

NEWS

Biden says commercial-scale lithium extraction possible in Imperial Valley by 2026



Erin Rode Palm Springs Desert Sun

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Drilling for lithium and geothermal has begun at the Salton Sea in an area known for geothermal energy production near Niland, Cal., November 3, 2021. *Jay Calderon/The Desert Sun*

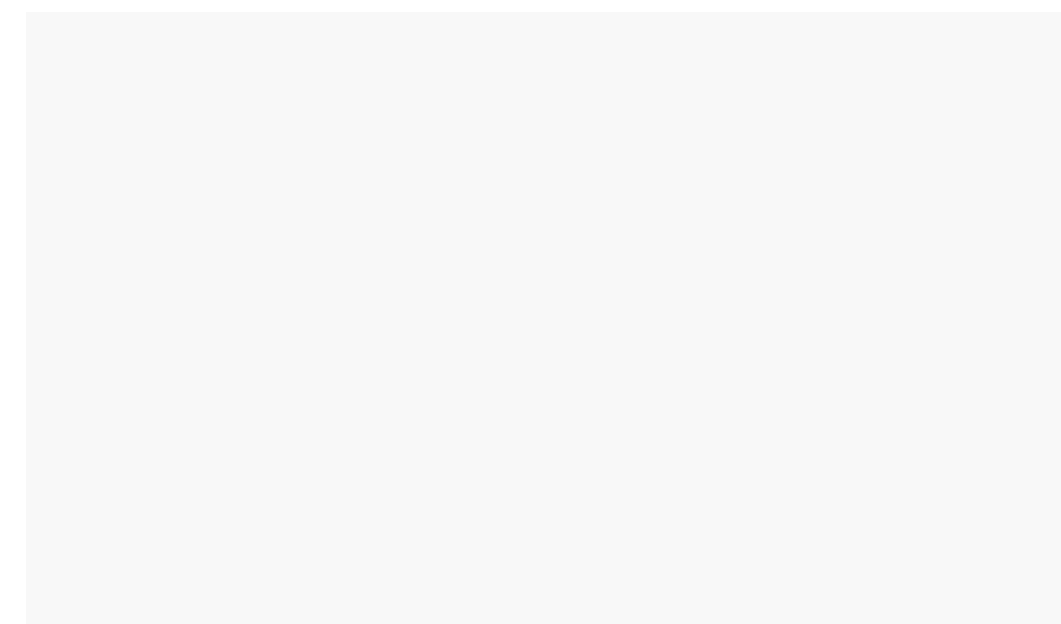
As the Imperial Valley begins its transformation into what some are calling Lithium Valley, one company says it could have lithium production at commercial

scale by 2026, President Joe Biden said Tuesday at an event with Gov. Gavin Newsom, industry executives, community representatives and labor leaders.

Biden met with the group to announce several investments in domestic production of critical minerals and materials, including lithium extraction in Imperial County.

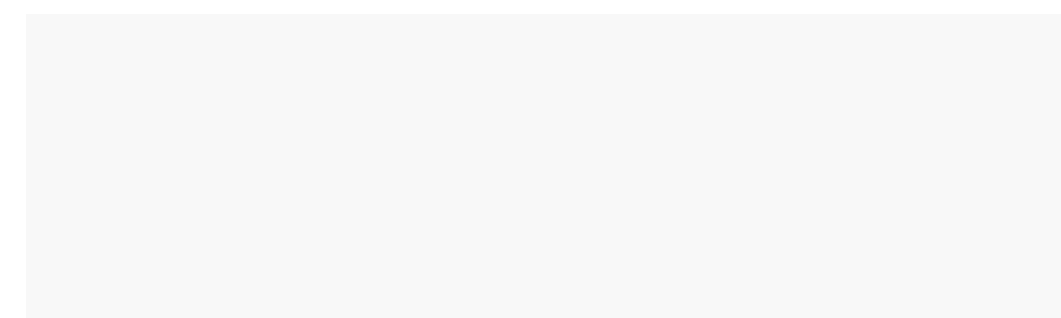
"[This announcement] is all about the belief we share that to build a truly strong economy, we need a future that is made in America," said Biden, noting that the U.S. currently imports close to 100% of these critical minerals and materials.

