at the applicant's risk. DOE is under no obligation to reimburse such costs if for any reason the applicant does not receive an award or if the award is made for a lesser amount than the applicant expected.

#### H. OTHER SUBMISSION AND REGISTRATION REQUIREMENTS

# 1. Where to Submit.

APPLICATIONS MUST BE SUBMITTED THROUGH GRANTS.GOV TO BE CONSIDERED FOR AWARD. Submit electronic applications through the "Apply for Grants" function at <a href="www.Grants.gov">www.Grants.gov</a>. If you have problems completing the registration process or submitting your application, call Grants.gov at 1-800-518-4726 or send an email to support@grants.gov.

# 2. Registration Process.

You must COMPLETE the one-time registration process (all steps) before you can submit your first application through Grants.gov (See www.grants.gov/GetStarted). We recommend that you start this process at least two weeks before the application due date. It may take 14 days or more to complete the entire process. Use the Grants.gov Organizational Registration Checklists at <a href="http://www.grants.gov/assets/OrganizationRegCheck.doc">http://www.grants.gov/assets/OrganizationRegCheck.doc</a> to guide you through the process. <a href="IMPORTANT">IMPORTANT</a>: During the CCR registration process, you will be asked to designate an E-Business Point of Contact (EBIZ POC). The EBIZ POC must obtain a special password called "Marketing Partner identification Number" (MPIN).

#### Part V - APPLICATION REVIEW INFORMATION

#### A. CRITERIA

#### 1. Initial Review Criteria.

Prior to a comprehensive merit evaluation, DOE will perform an initial review to determine that (1) the applicant is eligible for an award; (2) the information required by the announcement has been submitted; (3) all mandatory requirements are satisfied; and (4) the proposed project is responsive to the objectives of the funding opportunity announcement.

#### 2. Merit Review Criteria.

Selections will be made in accordance with the following merit review criteria. All applications will be evaluated and point-scored in accordance with the following criteria. The applications must be fully responsive to each of the criteria. The criteria used are weighted to select applications that convey a high level of confidence that a valid feasibility study of hydrogen production at existing nuclear power plants will be successfully completed. Factors in this consideration include the composition of the project team, their experience collecting, analyzing and reporting operation, economic, and regulatory information, suitability of the chosen hydrogen production technology, and the completeness of the project plan.

The four criteria that will serve as the basis for proposal evaluations are as follows:

Criterion 1 (25 points): Composition and Experience of Project Team—The composition of the

project team will be evaluated to determine if there is the required participation of a U.S nuclear energy utility company. The composition and experience of the rest of the team will be evaluated, including evaluating the encouraged participation of DOE national laboratories. The experience of the project team in conducting demonstration and analysis projects, and collecting and analyzing, operating, economic and regulatory data will be evaluated.

Criterion 2 (25 points): Hydrogen Production Technology Proposed-The proposed hydrogen production technology must have potential to be scaled up to produce commercially viable quantities--on the order of about one kilogram per second--of high purity hydrogen over an extended period of operation. The operations of hydrogen production equipment during this study are anticipated to produce on the order of 100 kilograms of hydrogen per day, but operations must demonstrate that they are representative of production systems with the capability for full, commercial scale operation. The manufacturer(s) of the hydrogen production system must be interested and committed to participation in this project. The potential proposed beneficial use of the hydrogen produced for commercial success and market penetration of the technology will be evaluated.

Criterion 3 (25 points): Feasibility Study Project Concept and Plan—The concept and plan for the proposed analysis project will be evaluated to determine the likelihood thatthe applicant team would be able to complete the project successfully without significant unknowns impacting deployment, operation, data collection and analysis. The plan will also be evaluated for the adequacy and appropriateness of the schedule (sequence of project tasks, planned levels of data collection, data analyses, principal milestones, and time for each task) and the planned assignment of responsibilities and level of manpower to complete the project. This evaluation will include a review of the qualifications of key personnel identified in the proposal, and of the proposed method of conducting the economic analysis of the hydrogen production system. Proposed project cost share will be evaluated to determine the level of team member's willingness to participate. The amount and type of cost share to which the team commits will be evaluated.

