

P3 Abstract Format (EXAMPLE FORMAT)

The abstract is a very important document in the review process. Therefore, it is critical that the abstract accurately and understandably describes the research or new design concept being proposed and conveys all the essential elements of the proposed project. Abstracts of applications that receive funding will be posted on the NCER web site. The abstract should include the information described below (a-l). Examples of abstracts for previous P3 grants may be found on the P3 web site (<http://www.epa.gov/P3>).

- a. Funding Opportunity Number(s) and Research Area(s):** Enter the full name of the solicitation (*P3 Awards: A National Student Design Competition for Sustainability Focusing on People, Prosperity and the Planet*) and one of the five funding opportunity numbers (FONs) and associated research areas under which you are submitting your proposal. The FONs and their associated research areas are listed at the beginning of the solicitation. If your project is relevant to more than one research area, you may list additional research areas, labeled as such.

Please note: Put the Funding Opportunity Number to which the proposal is being submitted in the upper right side of the “header” of the Abstract page. Each application should be submitted using a single FON.

- b. Project Title:** Use the exact title of your project as it appears in the application. The title should be brief yet represent the major thrust of the project. Because the title will be used by those not familiar with the project, use more commonly understood terminology. Do not use general phrases such as “research on.”
- c. Principal Investigator (P.I.):** This person will serve as the faculty advisor to the P3 student team. List the name of the PI and then the names and affiliations of any co-investigators/advisors who will significantly contribute to the project. Provide a web site URL or an e-mail contact address for each investigator.
- d. Student Team:** If student investigators are known at the time of the proposal, list student investigators and indicate whether each student is an undergraduate or graduate student. If student investigators are not yet known, provide a brief explanation of how and when the P3 student team will be formed.

- e. **Institution:** In the same order as the list of investigators, list the name, city and state of each participating university or other applicant institution. The lead institution applying for assistance must be clearly identified.
- f. **Student Represented Departments and Institutions:** List the departments and institutions that will be represented by the students participating on the team.
- g. **Project Period:** The Phase I project will begin on or about August 15 of the year following the year in which to solicitation opens and end on or about August 14 of the following year.
- h. **Proposed EPA Project Cost:** Show the total dollars requested from the EPA, including direct and indirect costs. (This can not exceed \$15,000.)
- i. **Total Project Amount:** Show the total dollar amount, including total dollars requested from EPA and an estimate of the total contribution (funding and/or in-kind) that will be provided by partners (such as education institutions, industry, NGOs), if applicable.
- j. **Project Summary:** Provide the following three subsections:
- Objective: Provide a definition of the technical challenge to sustainability, describe how the proposed design approach will address the challenge, and identify the innovative scientific or technical aspects of the proposal.
 - Description: Describe the project/design and how it relates to the three aspects of sustainability: people, prosperity and the planet. Also identify how the P3 Project will provide education about the concepts of sustainability at the university or community level.
 - Results: Identify the expected results of the project and provide a description of the strategy for measuring results, evaluation and demonstration.
- k. **Contribution to Pollution Prevention or Control:** Provide a brief statement describing how the proposed project/design will further the goals of pollution prevention and/or control.
- l. **Supplemental Keywords:** Without duplicating terms already used in the text of the abstract, list keywords to assist database searchers in finding your research. A list of suggested keywords may be found in the P3 Abstract format provided at: <http://epa.gov/ncer/rfa/forms>.

EPA's P3 Award Program

Research Areas and Suggested Keywords

Research Areas:

- Energy (e.g., reduction in air and water emissions through innovative strategies for energy production and energy distribution; energy conservation; inherently benign energy through green chemistry, green engineering, development of alternative energy sources)
- Built Environment (e.g., green building designs, transportation and mobility strategies, or smart growth approaches that result in environmental benefits such as air emission reductions or water quality improvements)
- Materials and Chemicals (e.g., materials conservation; renewable feedstocks; materials and chemicals that are inherently benign and energy-, water- and material efficient through their full life-cycles; recovery and reuse of materials through product, process, or system design; biomimicry that contributes to pollution prevention)
- Water (e.g., research relating to causes, effects, extent, prevention, reduction and elimination of water pollution; research on the structure and function of freshwater ecosystems for the maintenance of the chemical, physical and biological integrity of the systems; or research to ensure provision of a dependable safe supply of drinking water, including methods to treat raw water for drinking, improvements in water purification and distribution, and protection of underground water sources of public water systems)
- Agriculture (e.g., reduction or elimination of pesticides, minimizing fertilizer and nutrient runoff, productive use of agricultural wastes. Projects focused solely on food supply are not allowable.)

P3 Keywords:

Miscellaneous Sustainability keywords:

Life cycle analysis, cost benefit assessment, environmental justice, bioremediation, treatment technologies, emission control technologies, land use, sustainable urban planning, sustainable infrastructure design, environmentally benign substitute, alternative synthetic pathways, environmentally benign endpoints, anaerobic remediation, nanotechnology, automated waste recycling, biocomposites, biodegradable, bioengineering, biofiltration technology, resource recovery, green manufacturing, closed loop recycling, reuse, sustainable urban planning, environmental planning, environmental policy, decision making, willingness to pay, conservation, biodiversity, design for the environment, conjoint analysis, contingent valuation, electronic waste recycling, environmental accounting, renewable feedstocks, global considerations, hazardous waste

remediation, holistic design, holistic environmental audit, industrial ecology, sustainability monitoring, model for sustainability, sustainable urban redevelopment, environmental education, public policy, interactive development tools, decision-making, computer models, computational simulations, computer generated alternatives,

Energy: energy conservation, alternative energy source, renewable energy, solar energy, renewable fuel, biodiesel, energy recovery, photovoltaic technology, ocean wave energy, wind energy, biohydrogen, energy storage, fuel cells, fuel efficiency, monitoring resource consumption, waste to energy, wind energy, solar thermal heating

Built Environment: green building, solar greenhouse, bioshelter, green roofs, green landscaping, alternative construction material, plastic wood, recycled materials, architectural design, green roof, smart buildings, green landscaping

Materials & Chemicals: bio-based feed stocks, green chemistry, green energy, environmentally benign substitute, biotechnology, recycling surfactants, biopolymers, waste to value, sustainable construction materials, toxic use reduction

Water: water conservation, sustainable water management, urban water planning, drinking water, water treatment, water purification technologies, water filtration, solar water treatment, ceramic membrane technology, drinking water treatment technologies, solar water treatment, groundwater remediation, disinfection, pathogen detection and removal, photocatalyst water disinfection, stormwater management

Agriculture: alternative pesticides, agricultural wastewater treatment, bio-gas fuel cells, bioremediation of agricultural chemicals, bio-methane transportation, biogas, agricultural byproducts, animal feeding operations, animal waste gasification, insect resistant plants, pheromone insect traps