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1. What Exxon's bet on lithium means for the oil industry

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What Exxon's bet on lithium means for the oil industry

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Body

By Shelby Webb Exxon Mobil outlined plans Monday to become "a leading producer of lithium," marking the first big commitment from a major U.S. oil company to begin large-scale extraction and production of one of the most important minerals in electric vehicle batteries. The move serves as a signal that Exxon - and potentially other U.S. oil companies that have voiced interest in lithium extraction - are looking to diversify their oil- and gas-focused portfolios as EVs grab a larger market share of domestic passenger transportation. "They do recognize that lithium is going to play a fundamental role in one sector of oil demand, which is vehicle demand," said Claudio Galimberti, a senior vice president with energy research firm Rystad Energy. "The electrification of passenger transport is going to occur, and they want to position themselves as a provider for that business."

On Monday, Exxon officials said they would begin drilling for ancient salt water, known in the industry as brine, in southwestern Arkansas' Smackover formation with the goal to begin extracting lithium from the water by 2027. The company said it aims to produce enough lithium to cover the manufacturing needs of more than 1 million EVs annually by 2030. Exxon has been teasing its entry into the lithium market for some time. It acquired the rights to 120,000 acres of land in the Smackover formation earlier this year, and CEO Darren Woods for months has said a lithium operation would fit well with what the company already does: extracting and refining minerals and molecules. "And so we've looked at that space, and clearly, with the opportunity in Smackover and the ability to drill - extract the lithium from the brine water - and reinject that, it's got a much, much lower environmental impact than the current production process for lithium," Woods said during Exxon's third guarter earnings call Oct. 27. "It fits very well with our capabilities. And the cost-of-supply curve, it's very competitive." Leaders with Chevron and Occidental Petroleum have also said their companies are looking into commercial lithium extraction and have launched test projects. Brent Elliott, an economic geologist and research scientist for the University of Texas' Bureau of *Economic Geology*, said looking into mineral extraction is not new for oil companies. He said large oil companies had departments dedicated to studying mineral extraction in the 1980s and 1990s, focused mostly on finding ways they could extract uranium for nuclear power plants or other minerals that could be used to produce alternative energy. Most of those efforts fell flat, and oil majors began cutting those departments until the past 15 or so years, he said. Elliott said rising demand for the mineral and new technologies have now made lithium extraction attractive as a new viable business segment for big oil companies. "Lithium is well established now," Elliott said. "In the end, extractive technologies and the price point of lithium have gotten to the point where it's economical now, and it makes sense to get into that space in the long run and to be a supplier here domestically." Mona Dajani, global head of renewables as well as energy and infrastructure at the Shearman & Sterling law firm, said global demand for lithium has already tripled from 2017 to 2022 and is poised to quadruple again by 2030. The Energy and Interior departments have also worked to sweeten the deal for companies looking to develop rare earth metals in the United States. DOE has offered tens of millions of dollars in funding for lithium production projects from environmentalists for approving a massive lithium mine in Nevada. Elliott said those programs come as the government recognizes that the country needs a more reliable, domestic source of rare earth minerals. That need became especially clear because of supply chain snags experienced during the Covid-19 pandemic as well as strained geopolitical tensions with China, which is a major lithium processor. EVs become eligible for half of the \$7,500-per-vehicle tax credit in last year's Inflation Reduction Act if a certain percentage of the critical mineral materials used to make their electric

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vehicles are produced domestically or in U.S.-partner countries, Dajani noted. Already, Exxon officials have spoken to automakers about supplying them with lithium, she said. Exxon's foray into lithium production also highlights a difference in strategy than its European competitors, especially as it relates to environmental, social and governance goals known as ESG. While Exxon has focused on its core oil and gas business, European majors have worked to jump-start renewable energy businesses over the past two years - business units that have struggled to turn profits . That makes Exxon's announcement that it has started its first phase of large-scale lithium production all the more potent, said Rystad's Galimberti. "This is the company that has not wavered in past five or 10 years against winds coming from ESG. Think Shell or BP - they all redirected their strategies to accommodate ESG," Galimberti said. "Exxon has not done that at all - they stuck to their guns all these years and were handsomely rewarded by the market for their rigorous approach." Exxon's lithium announcement means the company recognized "a valuable opportunity to make money, because that's what Exxon is about doing," Galimberti said. "It's very bullish for electric vehicles."

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