Criterion 4 (25 points): Analysis of Regulatory and Environmental Impacts – The reviewers will evaluate the applicant's ability to perform analysis of the regulatory requirements and environmental impacts of commercial hydrogen production demonstrations at nuclear power plants.

The criteria will be based on a maximum of 100 points. The evaluation criteria are weighted as indicated above.

#### 3. Other Selection Factors.

The selection official will consider the following program policy factors in the selection process:

- 1) A balanced portfolio of projects (i.e., diverse technologies, applications that benefit diverse sectors of industries or uses of hydrogen, complementary efforts, geographic distribution, etc.).
- 2) The proposed project's relevance to DOE Nuclear Hydrogen Initiative programmatic objectives, including achieving and publicizing nuclear hydrogen production, reducing negative environmental impacts particularly regulated emissions and greenhouse gas emission—and maximizing the number of excellent projects funded.
- 3) The total proposed cost of the project will not be point scored. Applicants are advised, however, that notwithstanding the lower relative importance of the project cost, the cost may become a consideration in selections. All costs will be evaluated for reasonableness and appropriateness for the work involved. Unreasonable and/or inappropriate costs may negatively impact a proposal's evaluation.

# **B. REVIEW AND SELECTION PROCESS.**

#### 1. Merit Review.

Applications that pass the initial review will be subjected to a merit review in accordance with the guidance provided in the "Department of Energy Merit Review Guide for Financial Assistance and Unsolicited Proposals." This guide is available under Financial Assistance, Regulations and Guidance at <a href="http://professionals.pr.doe.gov/ma5/ma-5web.nsf/?Open">http://professionals.pr.doe.gov/ma5/ma-5web.nsf/?Open</a>.

#### 2. Selection.

The Selection Official will consider the merit review recommendation, program policy factors, and the amount of funds available.

#### 3. Discussions and Award.

The Government may enter into discussions with a selected applicant for any reason deemed necessary, including but not limited to: (1) the budget is not appropriate or reasonable for the requirement; (2) only a portion of the application is selected for award; (3) the Government needs additional information to determine that the recipient is capable of complying with the requirements in 10 CFR part 600; and/or (4) special terms and conditions are required. Failure to resolve satisfactorily the issues identified by the Government will preclude award to the applicant.

# C. ANTICIPATED NOTICE OF SELECTION AND AWARD DATES.

DOE anticipates notifying applicants selected for award by July 31, 2006 and making awards by September 30, 2006.

#### Part VI - AWARD ADMINISTRATION INFORMATION

#### A. AWARD NOTICES.

# 1. Notice of Selection.

DOE will notify applicants selected for award. This notice of selection is not an authorization to begin performance. (See Part IV.G with respect to the allowability of pre-award costs.)

Organizations whose applications have not been selected will be advised as promptly as possible. This notice will explain why the application was not selected.

#### 2. Notice of Award.

A Notice of Financial Assistance Award issued by the contracting officer is the authorizing award document. It normally includes, either as an attachment or by reference: 1. Special Terms and Conditions; 2. Applicable program regulations, if any; 3. Application as approved by DOE.; 4. DOE assistance regulations at 10 CFR part 600, or, for Federal Demonstration Partnership (FDP) institutions, the FDP terms and conditions; 5. National Policy Assurances To Be Incorporated As Award Terms; 6. Budget Summary; and 7. Federal Assistance Reporting Checklist, which identifies the reporting requirements.

#### B. ADMINISTRATIVE AND NATIONAL POLICY REQUIREMENTS.

# 1. Administrative Requirements.

The administrative requirements for DOE grants and cooperative agreements are contained in 10 CFR part 600 (See: <a href="http://ecfr.gpoaccess.gov">http://ecfr.gpoaccess.gov</a>), except for grants made to Federal Demonstration Partnership (FDP) institutions. The FDP terms and conditions and DOE FDP agency specific terms and conditions are located on the National Science Foundation web site at

http://www.nsf.gov/awards/managing/fed\_dem\_part.jsp.

# 2. Special Terms and Conditions and National Policy Requirements.

# **Special Terms and Conditions and National Policy Requirements.**

The DOE Special Terms and Conditions for Use in Most Grants and Cooperative Agreements are located at <a href="http://grants.pr.doe.gov">http://grants.pr.doe.gov</a>. The National Policy AssurancesTo Be Incorporated As Award Terms are located at <a href="http://grants.pr.doe.gov">http://grants.pr.doe.gov</a>.

