

# ***The U.S. Needs Minerals for Electric Cars. Everyone Else Wants Them Too.***

The United States is entering an array of agreements to secure the critical minerals necessary for the energy transition, but it's not clear which of the arrangements can succeed.



The Chaerhan Salt Lake in Golmud, China, where brine is processed to extract lithium and other minerals. Credit... Qilai Shen for The New York Times



By [Ana Swanson](#)

Reporting from Washington

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For decades, a group of the world's biggest oil producers has held huge sway over the American economy and the popularity of U.S. presidents through its control of the global oil supply, with decisions by the Organization of the Petroleum Exporting Countries determining what U.S. consumers pay at the pump.

As the world shifts to cleaner sources of energy, control over the materials needed to power that transition is still up for grabs.

China currently [dominates global processing of the critical minerals](#) that are now in high demand to make batteries for electric vehicles and renewable energy storage. In an attempt to gain more power over that supply chain, U.S. officials have begun negotiating a series of agreements with other countries to expand America's access to important minerals like lithium, cobalt, nickel and graphite.

But it remains unclear which of these partnerships will succeed, or if they will be able to generate anything close to the supply of minerals the United States is projected to need for a wide array of products, including electric cars and batteries for storing solar power.

Leaders of Japan, Europe and other advanced nations, who are [meeting in Hiroshima](#), agree that the world's reliance on China for more than 80 percent of processing of minerals leaves their nations vulnerable to political pressure from Beijing, which has a history of weaponizing supply chains in times of conflict.

On Saturday, the leaders of the Group of 7 countries reaffirmed the need to manage the risks caused by vulnerable mineral supply chains and build more resilient sources. The United States and Australia announced a partnership to share information and coordinate standards and investment to create more responsible and sustainable supply chains.

"This is a huge step, from our perspective — a huge step forward in our fight against the climate crisis," President Biden said Saturday as he signed the agreement with Australia.

But figuring out how to access all of the minerals the United States will need will still be a challenge. Many mineral-rich nations have poor environmental and labor standards. And although speeches at the G7 emphasized alliances and partnerships, rich countries are still essentially competing for scarce resources.

Japan [has signed a critical minerals deal](#) with the United States, and [Europe is in the midst of negotiating one](#). But like the United States, those regions have substantially greater demand for critical minerals to feed their own factories than supply to spare.

Kirsten Hillman, Canada's ambassador to the United States, said in an interview that the allied countries had an important partnership in the industry, but that they were also, to some extent, commercial competitors. "It is a partnership, but it's a partnership with certain levels of tension," she said.

"It's a complicated economic geopolitical moment," Ms. Hillman added. "And we are all committed to getting to the same place and we're going to work together to do it, but we're going to work together to do it in a way that's also good for our businesses."

"We have to create a market for the products that are produced and created in a way that is consistent with our values," she said.

Image



Leaders of the G7 nations, who are gathering in Japan this week, agree that the world's reliance on China for more than 80 percent of processing of minerals leaves their nations vulnerable to political pressure from Beijing. Credit...Kenny Holston/The New York Times



The State Department has been pushing forward with a “[minerals security partnership](#),” with 13 governments trying to promote public and private investment in their critical mineral supply chains. And European officials have been advocating a “buyers’ club” for critical minerals with the G7 countries, which could establish certain common labor and environmental standards for suppliers.

Indonesia, which is the world’s biggest nickel producer, has floated the idea of joining with other resource-rich countries to make an OPEC-style producers cartel, an arrangement that would try to shift the power to mineral suppliers.

Indonesia has also approached the United States in recent months seeking a deal similar to that of Japan and the European Union. Biden administration officials are weighing whether to give Indonesia some kind of preferential access, either through an independent deal or as part of a trade framework the United States is negotiating in the Indo-Pacific.

But some U.S. officials have warned that Indonesia’s lagging environmental and labor standards could allow materials into the United States that undercut the country’s nascent mines, as well as its values. Such a deal is also likely to trigger stiff opposition in Congress, where some lawmakers [criticized the Biden administration’s deal with Japan](#).

Jake Sullivan, the national security adviser, hinted at these trade-offs in a speech last month, saying that carrying out negotiations with critical mineral-producing states would be necessary, but would raise “hard questions” about labor practices in those countries and America’s broader environmental goals.

Whether America's new agreements would take the shape of a critical minerals club, a fuller negotiation or something else was unclear, Mr. Sullivan said: "We are now in the thick of trying to figure that out."

Cullen Hendrix, a senior fellow at the Peterson Institute for International Economics, said the Biden administration's strategy to build more secure international supply chains for minerals outside of China had so far been "a bit incoherent and not necessarily sufficient to achieve that goal."

