

BUSINESS

# U.S. Steps Up Efforts to Counter China's Dominance of Minerals Key to Electric Cars, Phones

State-backed group invests in battery-metals firm after Trump recently signed rare-earths executive order



The Mountain Pass mine in California is the nation's only rare-earths mine. The U.S. and other Western nations trail China in production and processing of the minerals that are critical to modern technology such as electric vehicles and cellphones.

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The U.S. government is ramping up efforts to secure minerals critical to modern technology but whose supply is dominated by China—a stranglehold that miners warn could take years to break.

In recent years, the U.S. and other Western nations have invested in projects and approved licenses to mine these resources—essential for the production of electric vehicles, cellphones and wind turbines—an effort these countries are now accelerating given how far they still trail China.

Last week President Trump signed an executive order declaring a national emergency and authorizing the use of the Defense Production Act to speed the development of mines. The law was used earlier this year to speed production of medical supplies amid the pandemic.

On Monday, Ireland-based TechMet Ltd. said the U.S. International Development Finance Corporation, a state-funded lender and investor, had made a \$25 million investment in its projects that produce and recycle resources like battery metals nickel and cobalt.

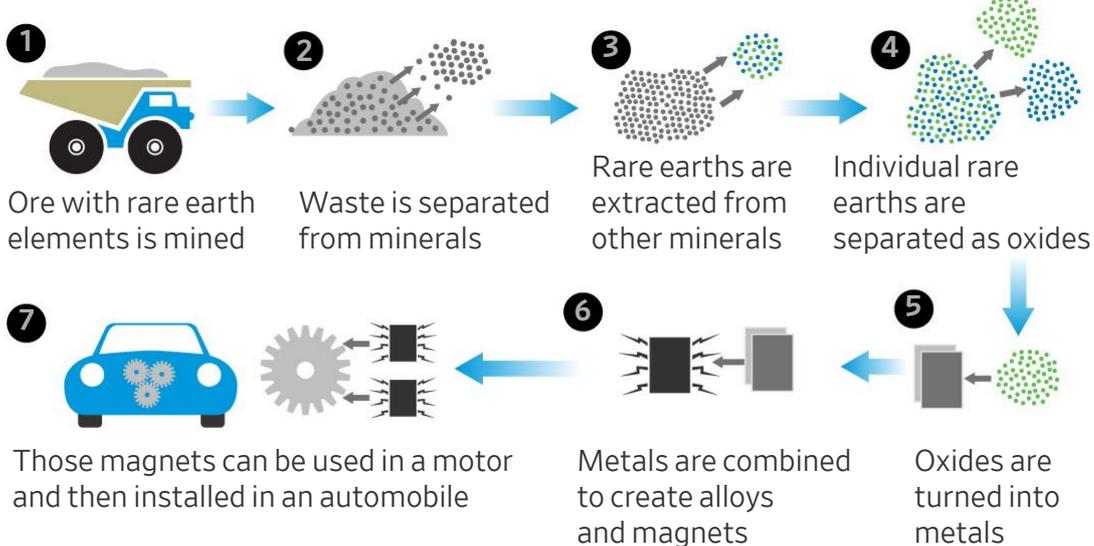
Miners and analysts have welcomed the moves, but caution it takes around 10 years to set up a mine and that the West also needs to develop the capability to process these resources into the materials used in final products.

“To dislodge China’s overwhelming dominance of rare earth, in particular, is a multi, multiyear process,” said TechMet Chief Executive Brian Menell. “There are no quick fixes.”

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China dominates the production chain that provides high-tech industries with rare-earth metals.

### How rare earths are extracted and processed



Source: Industrial Minerals Company of Australia

Rare-earth elements, used in batteries and electronics, are one of the 35 types of minerals that the U.S. government has deemed critical to economic and national security. The U.S. says it imports 80% of its rare-earth elements from China, with further supply coming indirectly from the country. For 14 of the 35 critical types of minerals, the U.S. has no domestic production.

That includes gallium, an element used in light-emitting diodes and semiconductors for cellphones. Critical minerals are also used in less high-tech sectors. China supplies half of

the U.S.'s barite, which is used in the hydraulic fracturing that revolutionized American oil production.

China has built its dominant position in many of these minerals because of their abundance there, the country's more lax environmental laws make it easier to mine them and through subsidizing their production and processing.

Up until the 1980s, the U.S. was the world's biggest producer of rare earths and created the technology to process them, but today it has only one producing mine, the Mountain Pass mine in California, and no processing plants.

David Henderson, founder of consulting firm Rittenhouse International Resources LLC, says the U.S. now lacks technical expertise in the sector and will need to collaborate with allies like Australia and Canada to catch up.

Even if you can mine the minerals, China dominates the entire supply chain, says Jack Lifton, another consultant who has worked for the U.S. government. To make magnets, for example, rare earths have to be mined, extracted from their ores and then separated into individual elements. They are then turned into magnet metals, which are made into magnets. Chinese companies can do every stage of this process, sometimes within the same firm, he says, while only one company outside of the country can—Canada's Neo Performance Materials ULC.

Mr. Trump's executive order called for an assessment of U.S. dependence on China for critical minerals, and said the government could provide grants and loans to kick-start production and processing. It also said it could impose tariffs and quotas on imports from China.

The U.S. government, though, has for almost two decades voiced concern about China's dominance and the need to catch up, with little progress.

In 2012, the Obama administration filed a complaint with the World Trade Organization asking China to loosen its restrictions on exports of rare earths. And in 2017, the Trump administration issued an order calling for a strategy to reduce U.S. susceptibility to critical mineral-supply disruptions. Since then, the government has funded some projects.

The Defense Department is part-funding the development of a processing facility at a mine in California, and also supporting a separation plant in Texas. This year, the U.S. Geological Survey has invested about \$30 million in critical minerals research.

Other countries are also stepping up their efforts.

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Last month, the European Union published an action plan to increase domestic sourcing and diversify its supply of 30 raw materials. Canada recently funded a rare-earth processing facility in Saskatchewan, while Australia is offering loans to develop its domestic industry in these minerals.

Miners say they think Mr. Trump's executive order could encourage a stronger U.S. industry in critical minerals, not least because investors are more likely to back companies they believe the government supports. Shares in companies that mine or want to mine critical materials rose on the news of the order.

"The U.S. has been moving very slowly," said Pini Althaus, chief executive of USA Rare Earth, which hopes to be mining these minerals within three years in Texas. "This gives it a boot up the rear end to get it happening quicker."

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