

Awards Opportunities

The Pollution Prevention Act of 1990 established a national policy to prevent or reduce pollution at its source whenever feasible. The Pollution Prevention Act also provided an opportunity to expand beyond traditional EPA programs and devise creative strategies to protect human health and the environment. Green chemistry, or the design of chemical products and processes that reduce or eliminate the use and generation of hazardous substances, is a highly effective approach to pollution prevention. Green Chemistry applies innovative scientific solutions to real-world environmental situations, all through voluntary partnership programs. In order to successfully effect the technical and behavioral changes necessary to accomplish wide-spread pollution prevention through green chemistry, the benefits of the approach must be clearly demonstrated and communicated.

OBJECTIVE:

The Presidential Green Chemistry Challenge seeks to recognize outstanding accomplishments in green chemistry through an annual awards program in order to demonstrate the scientific, environmental, and economic benefits that green chemistry technologies offer.

BACKGROUND:

The Presidential Green Chemistry Challenge was implemented as a voluntary EPA Design for the Environment (DfE) partnership with the chemical community. DfE partnerships encourage changes that both promote economic development and benefit industry by identifying cost-effective ways to prevent pollution.

DESCRIPTION:

The Presidential Green Chemistry Challenge Awards Program is an opportunity for individuals, groups, and organizations to compete for annual awards in recognition of innovations in cleaner, cheaper, smarter chemistry. The Challenge Awards Program provides national recognition for outstanding chemical technologies that incorporate the principles of green chemistry into chemical design, manufacture, and use, and that have been or can be utilized by industry to achieve its pollution prevention goals.

Nominations received for the awards are judged by an independent panel of technical experts convened by the American Chemical Society. Typically, five awards are given annually to industry and government sponsors, an academic investigator, and a small business. For this program. Individual projects selected for support may be funded by EPA, NSF, or jointly by both agencies. This is at the option of the agencies, not the grantee.



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FOCUS AREAS

The Presidential Green Chemistry Challenge Awards recognize and promote the following green chemistry technologies:

1. The use of alternative synthetic pathways for green chemistry, such as:
 - Catalysis/biocatalysis,
 - Natural processes, such as photochemistry and biomimetic synthesis, or
 - Alternative feedstocks that are more innocuous and renewable (e.g., biomass).
2. The use of alternative reaction conditions for green chemistry, such as:
 - Use of solvents that have a reduced impact on human health and the environment, or
 - Increased selectivity and reduced wastes and emissions.
3. The design of safer chemicals that are, for example:
 - Less toxic than current alternatives, or
 - Inherently safer with regard to accident potential.

SELECTION CRITERIA

The selection criteria used to judge nominations received for the Presidential Green Chemistry Challenge Awards were designed to ensure that recognition of outstanding accomplishments in green chemistry demonstrates the program objectives.

The awards selection criteria are as follows:

1. A nominated technology must prevent pollution at the source and have a significant chemistry component.

2. A nominated chemistry technology should offer human health and/or environmental benefits. The technology may, for example:
 - Reduce toxicity (acute or chronic), illness or injury, flammability, explosion potential, emissions or other releases, transport of hazardous substances, or use of hazardous substances in reaction processes,
 - Improve usage of natural resources, such as renewable feedstocks, or
 - Enhance biodiversity.
3. A nominated chemistry technology must be generally applicable to a large and broad-based segment of chemical manufacturers, users, or society at large. The nominated technology must offer at least the following:
 - A realistic approach to green chemistry,
 - A remedy to a real environmental management problem, or
 - Features that can be transferred readily to other facilities, locations, and industry sectors.
4. A nominated chemistry technology must be innovative and of scientific merit. The technology should be, for example, original (i.e., never employed before) and scientifically valid.

Other sources of information regarding EPA's Presidential Green Chemistry Challenge Program include EPA's Pollution Prevention Information Clearinghouse at 202 566-0799 (e-mail ppic@epa.gov), Richard Engler of EPA at 202 564-8740 or engler.richard@epa.gov, and the Green Chemistry Web site at <http://www.epa.gov/greenchemistry>.

