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Education:

State receives $20 million grant for solar research

Harry Reid calls grant 'another important step toward a more sustainable energy future'

By Karoun Demirjian

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Washington —
Nevada's top higher education officials announced Monday that the state has won a $20 million grant to sponsor a large-scale research project on solar energy and water.

The grant, disbursed through the National Science Foundation's Experimental Project to Stimulate Competitive Research, or EPSCoR, aims to fund research into more efficient infrastructure for solar energy production in desert climates. The recipients also are hoping the $20 million, spread out over five years, will help them develop a more sustainable local workforce of scientists and encourage minorities to study and graduate with science, technology, engineering and mathematics degrees.

"One of the most important aspects of this program is to have a project … to make us more competitive and able to contribute nationally to key issues, such as renewable energy," said Gayle Dana, EPSCoR project director for Nevada.

The Desert Research Institute and research centers at both campuses of the University of Nevada collaborated on Nevada's winning proposal, "The Solar Energy-Water-Environment Nexus in Nevada."

In the proposal, state scientists said they would use the award to create a new research facility — the Nevada Environment, Water and Solar Testing and Research Facility (NEW-STAR) — to examine and design "effective ways to manage and mitigate environmental impacts associated with large-scale solar installations."

"Despite plentiful sunlight and cloud-free days which are conducive for solar energy collections, arid regions experience frequent dust storms and receive little or no rain," the proposal read. "Dust accumulated on solar panels absorb sunlight and decrease the efficiency of solar cells; water scarcity increases the cost of meeting the cooling needs of solar thermal collectors."

The project designers believe their research has the potential to produce "technological solutions … applicable to other solar energy installations nationally and globally," as well as help develop a workforce closer to home. The grant also will pay for undergraduate and graduate research and training opportunities — education officials estimated Monday there would be up to 100 tech, student and faculty positions associated with the project — professional training in the sciences for K-12 teachers, and programs to help K-12 students develop skills and interest in STEM careers.

"We think this is a perfect grant for Nevada now as we rebuild coming out of this recession that we've been in," Nevada System of Higher Education Chancellor Dan Klaich said on a call with reporters Monday afternoon.

Nevada is one of 28 states that is eligible to apply for special EPSCoR funding through the National Science Foundation.

"The idea of it is there are a lot of states that have a pretty sophisticated research infrastructure in place, and there are states that don't have that," said Maria Zacharias, a spokeswoman for the NSF. "EPSCoR exists to try to level the playing field somewhat and start building that infrastructure in EPSCoR states."

But only a handful of states every year receive sizeable Research Infrasturcture Improvement grants.

"Only 10 percent of the grant applications receive funding ... so that tells you how good this application was," Nevada Sen. Harry Reid bragged on the call. "This collaborative project is another important step toward a more sustainable energy future and establishing Nevada as a leader."