

# P3 Abstract Format (EXAMPLE FORMAT)

**The abstract is a very important document in the review process.** Therefore, it is critical that the abstract accurately describes the research being proposed and conveys all the essential elements of the research. Also, the abstracts of applications that receive funding will be posted on the NCER web site. The abstract should include the information described below (a-j). Examples of abstracts for previous P3 grants may be found on the P3 web site.

**a. Research Category and Funding Opportunity Number:** 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 six funding opportunity numbers that appear at the beginning of this announcement. The funding opportunity number selected should be the one that reflects the challenge area that best represents the proposed project.

**b. Title:** Use the exact title of your project as it appears in the application. The title must be brief yet represent the major thrust of the project. Because the title will be used by those not familiar with the project, strike a balance between highly technical words and phrases and more commonly understood terminology. Do not use general phrases such as "research on."

**c. Faculty Advisor:** List the faculty advisor, then the names and affiliations of each co-advisor who will significantly contribute to the project. Provide a web site URL or an e-mail contact address for additional information. The faculty advisor will serve as the Principal Investigator for the purposes of the award.

**d. Institution:** In the same order as the list of advisors, list the name, city and state of each participating university or other applicant institution. The lead institution applying for assistance must be clearly identified.

**e. Student Represented Departments and Institutions:** List the departments and institutions that will be represented by the students participating on the team.

**f. Project Period:** The Phase I project will begin on or about August 4, 2008 and end on or about April 1, 2009.

**g. Project Amount:** Show the total dollars requested from the EPA for the entire project period such that the budget total does not exceed \$10,000, including direct and indirect costs.

**h. Total Project Amount:** Show the total dollar amount, including total dollar request from EPA and an estimate of the total contribution (funding and/or in-kind) that will be provided by partners (such as educational institutions, industry, NGOs), if applicable.

**i. Project Summary:** Cover the following: (1) Definition of a technical challenge to sustainability; (2) Development of an innovative design approach with technical merit to address the challenge; (3) Discussion of how the challenge and proposed design relate to sustainability including people, prosperity, and the planet; (4) Description of strategy for measuring results, evaluation and demonstration; and (5) Description of how P3 concepts will be used as an educational tool at the university, such as by incorporation into the community and/or the institution's curriculum.

**j. Supplemental Keywords:** Without duplicating terms already used in the text of the abstract, list keywords to assist database searchers in finding your research. A complete

set of keywords is very important. A list of suggested keywords may be found at:  
<http://www.epa.gov/ncer/rfa/forms>.

**k. The Funding Opportunity Number (see IV.B.9.b.)** must be placed in the upper right side of the "header" of the Abstract page.

Suggested Keywords:

Sustainability Focus Area: (Please include a keyword to indicate the P3 focus area)

- **agriculture** (e.g., irrigation practices, reduction or elimination of pesticides)
- **materials and chemicals** (e.g., materials conservation; renewable, bio-based feedstocks; inherently benign materials and chemicals through green engineering and green chemistry; biotechnology; recovery and reuse of materials through product, process, or system design)
- **energy** (e.g., reduction in air emissions through innovative strategies for energy production and energy distribution; energy conservation; inherently benign energy through green chemistry, green engineering; biotechnology)
- **information technology** (e.g., delivery of and access to environmental performance, technical, educational, or public health information related environmental decision-making)
- **water** (e.g., water quality, quantity, conservation, availability, and access)
- **built environment** (e.g., environmental benefits through innovative green buildings, transportation and mobility strategies, and smart growth as it results in reduced vehicle miles traveled or reduces storm water runoff)

P3 Keywords Within Focus Areas: (These are some examples of keywords by focus area – please see also the miscellaneous terms below)

**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

**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

**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

**Information Technology:** environmental education, public policy, interactive development tools, decision-making, computer models, computational simulations, computer generated alternatives,

**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

**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

**Miscellaneous Sustainability keywords:** (These additional keywords may be applicable to one or more of the above focus areas)

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,