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Energy Commission Awards \$725,000 for Energy Research

SACRAMENTO - The California Energy Commission today approved \$724,998 for energy research projects involving making high-tech windows more efficient and creating an analysis for energy storage technology. The two research projects are funded by the Energy Commission's Public Interest Energy Research (PIER) program.

Soladigm, Inc. of Milpitas will receive \$400,000 to develop an improved manufacturing process for low-cost dynamic windows. Dynamic windows, which can switch from clear to tinted on demand, offer significant potential energy savings and peak-load demand reduction by blocking direct sunlight and radiant heat in the summer, transmitting radiant heat in the winter, and transmitting indirect sunlight year-round.

Dynamic windows can reduce energy demand since more than 20 percent of energy consumed in California is used for heating, cooling, and lighting residential and commercial buildings. California ratepayers could save as much as 14,000 gigawatt hours of energy per year and reduce the traditional summer peak load by more than nine percent if high-efficiency dynamic windows are widely adopted.

Soladigm has developed a new approach to manufacturing dynamic windows at low cost using a new manufacturing process. In the past, some layers in a dynamic window could be applied in a vacuum, while others had to be applied outside a vacuum. This required the glass to be shuttled in and out of the production line. Soladigm's new approach will apply the layers in-line, one after another, using only one vacuum.

Funds from the Energy Commission will be used to develop and scale up window manufacturing and perform durability tests. The funds will leverage an American Recovery and Reinvestment Act (ARRA) award that Soladigm received from the U.S. Department of Energy. The total budget for the project is \$5,779,237, with \$3,467,541 in ARRA funds and \$1,911,696 in matching funds from Soladigm. The Commission also approved \$324,998 to the California Institute for Energy and Environment (CIEE) to conduct a strategic analysis of energy storage technology and develop a 2020 energy storage vision for the state.

CIEE, a branch of the University of California Energy Institute, plans to assemble a research team of energy storage technology and policy experts from several UC campuses including Berkeley, Los Angeles, and San Diego.

The analysis will look at the current status of energy storage technologies and identify research gaps, challenges, and opportunities needed to develop and deploy energy storage technologies. The project will detail the elements, technologies, end-use applications, and business cases for energy storage technologies in California from 2010 to 2020. The project calls for working with utilities, the energy storage industry, and other stakeholders.

The results from the project will be used to help the California Public Utilities Commission, which will develop specific energy storage policies for California utilities as required by Assembly Bill 2514.

The Public Interest Energy Research (PIER) program supports public interest research and development that helps improve the quality of life in California by bringing environmentally safe, reliable, and affordable energy services and products to the marketplace. For more information, visit www.energy.ca.gov/research/.

Created by the California Legislature in 1974, the California Energy Commission is the state's primary energy policy and planning agency. The Energy Commission has five major responsibilities: forecasting future energy needs and keeping historical energy data; licensing thermal power plants 50 megawatts or larger; promoting energy efficiency through appliance and building standards; developing energy technologies and supporting renewable energy; and planning for and directing state response to energy emergency.

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