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ASU biofuel growth idea to be tested in Tempe

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Arizona State University scientists believe they have figured out a way to promote growth of a critical fuel source from containers full of bacteria nurtured with sunshine and greenhouse gases.

ASU researchers will test the idea over the next two years in small reactors placed atop the school's engineering-research building in Tempe.

The project will be funded with a two-year, \$2.2 million Science Foundation Arizona grant that will be matched by an equal amount from petroleum giant BP and Arizona State University.

The advantage of developing such a method of growing renewable biofuel, researchers say, is that it can absorb harmful gases and provide a clean energy source.

If the two-year project proves successful, ASU scientists may establish a pilot plant next to an existing coal-fired power plant in Arizona.

"It's a risky thing and a challenging thing, but that's what the future is about," said William Harris, president and CEO of Science Foundation Arizona. "It is the kind of research we have to have in Arizona."

BP has made a push in developing sources of renewable energy, particularly with its \$500 million Energy Biosciences Institute at the University of California-Berkeley and the University of Illinois at Urbana-Champaign. BP and university scientists there will study everything from biofuel to cellulosic technology that converts waste into energy.

BP will help fund the ASU project because it demonstrates the company's efforts to develop low-carbon energy sources, a BP spokeswoman said.

ASU researchers say the biofuel project may give them an opportunity to work and share scientific know-how with BP Energy Biosciences Institute.

The heart of the project calls for growing a strain of bacteria in tubes as part of a photosynthetic process. The bacterium is expected to yield a fatty substance that can produce biodiesel.

Containers fed with carbon dioxide will be placed on top of a building to capture sunlight, according to Neal Woodbury, an ASU professor of chemistry and biochemistry who is coordinating the project.

About 10 scientists from ASU's Biodesign Institute, School of Life Sciences and Ira A. Fulton School of Engineering will spearhead the research.

ASU has held preliminary talks with Arizona Public Service Co. about establishing a pilot plant at one of the Phoenix-based company's coal-fired power plants. Biofuel production could thrive in such a setting because it needs carbon emissions to produce such fuel.

Science Foundation Arizona, a non-profit group funded by the state and private donors, provided money for the biofuel experiment through its strategic-research group awards.

Harris said he hopes the research project is a catalyst that encourages BP and other energy companies to invest in Arizona's renewable-energy research.

"I think ASU has a chance to really transform BP's understanding of what BP can do," Harris said.

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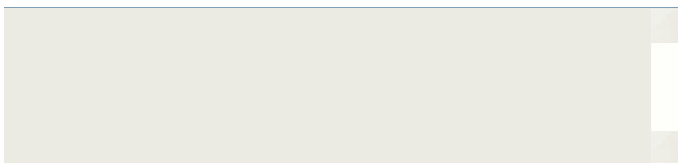
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