# **Intellectual Property Provisions.**

The standard DOE financial assistance intellectual property provisions applicable to the various types of recipients are located at <a href="http://www.gc.doe.gov/techtrans/sipp">http://www.gc.doe.gov/techtrans/sipp</a> matrix.html.

## Statement of Substantial Involvement.

a. DOE anticipates having substantial involvement during the project period, through technical assistance, advice, intervention, integration with other awardees performing related activities, and technical transfer activities. The recipient's responsibilities are listed in paragraph b and DOE's responsibilities are listed in paragraph c.

b. Recipient's responsibilities. The recipient is responsible for:

Performing the activities supported by this award, including providing the required personnel, facilities, equipment, supplies and services;

- (1) Defining approaches and plans, submitting the plans to DOE for review, and incorporating DOE's comments;
- (2) Managing and conducting the project activities, including coordinating with a DOE management and operating (M&O) contractor on activities performed under the M&O contract that are related to the project;
- (3) Attending annual program review meetings and reporting project status;
- (4) Submitting technical reports as stated in the Federal Assistance Reporting Checklist, and incorporating DOE comments; and
- (5) Presenting the project results at appropriate technical conferences or meetings as directed by the DOE Project Officer.
- c. DOE responsibilities. DOE is responsible for:
- (1) Reviewing in a timely manner project plans, including technology transfer plans, and redirecting the work effort if the plans do not address critical programmatic issues;
- (2) Conducting annual program review meetings to ensure adequate progress and that the work accomplishes the program and project activities. Redirecting work or shifting work emphasis, if needed:

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- (3) Promoting and facilitating technology transfer activities, including disseminating program results through presentations and publications; and
- (4) Serving as scientific/technical liaison between awardees and other program or industry staff.
- d. There are limitations on recipient and DOE responsibilities and authorities in the performance of the project activities. Performance of the project activities must be within the scope of the Statement of Objectives, the terms and conditions of the Cooperative Agreement, and the funding and schedule constraints.

#### C. **REPORTING.**

Reporting requirements are identified on the Federal Assistance Reporting Checklist, DOE F 4600.2, attached to the award agreement. See Attachment A for the proposed Checklist for this program.

#### PART VII - QUESTIONS/AGENCY CONTACTS

#### A. QUESTIONS

Questions regarding the content of the announcement must be submitted through the "Submit Question" feature of the DOE Industry Interactive Procurement System (IIPS) at <a href="http://e-center.doe.gov">http://e-center.doe.gov</a>. Locate the program announcement on IIPS and then click on the "Submit Question" button. Enter required information. You will receive an electronic notification that your question has been answered. DOE will try to respond to a question within 3 business days, unless a similar question and answer have already been posted on the website

Questions relating to the registration process, system requirements, how an application form works, or the submittal process must be directed to Grants.gov at 1-800-518-4726 or <a href="mailto:support@grants.gov">support@grants.gov</a>. DOE cannot answer these questions.

# **B.** Agency Contact

Name: Jeffrey C. Fogg

E-mail address: foggjc@id.doe.gov

Fax:

208-526-5548

Telephone: 208-526-4958

#### A. MODIFICATIONS.

Notices of any modifications to this announcement will be posted on Grants.gov and the DOE Industry Interactive Procurement System (IIPS). You can receive an email when a modification or an announcement message is posted by joining the mailing list for this announcement through the link in IIPS. When you download the application at Grants.gov, you can also register to receive notifications of changes through Grants.gov.

#### B. GOVERNMENT RIGHT TO REJECT OR NEGOTIATE.

DOE reserves the right, without qualification, to reject any or all applications received in response to this announcement and to select any application, in whole or in part, as a basis for negotiation and/or award.

#### C. COMMITMENT OF PUBLIC FUNDS.

The Contracting Officer is the only individual who can make awards or commit the Government to the expenditure of public funds. A commitment by other than the Contracting Officer, either explicit or implied, is invalid.