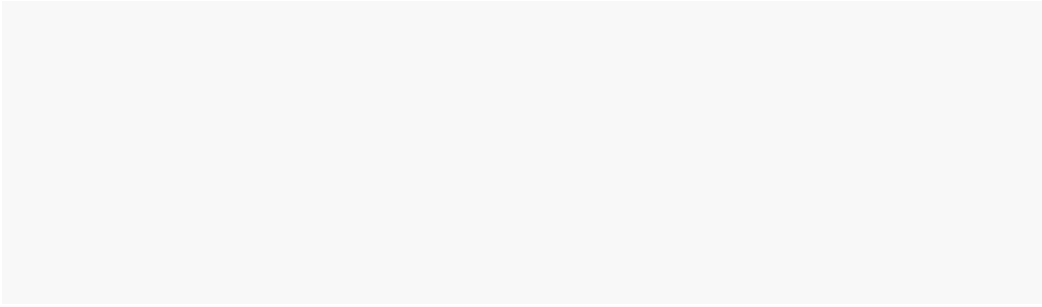
An estimated 15 million metric tons of lithium, in addition to other rare minerals, are available for extraction in Imperial County, home to one of the largest lithium deposits in the world. That's enough lithium to satisfy more than one-third of today's global lithium demand.



Global demand for the mineral used for rechargeable batteries, including for cell phones, battery storage, and electric vehicles, is expected to grow by as much as 4,000% over the next several decades as lithium plays an important role in transitioning to electric vehicles and the clean energy economy.

Biden said Tuesday that these new mining projects will allow the U.S. to reduce its dependence on importing materials from other countries, and that unlike historical mining operations, environmental protections and benefits for local communities will be prioritized.





"We're going to build [the clean energy economy] around working Americans, making sure that labor is at the table, and the tribes, and people from the community are at the table from day one, and that environmental protections are paramount. We are going to ensure that these resources actually benefit folks in the communities where they live, not just the shareholders," Biden said.

Biden said he's asked U.S. Energy Secretary Jennifer Granholm to visit the Imperial Valley "and hear directly from local residents about how this will impact them."

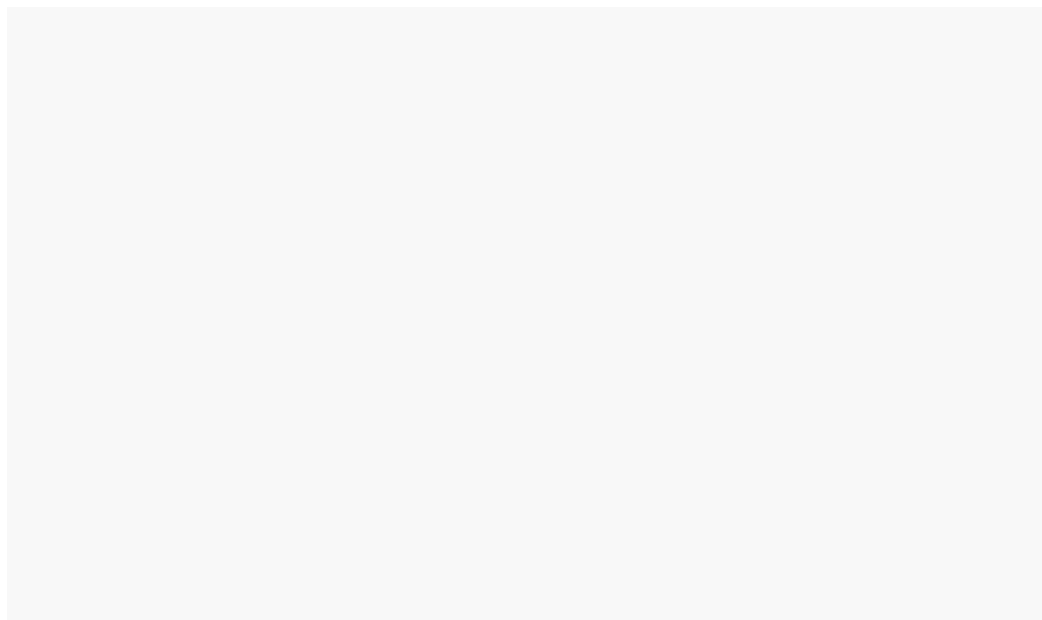
Berkshire Hathaway Energy Renewables announced it will break ground on a new demonstration facility in Imperial County this spring to test the commercial viability of their lithium extraction process from geothermal brine. If the demonstration facility is successful, the company would move toward commercial scale production of battery grade lithium hydroxide and lithium carbonate by 2026. Once at commercial scale, the facility could produce as much as 90,000 metric tons of lithium per year.

