



2009 P3 PROJECT REPORT INSTRUCTIONS

**Due: Monday, March 23, 2009,
No Later Than 4:00 PM, Eastern Time**

**The P3 Project Report consists of the following two files.
They must be in Adobe portable document format (pdf):**

- (1) A document containing ONLY the Executive Summary described in Section IV below. This document must be titled:
“8339XX ExecSum-University Abbreviation.pdf”, where: (i) “XX” is replaced by the 2 digits unique to your grant number and (ii) “University Abbreviation” is replaced by a short abbreviation indicative of your University or College.
- (2) A document containing ALL the items identified in Items I-VIII in the “Required Materials” section below. This document must be titled:
“8339XX ProjRpt-University Abbreviation.pdf”, where: (i) “XX” is replaced by the 2 digits unique to your grant number and (ii) “University Abbreviation” is replaced by a short abbreviation indicative of your University or College. The same abbreviation for your university or college must be used in both file titles.

To submit your P3 Project Report, send these two files via e-mail to Cynthia Nolt-Helms at: nolt-helms.cynthia@epa.gov no later than Monday, March 23, 2009 at 4:00 PM Eastern Time.

Files may be submitted in one or two e-mail messages.

If an e-mail acknowledgment has not been received within 5 days of the submission deadline, immediately contact Cynthia Nolt-Helms, P3 Award program manager by phone at 202-343-9693.

NOTE: Phase II proposals CANNOT be submitted via Grants.gov

BACKGROUND

The P3 Award Competition was developed to enable college and university students from across the U.S. to design scientific, technical, and policy solutions to sustainability challenges. The 43 projects being developed by this year's P3 teams will be displayed April 18-20, 2009 at the National Sustainable Design Expo on the National Mall in Washington, DC to showcase the teams' results and ideas for Phase II. The teams are also expected to prepare a written report that will help the judging panel convened by the American Association for the Advancement of Science (AAAS) evaluate the teams' success in completing their Phase I project as well as projected activities for a Phase II grant. From the written Project Reports and the team presentations at the Expo, the AAAS judging panel will recommend up to ten (10) projects to receive the P3 Award.

From those recommendations, EPA will select five (5) winners of the P3 Award. These teams will then be eligible to receive a Phase II grant to provide additional funding to support further development or implementation as proposed in the Project Report. Up to \$75,000 is available for each Phase II grant, including direct and indirect costs, and exempting personnel expenses. Proposals exceeding this amount (\$75,000) will not be considered. The total Phase II project period for an application submitted in response to this Request for Applications (RFA) may not exceed 2 years.

The team's project report will serve two purposes. It should:

- (1) Describe the team's achievements with respect to the stated Phase I project purposes and objectives. Specifically, it should provide a comprehensive overview of the research objectives and results (outputs & outcomes), as well as publications and presentations. And
- (2) Provide a proposal for Phase II funding detailing development and implementation strategies based on the Phase I project.

The project report from each P3 student team will need to communicate progress that has been made toward the Phase I project goals. Since the P3 program recognizes the importance of the design process as well as outputs and outcomes, some of the award criteria will be based on how the work proceeded as well as the ultimate conclusions that were reached by the student teams.

The project report should be written in language that would be understood by the educated public.

REQUIRED MATERIALS

I. STANDARD FORM 424A (available at <http://es.epa.gov/ncer/rfa/forms/> under FORMS REQUIRED WITH STAR GRANT APPLICATIONS). The applicant must complete SF424. This form will be the first page of the application. Instructions for completing the SF424 are included with the form. At this point in the process, this form does NOT need to contain the original signature of an authorized representative of the applying institution. However, both the Principal Investigator and an administrative contact must be identified in Section 5 of the SF424.

Regarding Block 16 of the SF424: research funded under this program may be eligible under E.O. 12372, "Intergovernmental Review of Federal Programs," if it affects public health or if an environmental impact statement is required. If applicable, an applicant should consult the office or official designated as the single point of contact in his or her state for more information on the process the state requires to be followed in applying for assistance, if the state has selected the program for review. To determine whether their state participates in this process, and how to comply, applicants should consult <http://www.whitehouse.gov/omb/grants/spoc.html>.