#### D. PROPRIETARY APPLICATION INFORMATION.

Patentable ideas, trade secrets, proprietary or confidentional commercial or financial information, disclosure of which may harm the applicant, should be included in an application only when such information is necessary to convey an understanding of the proposed project. The use and disclosure of such data may be restricted, provided the applicant includes the following legend on the first page of the project narrative and specifies the pages of the application which are to be restricted:

"The data contained in pages \_\_\_\_\_ of this application have been submitted in confidence and contain trade secrets or proprietary information, and such data shall be used or disclosed only for evaluation purposes, provided that if this applicant receives an award as a result of or in connection with the submission of this application, DOE shall have the right to use or disclose the data herein to the extent provided in the award. This restriction does not limit the government's right to use or disclose data obtained without restriction from any source, including the applicant."

To protect such data, each line or paragraph on the pages containing such data must be specifically identified and marked with a legend similar to the following:

"The following contains proprietary information that (name of applicant) requests not be released to persons outside the Government, except for purposes of review and evaluation."

# E. EVALUATION AND ADMINISTRATION BY NON-FEDERAL PERSONNEL.

In conducting the merit review evaluation, the Government may seek the advice of qualified non-Federal personnel as reviewers. The Government may also use non-Federal personnel to conduct routine, nondiscretionary administrative activities. The applicant, by submitting its application, consents to the use of non-Federal reviewers/administrators. Non-Federal reviewers must sign conflict of interest and non-disclosure agreements prior to reviewing an application. Non-Federal personnel conducting administrative activities must sign a non-disclosure agreement.

# F. INTELLECTUAL PROPERTY DEVELOPED UNDER THIS PROGRAM.

Patent Rights. The government will have certain statutory rights in an invention that is

conceived or first actually reduced to practice under a DOE award. 42 U.S.C. 5908 provides that title to such inventions vests in the United States, except where 35 U.S.C. 202 provides otherwise for nonprofit organizations or small business firms. However, the Secretary of Energy may waive all or any part of the rights of the United States subject to certain conditions. (See "Notice of Right to Request Patent Waiver" in paragraph G below.)

Rights in Technical Data. Normally, the government has unlimited rights in technical data created under a DOE agreement. Delivery or third party licensing of proprietary software or data developed solely at private expense will not normally be required except as specifically negotiated in a particular agreement to satisfy DOE's own needs or to insure the commercialization of technology developed under a DOE agreement.

Special Protected Data Statutes. This program is covered by a special protected data statute. The provisions of the statute provide for the protection from public disclosure, for a period of up to 5 years from the development of the information, of data that would be trade secret, or commercial or financial information that is privileged or confidential, if the information had been obtained from a non-Federal party. Generally, the provision entitled, Rights in Data Programs Covered Under Special Protected Data Statutes, (10 CFR 600 Appendix A to Subpart D), would apply to an award made under this announcement. This provision will identify data or categories of data first produced in the performance of the award that will be made available to the public, notwithstanding the statutory authority to withhold data from public dissemination, and will also identify data that will be recognized by the parties as protected data.

# G. NOTICE OF RIGHT TO REQUEST PATENT WAIVER.

Applicants may request a waiver of all or any part of the rights of the United States in inventions conceived or first actually reduced to practice in performance of an agreement as a result of this announcement, in advance of or within 30 days after the effective date of the award. Even if such advance waiver is not requested or the request is denied, the recipient will have a continuing right under the award to request a waiver of the rights of the United States in identified inventions, i.e., individual inventions conceived or first actually reduced to practice in performance of the award. Any patent waiver that may be granted is subject to certain terms and conditions in 10 CFR 784.

Domestic small businesses and domestic nonprofit organizations will receive the patent rights clause at 37 CFR 401.14, i.e., the implementation of the Bayh-Dole Act. This clause permits domestic small business and domestic nonprofit organizations to retain title to subject inventions. Therefore, small businesses and nonprofit organizations do not need to request a waiver.

#### H. NOTICE REGARDING ELIGIBLE/INELIGIBLE ACTIVITIES.

Eligible activities under this program include those which describe and promote the understanding of scientific and technical aspects of specific energy technologies, but not those which encourage or support political activities such as the collection and dissemination of information related to potential, planned or pending legislation.