"We are working not just to secure domestic sources of lithium, but we're working to secure the most abundant source of lithium in the United States using the world's most environmentally friendly technology, and providing economic and unemployment benefits in one of the most disadvantaged counties in the country," said Alicia Knapp, president and CEO of Berkshire Hathaway Energy Renewables.

Knapp said the company has operated geothermal plants in Imperial Valley for more than 40 years, and currently operates 10 plants that bring superheated, lithium-rich brine to the surface, then use that steam to generate power before reinjecting the brine into the ground.

"Right now we are pumping 50,000 gallons a minute of lithium-rich brine to the surface, and because there is no proven commercial technology we are pumping it right back down into the ground," said Knapp.

The first phase of the demonstration project is supported by a \$6 million grant from the state, and the second phase is supported by a \$14.9 million grant from the Department of Energy. If both phases are successful, the company will begin constructing its commercial plant in 2024. Knapp said the company is working with local educational institutions to develop a curriculum to train workers, as well as on-site job training opportunities, to provide opportunities for those who want to obtain a two- or four-year degree or for those who want to enter the workforce after high school.



Imperial County plans for growth

Tuesday's announcement comes a week after the Imperial County Board of Supervisors approved a plan that lays out a specific list of requests from the state and federal government as the county prepares to potentially become a national hub for lithium development.

More: Cal Poly 'Lithium Valley'? Imperial County calls for university to support lithium development

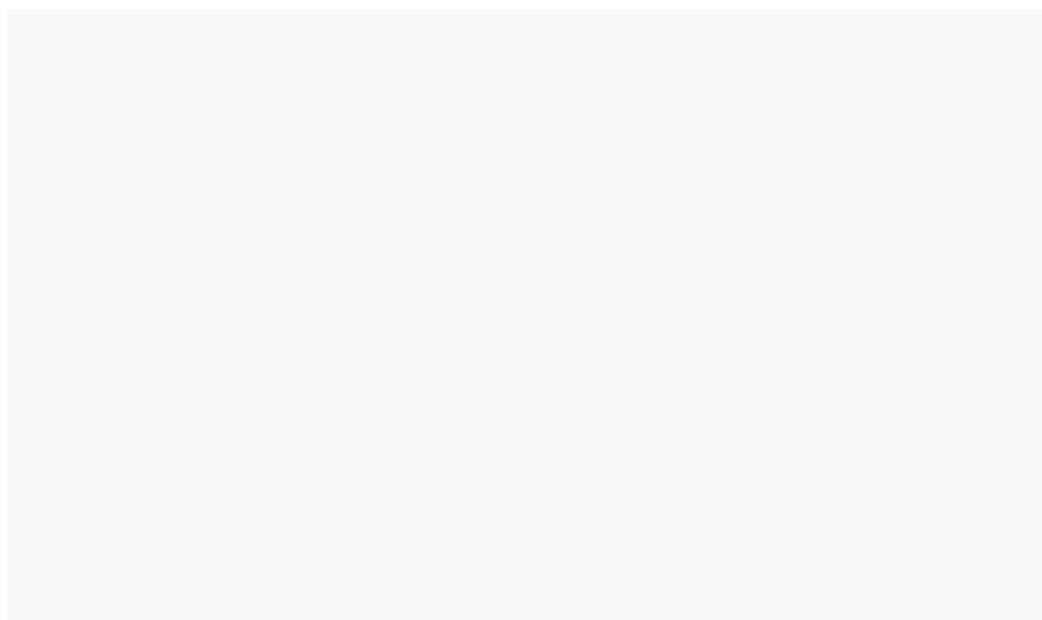
The county's requests for the state include a local California Polytechnic University to "provide the engineers and chemists needed to work in the geothermal and lithium development sector" and "provide opportunities for the vocational and technical development of the workforce."

