

ASU CREATES SOLAR POWER LABORATORY TO BOOST ARIZONA'S RENEWABLE ENERGY INDUSTRY, IMPROVE STATE'S ENVIRONMENT

Experts from one of the nation's leading solar energy research programs, Christiana Honsberg and Stuart Bowden, are hired by the university to join industry innovator George Maracas in the quest to make solar systems more efficient and economical

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Tempe, AZ – Arizona State University is strengthening its commitment to boost Arizona's economic development prospects in the renewable energy industry by establishing the Solar Power Laboratory to advance solar energy research, education and technology.

Prominent scientists and engineers are being hired to lead the endeavor to improve the efficiency of solar electric power systems while making them more economically feasible.

"The Solar Power Laboratory will further build up the university's already formidable solar energy research and develop collaborations with the energy industry to accelerate expansion of the state's economy," said ASU President Michael Crow.

The effort is a major part of ASU's response to the Arizona Board of Regents' Solar Energy Initiative, aimed at encouraging research and development to meet future needs for renewable energy sources, Crow said.

In addition to spurring economic opportunity, advances in solar power systems will help Arizona protect its environment by

enabling more widespread use of this clean-energy source, Crow said.

The laboratory will be a collaboration partnering the university's Global Institute of Sustainability and Ira A. Fulton School of Engineering.

Christiana Honsberg, Stuart Bowden and George Maracas have been hired for the venture. Honsberg will be chief scientist, Bowden will be industrial liaison, and Maracas will be chief operating officer.

Honsberg and Bowden are coming to ASU from the University of Delaware, where they worked in the most extensive university solar research program in the United States.

Maracas has made his mark with more than 25 years of accomplishments in engineering research, research management and technology commercialization.

"Our goal is for ASU to have the pre-eminent academic solar energy research, development and training program in the United States, and one of the top such programs in the world" said Jonathan Fink, director of the Global Institute of Sustainability. "The establishment of the Solar Power Laboratory and the hiring of Honsberg, Bowden and Maracas combined with our ongoing research efforts help us meet this objective."

The lab's goal in large part will be to support a significant facet of the economic development objectives of Arizona and the Southwest, Fink said, noting that expansion of the solar energy industry has been identified as an economic priority by Arizona Gov. Janet Napolitano, the state Department of Commerce, the Greater Phoenix Economic Council and Science Foundation Arizona.

"ASU and the state of Arizona have a number of exciting economic development and research opportunities associated with renewable energy," he said. "These three new

faculty members will play key roles in making sure that these efforts are successful.”

Honsberg is considered a pioneer in photovoltaics – the solar cells that convert sunlight into energy. She helped establish the Center for Photovoltaic Engineering at the University of Delaware, which developed the first undergraduate degree in photovoltaic engineering.

Delaware’s photovoltaics center also won the largest solar energy research grant in the country – \$50 million from the U.S. Department of Defense.

Bowden has been working at the University of Delaware’s Institute of Energy Conversion. He is credited with helping make major strides in improving the efficiency of silicon and crystalline silicon solar cells and the cell manufacturing process.

Honsberg and Bowden previously were at the University of New South Wales, Australia, working in one of the strongest academic solar energy programs in the world.

Maracas is returning to ASU after leaving 14 years ago to work with Motorola Inc., where he founded the company’s Molecular Technology Lab and Motorola Life Sciences, and held director positions in Motorola’s advanced technologies and nanotechnology research operations. He had 30 patents issued during his time with the company.

Maracas also has been president of two companies providing technical and management consulting services to industry and government in nanotechnology, medical diagnostic devices and biotechnology.

Honsberg will be a professor and Bowden an associate research professor in the Department of Electrical Engineering. Maracas will be a professor in electrical engineering and ASU’s School of Sustainability. He had previously been an electrical engineering faculty member at ASU for about 10 years before leaving for private industry in 1994.

Through their work in the new laboratory, “We hope to unify the various solar energy-

related research efforts throughout the university and to develop industry collaborations,” explained Stephen Goodnick, ASU’s associate vice president of Research and Economic Affairs.

Solar power groups such as the University’s Advanced Photovoltaics Center and Photovoltaic Testing Laboratory will be affiliated with the new lab under the Global Institute of Sustainability.

The lab “will bring together other ASU researchers, from materials engineering, physics, chemistry, electrical engineering and architecture” to collaborate on projects, Goodnick said.

“For four decades, ASU has been a leader in research related to virtually all aspects of solar energy,” Fink said, including creation of new materials and devices for generating electricity from sunlight, improved methods of photovoltaics testing, design of advanced power systems, and laying the groundwork for sound energy policies

“To build on these accomplishments and, more importantly, increase the chances for Arizona to attract more international solar companies, we decided ASU needed to bring in new faculty members who have outstanding reputations in the global solar industry,” Fink said.

Maracas brings extensive experience in working with private industry, and the accomplishments of Honsberg and Bowden “are well-known to the solar industry on both sides of the Pacific,” he said.

“In a technical community replete with creative engineers and scientists, Christiana Honsberg stands out as a talent of unique vision,” said Craig Cornelius, a former director of the U.S. Department of Energy solar energy program and leader of its Solar America Initiative.

For years, the energy department “has turned to Honsberg to lead its most ambitious investigations of high-efficiency photovoltaics,” Cornelius said. “She will be a great

addition to ASU's growing franchise in solar research."

Zhengrong Shi, who worked with Honsberg and Bowden at the University of New South Wales, is the founder and CEO of Suntech, the largest solar energy company in China and one of three largest in the world.

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Shi ranks Honsberg and Bowden "clearly among world leaders in their respective fields in photovoltaics. Their strong links to [the University of New South Wales] and Suntech will provide great opportunities for research and development collaboration with ASU."

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