The demand for minerals in the United States has been spurred in large part by President Biden's climate law, which provided tax incentives for investments in the electric vehicle supply chain, particularly in the final assembly of batteries. But Mr. Hendrix said the law appeared to be having more limited success in rapidly increasing the number of domestic mines that would supply those new factories.

"The United States is not going to be able to go this alone," he said.

Biden officials agree that obtaining a secure supply of the minerals needed to power electric vehicle batteries is one of their most pressing challenges. [U.S. officials say](#) that the global supply of lithium alone needs to increase by 42 times by 2050 to meet the rising demand for electric vehicles. [Projections by the International Energy Agency](#) suggest that global demand for lithium will grow by 42 times by 2040.

Image



Ford's electric pickup truck on the production line of the company's plant in Dearborn, Mich. Credit...Brittany Greeson for The New York Times

While innovations in batteries could reduce the need for certain minerals, for now, the world is facing dramatic long-term shortages by any estimate. And many officials say Europe's reliance on Russian energy following the invasion of Ukraine has helped to illustrate the danger of foreign dependencies.

The global demand for these materials is triggering a wave of resource nationalism that could intensify. Outside of the United States, the European Union, Canada and other governments have also introduced subsidy programs to better compete for new mines and battery factories.

Indonesia [has progressively stepped up restrictions](#) on exporting raw nickel ore, requiring it to first be processed in the country. Chile, a major producer of lithium, has proposed nationalizing its lithium industry to better control how the resources are developed and deployed, as have Bolivia and Mexico.

And Chinese companies are still investing heavily in acquiring mines and refinery capacity globally.

For now, the Biden administration has appeared wary of cutting deals with countries with more mixed labor and environmental records. Officials are exploring changes needed to develop U.S. capacity, like faster permitting processes for mines, as well as closer partnerships with mineral-rich allies, like [Canada, Australia and Chile](#).

On Saturday, the White House said it [planned to ask Congress](#) to add Australia to a list of countries where the Pentagon can fund critical mineral projects, criteria that currently only applies to Canada.

Todd Malan, the chief external affairs officer at Talon Metals, which [has proposed a nickel mine in Minnesota](#) to supply Tesla's North American production, said that adding a top ally like Australia, which has high standards of production regarding environment, labor rights and Indigenous participation, to that list was a "smart move."

Image



A lithium mine near La Corne, Quebec, in Canada. Credit... Brendan George Ko for The New York Times





But Mr. Malan said that expanding the list of countries that would be eligible for benefits under the administration's new climate law beyond countries with similar labor and environmental standards could undermine efforts to develop a stronger supply chain in the United States.

"If you start opening the door to Indonesia and the Philippines or elsewhere where you don't have the common standards, we would view that as outside the spirit of what Congress was trying to do in incentivizing a domestic and friends supply chain for batteries," he said.

However, some U.S. officials argue that the supply of critical minerals in wealthy countries with high labor and environmental standards will be insufficient to meet demand, and that failing to strike new agreements with resource-rich countries in Africa and Asia could leave the United States highly vulnerable.

While the Biden administration is looking to streamline the permitting process in the United States for new mines, getting approval for such projects can still take years, if not decades. Auto companies, which are major U.S. employers, have also been warning of projected shortfalls in battery materials and arguing for arrangements that would give them more flexibility and lower prices.

The G7 nations, together with the countries with which the United States has free trade agreements, produce 30 percent of the world's lithium chemicals and about 20 percent of its refined cobalt and nickel, but only 1 percent of its natural flake graphite, according to estimates by Adam Megginson, a price analyst at Benchmark Mineral Intelligence.

Image



Workers at the site of a proposed nickel mine near Tamarack, Minn. Credit...Tim Gruber for The New York Times



Jennifer Harris, a former Biden White House official who worked on critical mineral strategy, argued that the country should move more quickly to develop and permit domestic mines, but that the United States also needs a new framework for multinational negotiations that include countries that are major mineral exporters.

The government could also set up a program to stockpile minerals like lithium when prices swing low, which would give miners more assurance they will find destinations for their products, she said.

“There’s so much that needs doing that this is very much a ‘both/and’ world,” she said. “The challenge is that we need to responsibly pull up a whole lot more rocks out of the ground yesterday.”

Jim Tankersley contributed reporting from Hiroshima, Japan.

Ana Swanson is based in the Washington bureau and covers trade and international economics for The Times. She previously worked at The Washington Post, where she wrote about trade, the Federal Reserve and the economy. [@AnaSwanson](#)