The county is also requesting \$500,000 a year to support a new Lithium Valley Development Office to answer industry inquiries and provide feedback on projects, and \$5 million in direct funding from the state to support the county's development of a Lithium Valley Specific Plan and a Programmatic Environmental Impact Report, which will be used to guide geothermal and lithium development in an area encompassing 8,000 to 12,000 acres.

From the federal government, Imperial County is requesting several major infrastructure investments, including \$50 million for road and bridge infrastructure in the region, \$1 billion for railway upgrades, and \$500 million for upgrades to the electrical grid.

In addition to Berkshire Hathaway, two other companies have lithium projects in the works in Imperial County. Controlled Thermal Resources and EnergySource Minerals both have established operations in the county to extract lithium from geothermal brine.

General Motors plans to source lithium for electric vehicle batteries from Controlled Thermal Resources, which began drilling its first lithium and power production well in November. In a November announcement, Controlled Thermal Resources CEO Rod Colwell said the company expects to begin delivering power in late 2023 and lithium hydroxide in 2024.



Lithium development in the Imperial Valley is a priority for California's focus on clean energy, with Newsom calling the region "the Saudi Arabia of lithium" while announcing his 2022-23 budget proposal on Jan. 10.

Newsom used this phrase again on Tuesday, noting that the state is working on strategies that prioritize local hires and other economic benefits to ensure that the "extraordinary economic opportunity" in the "Saudi Arabia of lithium" is shared among residents.

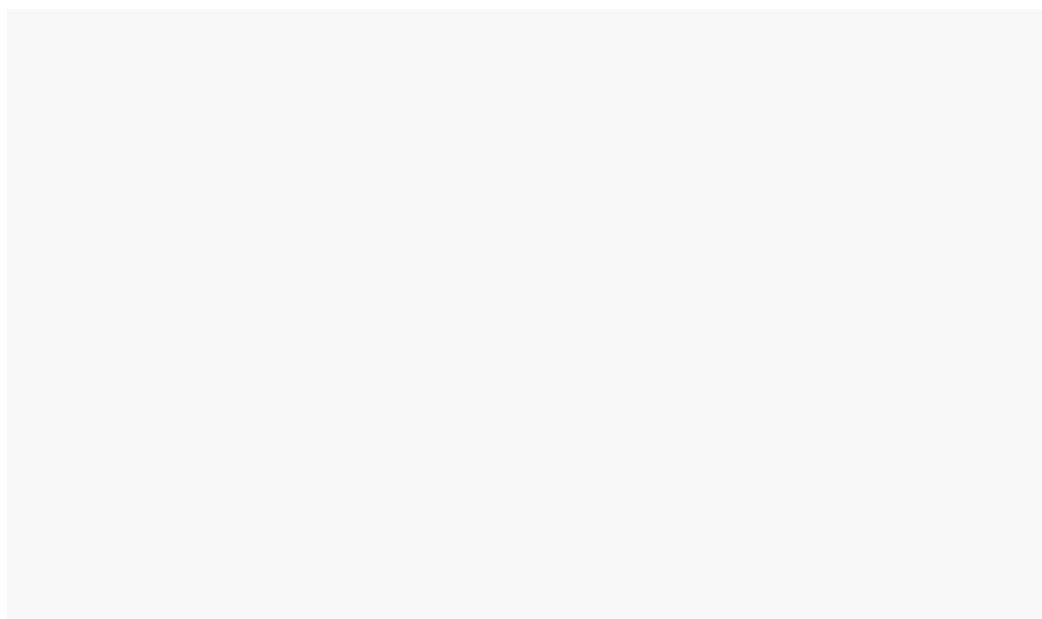
"We think this is big, we don't want to understate it, but we also don't want to overstate it... But if this is as big as it appears to be, this is a game-changer in terms of our efforts to transition to low carbon green growth and change the way we produce and consume energy," Newsom said.

