

Australian hydrogen company outlines US expansion in New Mexico, touts research

October 26 2023, by Morgan Lee



New Mexico Democratic Gov. Michelle Lujan Grisham speaks at Arcosa Wind Towers Wednesday, Aug. 9, 2023, in Belen, N.M. Grisham traveled to Australia this week to attend a hydrogen summit and meet with related businesses that may have an interest in expanding to New Mexico. At least one hydrogen business is forging plans to expand to New Mexico. Credit: AP Photo/Ross D. Franklin

An Australia-based company plans to build a campus in New Mexico to expand its research into hydrogen fuel as a heat source for industry, touting a proprietary chemical process without greenhouse gas emissions.

Hydrogen-technology research and developer Star Scientific Limited, which has around 20 employees, signed a letter of intent with Gov. Michelle Lujan Grisham while she was in Sydney attending a summit Thursday on [hydrogen](#) and the [energy sector](#).

Andrew Horvath, global group chairman at Star Scientific, said the new facilities in Albuquerque would scale up research and development of its hydrogen technology for generating heat.

"Our system doesn't burn gas, it reacts the gas," said Horvath, describing the proprietary technology in general terms only. "It creates an instantaneous reaction whereby you end up with the heat from the excitation energy from those atoms."

Horvath said the company is developing a chemical catalyst system for use in combining hydrogen and oxygen to produce heat directly, with water as a byproduct. The system is different from hydrogen fuel cells that provide electricity, he said.

Star Scientific is currently sponsoring two hydrogen-energy pilot projects in Australia with a food-production company and a plastics-packaging business. They aim to replace heat systems derived from [natural gas](#), reducing emissions of climate-warming pollution in the process.



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The New Mexico governor's office said in a statement that the company is looking to acquire enough land to place up to 10 buildings for laboratory research, testing and eventual manufacturing, and possibly qualify for public incentives that underwrite infrastructure investments and job training.

Lujan Grisham, a Democrat, has enthusiastically embraced support for hydrogen-energy ventures to create local jobs. But there's been concern

and criticism from environmentalists who say hydrogen presents its own pollution and climate risks depending on production methods and precautions against leaks.

The Biden administration this month selected clean-energy projects from Pennsylvania to California for a \$7 billion program to kickstart development and production of [hydrogen fuel](#), a key component of the administration's agenda to slow climate change. Applications that were passed over include a collaborative pitch by New Mexico, Colorado, Utah and Wyoming.

Some consider hydrogen "clean" only if made through electrolysis—splitting water molecules using [renewable energy sources](#) such as wind and solar power, which also is carbon free, as well as nuclear power. Hydrogen also can be produced from methane using heat, steam and pressure, but that brings challenges of storing the carbon dioxide that is generated.

Horvath said Star Scientific chose New Mexico for its expansion based on factors including public investments in education, business incentives and relatively inexpensive labor and land costs.

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Citation: Australian hydrogen company outlines US expansion in New Mexico, touts research (2023, October 26) retrieved 8 May 2024 from <https://techxplore.com/news/2023-10-australian-hydrogen-company-outlines-expansion.html>

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