II. KEY CONTACTS (available at <http://es.epa.gov/ncer/rfa/forms/> under FORMS REQUIRED WITH STAR GRANT APPLICATIONS). The applicant must complete the Key Contacts Form (NCER Form 5700.54) as the second page of the application. A copy of this form should also be completed for major sub-agreements with contacts at the institution of any primary co-investigator. Please make certain that all contact information is accurate.

III. TABLE OF CONTENTS

Provide a list of the major subdivisions of the application indicating the page number on which each section begins.

IV. EXECUTIVE SUMMARY (3-5 PAGES)

The executive summary will be placed on the EPA's P3 web page along with a list of publications, if any, that result from the P3 project. The summary should be submitted in the following format:

NCER Assistance Agreement Project Report Executive Summary

Date of Project Report:

EPA Agreement Number: SU8339##

Project Title:

Faculty Advisor(s), Departments, and Institutions:

Student Team Members, Departments, and Institutions:

Project Period:

Description and Objective of Research:

Summary of Findings (Outputs/Outcomes):

Conclusions:

Proposed Phase II Objectives and Strategies:

Publications/Presentations:

Supplemental Keywords:

Relevant Web Sites:

V. BODY OF REPORT (Not to exceed 15 pages)

The body of the report should not exceed fifteen (15) consecutively numbered (bottom center), 8.5x11-inch pages of single-spaced, standard 12-point type with 1-inch margins.

The project report should include the following sections:

A. Summary of Phase I Results (8 - 10 pages)

In the project report summary for Phase I projects, P3 teams must provide a comprehensive overview of their research objectives and results, as well as publications and presentations, in language that would be understood by the educated public. **P3 teams should describe their conclusions and the implications for further research, development, or implementation.** P3 teams are also encouraged to provide web site links to their publications or related research efforts.

1. Background and Problem Definition

- Relationship to people, prosperity and the planet
- Relevance and significance to developing or developed world
- Implementation of the P3 team project as an educational tool

2. Purpose, Objectives, Scope

3. Data, Findings, Outputs/Outcomes

- Streamlined life cycle costing and analysis, if appropriate
- Quantifiable and qualitative benefits to people, prosperity and the planet (estimated or actual)

4. Discussion, Conclusions, Recommendations

Note: Wherever possible, the report should provide quantitative data to more completely describe how the criterion has been addressed. It is appropriate and acceptable for the quantified benefits to be projected or likely as long as the implementation assumptions are clearly identified. Sections 3 and 4 above should primarily focus on the following items:

- i. Did the project balance the elements of people, prosperity and the planet?
- ii. Was your project successful (based on the definition of success you provided in the Phase I proposal)? If so, what was crucial to achieving success? If not, what were the critical barriers and impediments? If you were going to repeat the same project, what would you do differently?
- iii. Did all disciplines represented by the team members contribute in a substantive and constructive manner?
- iv. Does the project have potential to bring about positive impacts in making progress toward sustainability?
- v. Are the potential impacts broadly applicable and transferable to various industry sectors or various situations in both the developed and developing world or did the project have a significant impact within a given process or context?

- vi. How many external partners were involved on the project? How much external funding was leveraged for the project?
 - vii. Can the project's impacts be quantified in terms of reduced environmental impact (water, waste, toxic emissions, etc.) and/or in terms of improved environmental health (reduced probability of illness)? If so, what are the quantifiable benefits (i.e., reduction of X lbs. of emissions, reduced incidence rate of X cancer cases per 100,000 people, etc.)?
 - viii. Can the benefits of the project to people, prosperity and the planet be qualitatively determined?
 - ix. Can the project's impacts contribute to improved quality of life?
 - x. Was the project focused on original discoveries or an adaptation of existing knowledge to result in innovative approaches?
- Each of the above questions should be answered in the report in the form of a short narrative.

