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Secretary Chu Announces Over \$110 Million in SunShot Projects to Advance Solar Photovoltaic Manufacturing in the U.S.

Solar Manufacturing Partnerships will boost American competitiveness in the global solar energy industry and lower the cost of clean, renewable energy

WASHINGTON, DC - As part of the SunShot Initiative, U.S. Department of Energy Secretary Steven Chu today announced the selection of up to \$112.5 million over five years for funding to support the development of advanced solar photovoltaic (PV)-related manufacturing processes throughout the United States. The Department's SunShot Advanced Manufacturing Partnerships will help the solar power industry overcome technical barriers and reduce costs for PV installations, help the U.S. regain the lead in the global market for solar technologies, and provide support for clean energy jobs for years to come.

This program is modeled in part on SEMATECH (Semiconductor Manufacturing TECHNOlogy). Faced with falling U.S. market share for the domestic semiconductor industry from 57% in 1982 to 38% in 1988, SEMATECH began working with domestic equipment suppliers to improve their capabilities. As a result of SEMATECH's work to solve common manufacturing problems by leveraging resources and sharing risks, within ten years the domestic semiconductor industry had grown by 16%. Through this award, SEMATECH will now apply similar ingenuity to helping the U.S. recapture the lead in solar manufacturing.

"Expanding the U.S. solar energy industry is an important part of the Administration's goals to diversify our electricity supply and rebuild America's manufacturing base to create jobs now and in the future," said Secretary Chu. "The SunShot Initiative will not only keep the United States at the forefront in solar energy research and development, but will help us win the worldwide race to build a solar manufacturing industry that produces solar systems that are cost competitive with fossil fuels ." Today's investments are part of DOE's SunShot Initiative, which aims to reduce the total costs of photovoltaic solar energy systems by about 75 percent so that they are cost competitive at large scale with other forms of energy without subsidies by the end of the decade. Achieving this goal - equivalent to approximately \$1 a watt or roughly 6 cents per kilowatt-hour for utility systems - would allow solar energy systems to be broadly deployed across the country.

By engaging multiple companies across the PV supply chain, the SunShot Advanced Manufacturing Partnerships program intends to have broad impact on the U.S. solar industry. Selected projects will create organizations designed to bring PV companies together in a coordinated environment to address common technology needs. The facilities established through these projects will provide services, tools, and facilities to PV companies and suppliers to assist them in developing and demonstrating new technologies and in making the transition to commercial production. The program will also link universities and national labs with PV cell, materials, and equipment suppliers to help speed the rate of innovation through coordinated and focused PV manufacturing development. The selected industry-focused organizations will strongly leverage industry, state, and local funds, and are expected to achieve financial self-sufficiency after five years.

Funding was made available for applicants in university and industry. Both topics consider collaborative research models to accelerate manufacturing-related technologies and provide maximum leverage to federal funding. The selected projects are below:

Bay Area PV Consortium (Stanford, CA) - \$25 million for University-Focused Development

Bay Area PV Consortium (BAPVC) will fund industry-relevant research and development to impact high volume PV manufacturing using a competitive selection process open to all universities. This project, managed by Stanford University and the University of California, Berkeley, will develop and test the innovative new materials, device structures, and fabrication processes necessary to achieve cost effective PV modules in high volume production. The research will advance technologies that bring down manufacturing costs and improve device performance characteristics to help achieve SunShot's price targets. An industry board composed of representatives from PV companies will determine the specific topics for research and development to assure close alignment with industry and manufacturing needs.

SVTC Technologies (San Jose, CA) - \$25 million for Industry-Focused Development

SVTC will create a fee-for-service PV Manufacturing Development Facility (MDF) that will enable start-ups, materials suppliers, and other PV innovators to eliminate a major portion of their up-front capital and operating costs during product development and pilot production. This will potentially accelerate development and time to market by 12 to 15 months. The MDF will focus on the commercialization of silicon PV manufacturing processes and technologies, and aim to reduce the costs and development time for participating PV industry leaders to deliver innovative, emerging technologies from the laboratory to commercial manufacturing lines. The MDF will support SunShot targets by strengthening and accelerating growth along the PV manufacturing industry's entire supply chain by reducing the cost, time, and risk associated with commercialization.

U.S. Photovoltaic Manufacturing Consortium (Albany, NY and Palm Bay, FL) - \$62.5 million for Industry-Focused Development

Managed by SEMATECH, the U.S. Photovoltaic Manufacturing Consortium (PVMC) will coordinate an industry-driven research and development initiative to accelerate the development, manufacturing, and commercialization of next-generation copper indium gallium selenide (CIGS) thin film PV manufacturing

technologies, driving down the cost and risk of bringing them to the marketplace. PVMC with its major partner, The College of Nanoscale Science and Engineering at the State University of New York at Albany, will establish manufacturing development facilities that PV companies and researchers can use for product prototyping, demonstration, and pilot-scale manufacturing to evaluate and validate CIGS thin film and PV manufacturing technologies. PVMC will also work with The University of Central Florida to develop cost-effective in-line measurement and inspection tools to enable increased PV manufacturing yield. In addition, PVMC will operate complementary programs to foster new PV technologies and firms, and to develop the U.S. PV workforce. The proposed project will use heavy industry leveraging funds for every \$1 of DOE funding.

The SunShot program builds on the legacy of President Kennedy's 1960s "moon shot" goal, which laid out a plan to regain the country's lead in the space race and land a man on the moon. The program will aggressively drive innovations in the ways that solar systems are conceived, designed, manufactured and installed.

For more information and to follow the SunShot Initiative's progress, visit the [SunShot Initiative webpage](#).

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