



ENVIRONMENTAL AND ENERGY STUDY INSTITUTE

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PRESS RELEASE

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CLOSED-LOOP BIODIESEL PRODUCTION AMONG WINNERS AT NATIONAL SUSTAINABLE DESIGN EXPO

WASHINGTON, DC – An interdisciplinary student team from Appalachian State University (ASU) in North Carolina is among six university teams to have won the U.S. Environmental Protection Agency's (EPA) P3 Awards for its project to convert local waste vegetable oil into biodiesel through a "closed-loop" environmentally friendly process. The P3 (People, Prosperity, and the Planet) Awards are given to champions of a national student design competition who employ sustainable solutions to address challenges that advance economic growth and reduce environmental impacts. Each of the six winning teams is now eligible for a grant of up to \$75,000 to bring their project to the marketplace.

The ASU team, headed by faculty member Dr. Jeff Ramsdell, will use its grant money to develop a self-sustaining 80-gallon biodiesel processor that incorporates solar thermal technologies and vegetable oil-based heating systems, enabling it to run with no fossil fuel use or utility connection. In conjunction with the biodiesel processor, the team will develop a natural water filtration system to enable safe reuse of biodiesel production wastewater and a still to recover excess methanol and purify glycerol for use in making soap. ASU students will explore the feasibility of using the biofuels produced to provide heating for student and low-income families and fuel equipment for local farmers.

The other winners of EPA's P3 Award are:

- **Lafayette College** for their design of a sustainable water supply and sanitation system for the rural village of La Fortuna, Honduras;
- **Portland State University** for creating an interactive website for 4th to 8th graders in Portland Public Schools that effectively teaches the principles of whole systems design;
- **Stanford University** for the design, construction, and operation of a "Green Dorm" with a metering network that will make apparent the connections between room use patterns and resource cycles to inform the design of future sustainable buildings;
- **University of Massachusetts-Lowell** for the synthesis of anti-cancer drugs from bio-based materials in green tea using environmentally benign methods; and
- **University of Michigan-Ann Arbor** for designing and testing new bio-composite materials derived from agricultural fibers and recyclable polymers to develop alternative and innovative building design concepts that optimize the unique properties of these materials.

Awards were presented at last night's P3 Award ceremony. This event concluded the two-day National Sustainable Design Expo held on the National Mall May 9 and 10 where 41 student teams exhibited their projects along with numerous government, non-profit and private industry representatives showcasing commercially available sustainable products and actions they are taking to advance sustainability. The Environmental and Energy Study Institute (EESI) is proud to have co-sponsored the National Sustainable Design Expo with the U.S. EPA, the National Council for Science and the Environment (NCSE) and The American Chemical Society's Green Chemistry Institute (GCI).

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The Environmental and Energy Study Institute (EESI) is a non-profit organization dedicated to policymaker education, policy development and network building to move the country toward a sustainable, clean energy future.