5. References

B. Proposal for Phase II (5 - 7 pages)

Applications should be focused on a limited number of research objectives that adequately and clearly meet the RFA requirements. Explicitly state how Phase II will build on the successes achieved in Phase I. Detail the methods and approaches that will be used to further the design in terms of development or implementation. The Phase II portion of the P3 project report must provide the following information:

1. P3 Phase II Project Description

- Address the review criteria (see Evaluation Criteria section below). Include the criteria subheadings:
 - Challenge Definition and Relationship to Phase I
 - Innovation and Technical Merit
 - Relationship of Challenge to Sustainability
 - Measurable Results (Outputs/Outcomes), Evaluation Method, and Demonstration/Implementation Strategy
 - Integration of P3 Concepts as an Educational Tool

2. Project Schedule

- Show significant steps and milestones in the project. Clearly depict the project's duration, and include key milestones and project tasks building on the timeline from research to design (Phase I) through development to implementation (Phase II). Indicate anticipated roles and tasks of each team member or department represented. Also, indicate anticipated interactions with any and all partners (see 3 below), if applicable.

3. Partnerships (if applicable) Note: This description does not count towards the five to seven (5-7) page limit.

- Partnerships are strongly encouraged and considered particularly important for the implementation strategies.

- Formal partnerships should be established prior to submitting the project report. As such, detail any and all partnerships established for the purposes of competing for the P3 Award including the type of partner (educational institution, industry and/or NGOs), matching contributions (funding and/or in-kind) provided by the partner, the nature of the partnership, and the role of the partner in the project.
- Formal letters of understanding or commitment including anticipated support for Phase II of the project from any and all partners should be submitted in support of the application, when available and appropriate.

IMPORTANT ATTACHMENTS (These materials are in addition to the fifteen-page limit for the project report.)

VI. SUPPORTING LETTERS (as appropriate)

Letters of intention or understanding detailing commitment or support should be included and are in addition to the fifteen-page limit for the project report.

VII. BUDGET AND BUDGET JUSTIFICATION

EPA anticipates funding five (5) Phase II projects at a level up to \$75,000 for two years, dependent on the availability of funds. Proposals with budgets exceeding the award limit will not be considered.

Prepare a budget table using the guidance and format found at <http://es.epa.gov/ncer/rfa/forms/>, under the **FORMS REQUIRED WITH STAR GRANT APPLICATIONS** section of the Forms table. If a sub-agreement, such as a sub-contract or sub-award, is included in the application, provide a separate budget for the sub-agreement in the same format. Include the total amount for any sub-contracts under “f. Contracts” and any the sub-awards under “g. Other” in the master budget. Any project containing sub-agreements that constitute more than 40% of the total direct cost of the grant will be subject to special review. Additional justification for use of such a sub-agreement must be provided, discussing the need for this agreement to accomplish the objectives of the research project.

Please note that institutional cost-sharing is not required. However, if you intend to cost-share, a brief statement concerning cost-sharing should be added to the budget justification, and estimated dollar amounts must be included in the appropriate categories in the budget table in a separate cost-sharing column.

In addition to the tabular presentation of the budget, please provide a written “Budget Justification” that describes the basis for calculating the travel, equipment, supplies, contractual support, and other costs identified in the itemized budget and explain the basis for their calculation. (Special attention should be given to explaining the “travel,” “equipment,” and “other” categories.)

The “Budget Justification” should not exceed two consecutively numbered (bottom center), 8.5x11-inch pages of single-spaced, standard 12-point type with 1-inch margins.

Budget information in the “Budget Justification” document should be provided at the level of detail described below.

1. Personnel – **not eligible under this solicitation**
2. Fringe Benefits – not eligible under this solicitation
3. Travel – Specify the estimated number of trips and locations, and other costs for each type of travel. Explain the need for any travel outside the United States.
4. Equipment - Identify computers and each item to be purchased with an estimated cost of \$5,000 or more per unit and a useful life of more than one year. (Note: Items with a unit cost of less than \$5,000 are considered “Supplies”.)
5. Supplies - All tangible property other than “equipment.” Identify categories of supplies to be procured (e.g., laboratory supplies or office supplies).
6. Contractual - Identify any proposed sub-contract and specify its purpose and estimated cost.
7. Other – Identify any proposed sub-award and specify its purpose and estimated cost. List all additional items in sufficient detail for the EPA to determine the reasonableness of its cost relative to the research to be undertaken.
8. Indirect Charges - If indirect charges are included in the budget, indicate the approved rate and base with an explanation of how indirect costs were calculated.

