

## Echogen awarded \$1M DOE grant to develop novel solar energy technology

*Project will utilize Echogen's advanced power technology to produce electricity from stored solar thermal energy.*

**July 24, 2017, (Akron, OH)** - Echogen Power Systems, a clean energy technology company based in Akron, OH, has been awarded a \$1 million grant by the U.S. Department of Energy SunShot Initiative. Echogen will partner with Southern Research (Birmingham, AL) to design and test a novel solar energy storage and power system. The team will investigate an energy storage system that uses a chemical process to store solar thermal energy collected during daylight hours. Echogen's novel power technology will then convert the stored energy into electricity at all hours, even when sunlight is not available.

"Thermal energy storage has the potential to solve one of solar power's most significant problems, which is the mismatch of daytime supply with round-the-clock electricity demand," said Phil Brennan, CEO of Echogen.

Echogen's technology converts heat into emission-free electricity. The system utilizes high-pressure carbon dioxide, also called supercritical CO<sub>2</sub> or sCO<sub>2</sub>, as the primary fluid in the system instead of steam or refrigerants. The sCO<sub>2</sub> cycle is simpler, smaller and easier to operate than traditional power technologies. In addition to solar energy, Echogen's sCO<sub>2</sub> technology has applications in other markets including utility power generation, oil & gas, coal & nuclear power, industrial heat recovery, marine propulsion and many others.

"Carbon dioxide is used in both the power cycle and the energy storage system, which opens up new ways to harness solar energy," said Dr. Tim Held, CTO at Echogen and project leader. "Our development of the sCO<sub>2</sub> cycle now makes this type of solar power a real possibility. We're excited to lead the development of a new form of clean, renewable energy."

Echogen was selected as a part of the SunShot Initiative's [Technology to Market 3](#) funding program, which accelerates the research and development of next generation solar power technologies. To maintain its exponential growth, the solar industry needs a variety of products and services that can increase system values while reducing costs, facilitate grid integration, and increase consumer access to solar. This research enables entrepreneurs to prove the feasibility of their product and ready it for private sector follow-on support.

### About Echogen

Since founding in 2007, Echogen has become the industry leader in sCO<sub>2</sub> technology and has produced the world's first (and only) commercially available sCO<sub>2</sub> power system, the EPS100, which produces enough electricity to power 6,000 homes using energy from otherwise wasted heat. Echogen has previously been awarded various federal and state grants totaling nearly \$7 million.

### About the SunShot Initiative

The [U.S. Department of Energy SunShot Initiative](#) is a national effort to drive down the cost of solar electricity and support solar adoption. SunShot aims to make solar energy a low-cost electricity source for all Americans through research and development efforts in collaboration with public and private partners. Learn more at [energy.gov/sunshot](http://energy.gov/sunshot).

**Company contact:** Dr. Tim Held, CTO, [theld@echogen.com](mailto:theld@echogen.com), 234-542-4379. [www.echogen.com](http://www.echogen.com)