The budget proposal includes several mentions of lithium development in the Imperial Valley, and includes a new tax credit of \$100 million per year for three

years for new green energy technologies like lithium extraction, as well as other economic development incentives for the clean energy sector.

The state has also established a new 14-member Lithium Valley Commission, which includes nonprofit and tribal leaders, lithium industry executives, and representatives from state and local government. The commission began meeting in 2021, and is tasked with reviewing and analyzing the issue of lithium extraction in California before submitting a report to the Legislature on its findings in October 2022.

At the commission's first public forum in November, some community members expressed concerns over potential environmental impacts and whether local residents will actually experience economic benefits from the projects.



The companies operating in Imperial Valley are working with the Lithium Valley Commission to "develop a royalty structure that would invest profits from their operations in infrastructure, health, and educational investments for the residents of the surrounding region," according to the release from the Biden administration.

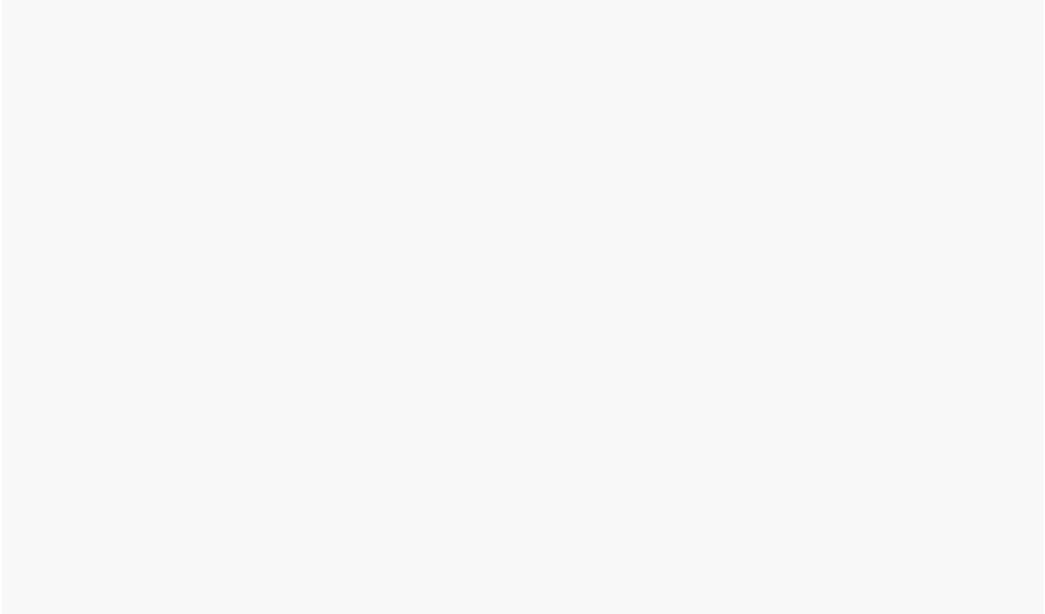
Silvia Paz, chair of the Lithium Valley Commission and executive director of community group Alianza Coachella Valley, emphasized the need for investment in the region during Tuesday's event.

"We're talking about an area that houses the largest body of water, the Salton Sea, that is facing environmental degradation. So when the community hears the excitement around lithium, there is a cautious optimism, because of the context of a community that has seen unfulfilled promises. Could this be a game-changer? Yes, if we get it right," Paz said.

Paz said "getting it right" would include "doubling down on investments" beyond just providing career and educational pathways, by making investments in the

region's infrastructure and ensuring the area doesn't experience further environmental degradation. Paz said she wants to see the community "transformed beyond only building the industry."

"When we talk about the potential of lithium we need to capture the many of the jobs possible... But if I look at my community, when there's a high wind our power lines fall and leave communities without power, we have a long ways to go and we are really counting on the incentives from the federal and state level to be able to do this right for our communities," she said.



Erin Rode covers the environment for the Desert Sun. Reach her at erin.rode@desertsun.com or on Twitter at @RodeErin.

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