

NEW ENERGY TECHNOLOGIES GIVEN COMMERCIAL BOOST

From U.S. Dept. of Energy

■(WASHINGTON) Eight projects utilizing renewable energy technologies have been selected for negotiation by the Department of Energy to receive up to \$14 million in grants or cooperative agreements. These projects, which include support for a "green pricing" utility project, commercialization of a new type of thin-film solar cell and ethanol production from potato wastes, will leverage an additional \$37 million from companies in California, Massachusetts, Colorado, Pennsylvania, New York, Florida, Michigan, and Wisconsin.

In announcing the selections, DOE's Assistant Secretary for Energy Efficiency and Renewable Energy Christine A. Ervin said, "The winning projects have high potential for commercial success and environmental benefit. They also demonstrate that financial barriers to commercializing renewable energy technologies can be overcome with appropriate partnerships and leadership."

DOE's Commercialization Ventures Program was started in 1989 to help viable, emerging renewable energy technologies enter the marketplace by reducing financial barriers to commercialization and by leveraging private sector funding. The eight winning projects were selected out of 76 applications submitted by state energy offices.

Final awards for the following eight projects will be negotiated among the Department of Energy, private sector participants, and state energy offices:

- **Low-Cost String Ribbon Photovoltaic Manufacturing:** Evergreen Solar Inc., of Waltham, MA, will incorporate new technology into an expanded photovoltaic (PV) or solar cell manufacturing plant in order to lower production costs and achieve the lowest life cycle PV cost in the industry — manufacturing cost of under \$1/watt. Evergreen Solar currently is commercializing String Ribbon, a method of producing high-quality crystalline silicon wafers without sawing crystals. (requested DOE funding: \$1.5 million; private sector: \$5.6 million)

- **Colorado Green Pricing Program:** The Public Service Co. of Colorado will begin phase two of a "green pricing program" to allow residential and commercial utility customers to voluntarily pay a premium electricity rate to support development of a 10 MW wind farm. The DOE grant will reduce the price premium required for participation and explore the potential for attracting additional investors with this type of marketing strategy. (requested DOE funding: \$3.1 million; private sector: \$8.040 million)

- **Commercialization of CIS Thin Film Photovoltaics:** Siemens Solar Industries of Camarillo, CA, will commercialize a cop-

per indium diselenide (CIS) processing system to create the world's first PV product based on this material. The technology is a thin-film technique that promises better than average efficiency and low cost manufacturing. (requested DOE funding: \$1.7 million; private sector: \$1.7 million)

- **Conversion of Organic Wastes into Biogas, Fertilizers, and Soil Amendments:** Biorecycling Technologies Inc. (BTI) of Fontana, CA, will demonstrate BTI's zero discharge process to convert organic waste into energy, fertilizers and potting soil components. BTI will build its first commercial size facility in Chino, Calif., which will generate 4 MW of electricity and approximately 500 million BTUs of thermal energy to be used in plant processing. (requested DOE funding: \$1.5 million; private sector funding: \$16.5 million — \$500,000 from the state of California)

- **Concentrated Acid Hydrolysis of Biomass to Ethanol:** A group led by Arkenol Holdings, L.L.C. of Laguna Hills, CA, joined by the American Refining Group of Indianola, PA, and the Renewable Energy Development Corp. of Conshohocken, PA, will develop, construct and operate the Pittsburgh BioRefinery to convert biomass feedstocks such as waste paper, wood wastes and yard wastes into fuel-grade ethanol and other valuable ethanol by-products. (requested DOE funding: \$2.3 million; private sector: \$2.3 million)

- **Solar Wall Solar Air Heating System:** Conserval of Buffalo, NY, will construct a plant in Buffalo to produce a patented air heating system that consists of a perforated metal plate mounted several inches from the south wall or roof of a building. Outside air flows through the perforations and is heated as it flows up behind the plate before entering the building. (requested DOE funding: \$1.4 million; private sector: \$1.9 million — \$184,000 from the state of New York)

- **Photovoltaic Roof Top Systems:** Private sector teams from Michigan and Florida will manufacture, market and sell building integrated PV energy systems for low cost export housing and mainstream domestic residential housing markets. The Michigan team will establish a 1 MW PV roofing module assembly facility using triple cell, triple-junction amorphous silicon PV technology manufactured by ECD/United Solar of Troy, MI. The Florida team will establish a 1 MW capacity systems integration facility in

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\$2.6 MILLION AWARDED TO NORTHWESTERN UNIVERSITY FOR TRANSPORTATION RESEARCH

From U.S. Dept. of Transportation

■(CHICAGO) U.S. Secretary of Transportation Federico Pena last Friday announced a \$2.6 million Research and Special Programs Administration (RSPA) grant to Northwestern University for transportation research.

RSPA Administrator Dr. D.K. Sharma was joined by Congressman William O. Lipinski as he awarded the \$2.6 million grant in a check-presentation ceremony here. The grant will be used to operate the Infrastructure Technology Institute, a Transportation University Research Institute established by the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991.

"President Clinton and Transportation Secretary Federico Pena are dedicated to supporting research that develops new and dynamic technologies that meet the transportation needs of the 21st century," Sharma said. "University Research Institutes play a key role in furthering this effort by providing valuable analyses of a variety of transportation issues, and encouraging talented students to pursue careers in transportation-related fields."

In the coming year, the Infrastructure Technology Institute will conduct research and educational projects on several issues including nondestructive bridge testing, surface-tolerant paint coatings, new weldable high-strength steel and automated pavement repair vehicles.

Northwestern University, located in Evanston, is one of six schools comprising the department's University Transportation Centers, which advance U.S. technology and expertise in transportation through education, research and technology transfer programs at the university level. The research grants received by the universities must be matched on a dollar-for-dollar basis.