VIII. RESUMES

Provide the resumes of all principal investigators and important co-workers. The resume for each individual must not exceed two consecutively numbered (bottom center), 8.5x11-inch pages of single-spaced, standard 12-point type with 1-inch margins.

FYI: GUIDELINES, LIMITATIONS, AND ADDITIONAL REQUIREMENTS

Confidentiality

By submitting an application in response to this solicitation, the applicant grants EPA permission to make limited disclosures of the application to technical reviewers both within and outside the Agency for the express purpose of assisting the Agency with evaluating the application. Information from a pending or unsuccessful application will be kept confidential to the fullest extent allowed under law; information from a successful application may be publicly disclosed.

EVALUATION CRITERIA

As part of the second phase of the P3 program, a panel of judges has been convened by the American Association for the Advancement of Science (AAAS) to evaluate the Phase I projects and review the Phase II proposals. This panel will recommend projects to receive the EPA's P3 Awards. The evaluation will consist of assessing the project report submitted along with the demonstration of the project at the National Sustainable Design Expo on the National Mall on April 18-20, 2009. The judges will use the following evaluation criteria to make recommendations to the EPA of the top projects that should be considered for a P3 Award and for the opportunity to receive Phase II funding. Winners of the P3 Award will be chosen by EPA and will be eligible for additional funding to support further development and demonstration. EPA will make the final decisions on which projects will receive the Phase II funding.

The following criteria will be used by the judges convened by AAAS in descending order of importance and relevance.

Note: This order is not the same as the required order for the project report.

I. Relationship of Challenge to Sustainability (People, Prosperity and the Planet)

- How well does the proposed follow-on work for Phase II promote sustainable environmental protection, economic prosperity, and social benefit across scales in the developing and/or developed world?
- Does the proposal address how future generations may be affected by the design?

People:

- Do the proposed environmental and economic outcomes benefit society?
- Does the project meet the needs of the intended end user?
- If the design is intended for the developing world, does it have the potential to improve quality of life?
- If the design is intended for the developed world, does it use energy and material resources effectively and efficiently through the life cycle while reducing hazards to human health and the environment?

Prosperity:

- Does the proposal mention or consider short-term (i.e., capital costs for implementation) and long-term (i.e., operation and maintenance) costs?

Planet:

- In general, will the design reduce impacts on the environment and human health, diminish resource consumption, and/or directly benefit the environment?

- Does the proposal demonstrate that: (1) the design implementation will not exhaust or degrade the local environment or shift the environmental impacts to another locality? And (2) the proposed project is less damaging or more beneficial to the health of natural systems than a traditional design?

II. Challenge Definition and Relationship to Phase I

- Is the technical challenge defined in terms that are relevant and significant related to sustainability?
- Is the scope of the project clearly described?
- Are potential or realized project characteristics, opportunities, and limitations described?
- Was Phase I of the project successful?
- How does Phase II build on the successes in Phase I?
- What are the lessons learned from Phase I and how will they be applied in Phase II?
- How will Phase II advance and improve progress in Phase I?

III. Innovation and Technical Merit

- Is the design novel?
- Is the design interdisciplinary?
- Does the proposal address feasibility of the design, demonstrate scientific/technical soundness, and discuss trade-offs in the design approach?
- Is the proposed approach and are the suggested materials adequate and appropriate?
- What is the likelihood of success for the work proposed in Phase II?

IV. Measurable Results (Outputs/Outcomes), Evaluation Method, and Implementation Strategy

- How will the goals and objectives for Phase II be achieved?
- Are the potential realized benefits described in terms of people, prosperity and the planet?
- Is the proposed strategy for moving the design from research to development (Phase I) to implementation (Phase II) adequate and realistic?
- Have the necessary partnerships been developed or are they being pursued?
- Is the design or design approach applicable to the extent appropriate?

V. Integration of P3 Concepts as an Educational Tool

- Was Phase I of the P3 project successfully demonstrated as an educational tool?
- Will the proposed plans for Phase II maximize the educational benefits of the projects?

- Will there be students or community members, beyond those directly participating in the P3 project, who will gain an increased awareness of the impacts of the P3 project on people, prosperity and the planet?