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## China Moves to Strengthen Grip Over Supply of Rare-Earth Metals

By **JAMES T. AREDDY** - 8 February 2011

SHANGHAI—China is building strategic reserves in rare-earth metals, an effort that could give Beijing increased power to influence global prices and supplies in a sector it already dominates.



Bloomberg News

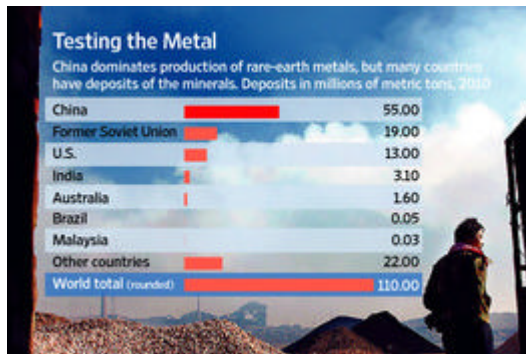
China is building reserves of such rare-earth metals as neodymium.

Details of the stockpiling plans haven't been made public. But the outlines of the effort have emerged in recent statements from Chinese government agencies, state-controlled companies and reports in government-run media. The reports say storage facilities built in recent months in the Chinese province of Inner Mongolia can hold more than the 39,813 metric tons China exported last year.

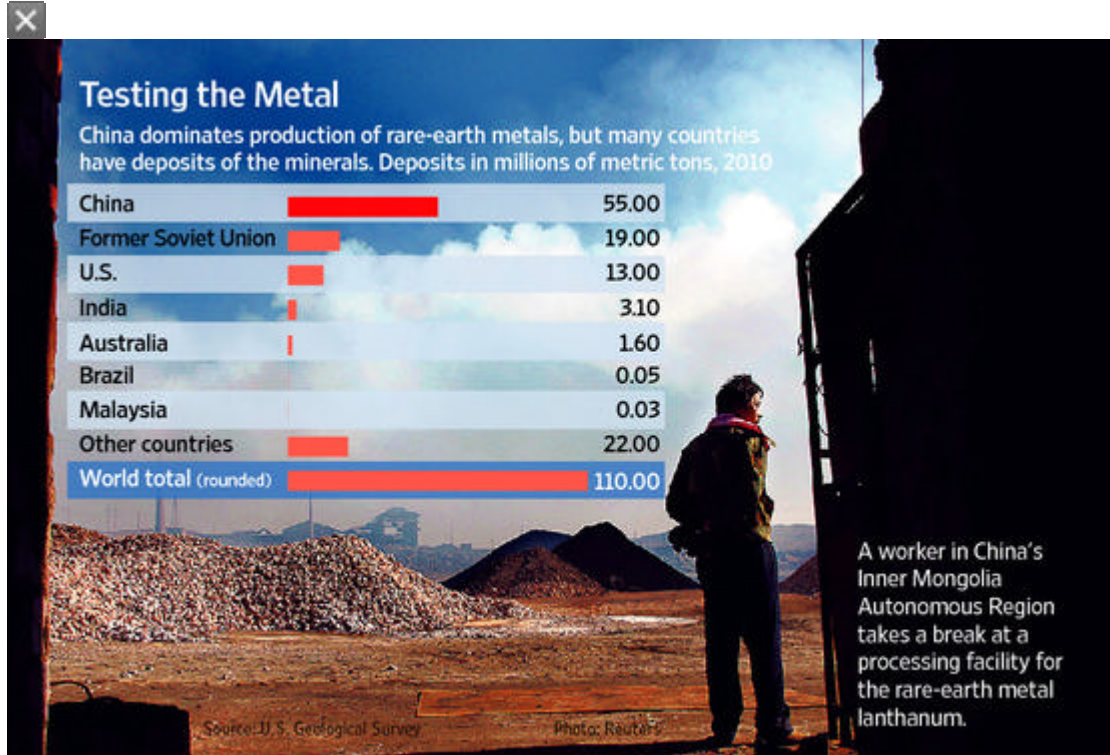
China controls more than 90% of current global supply of rare-earth metals—a group usually classified as 17 elements and sometimes are called "21st Century gold" for their importance in such high-tech applications as laser-guided weapons and hybrid-car batteries. Beijing has been tightening its exports with a quota policy.

### Testing the Metal

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Reuters



Mining companies around the world have responded by taking steps to increase production. Many rare-earth minerals aren't actually rare, and China doesn't have a monopoly on deposits of any particular rare-earth elements. The U.S. Geological Survey recently estimated that China has about half the world's 110 million metric tons of rare-earth deposits, however. Mining in the U.S. and elsewhere fell off several years ago, in part because of environmental concerns. Australia's [Lynas Corp.](#) U.S.-based [MolyCorp Inc.](#) and other companies are ramping up operations. But a new mine can take a decade to develop, and processing of rare-earth elements will remain concentrated in China for years.

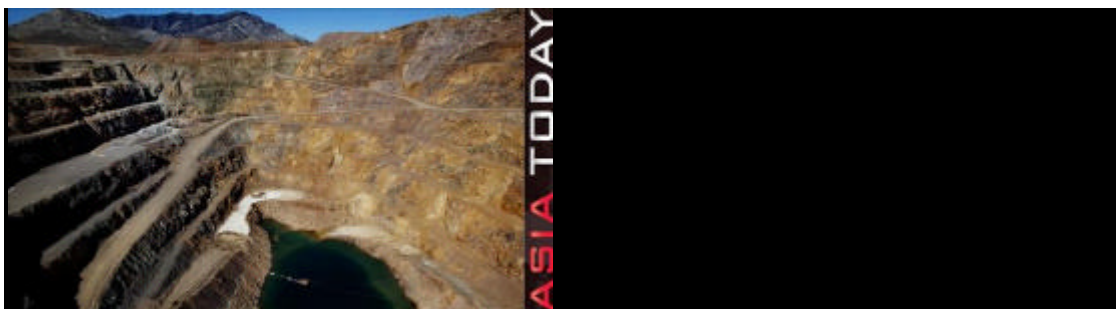
Industry observers say that if the stockpiling efforts further restrict China's exports, that could raise hackles higher in foreign capitals, where some governments already are threatening to challenge Beijing's quota regime by bringing complaints to the World Trade Organization.

"In my view, [a reserve] makes the Chinese position worse," said Steve Dickinson, an attorney at the Seattle law firm Harris & Moure.

Further limits on Chinese exports of rare-earth elements also threaten to raise costs for companies in an array of industries, including cellphones, oil refining and high-technology batteries.

Chinese government agencies manage other official stockpiles for commodities, such as copper and corn, as well. And many governments world-wide amass similar stockpiles to address temporary emergency shortfalls, such as grain supplies in a drought year. The U.S. manages a Strategic Petroleum Reserve but since 1994 has pared back holdings of a range of commodities that had been held in a World War II era stockpile.

China in recent years has expanded the number of commodities it holds in reserve. It appears to actively manage their use, but does so with little transparency and sometimes in ways that appear designed to influence market prices, analysts say.



China is building strategic reserves in rare-earth metals, and South Korean authorities are investigating units of Deutsche Bank over a sharp stock market fall last year. WSJ's Jake Lee and Asia Pacific Finance Reporter Alison Tudor discuss.

When aluminum prices were soaring in early November, for instance, the State Reserve Bureau blunted the rally by unloading more than 200,000 metric tons of aluminum ingots at as much as 7% below Shanghai Futures Exchange prices. China's lack of clarity over how exactly it manages its strategic reserves of petroleum has roiled global oil markets and drawn criticism from the International Energy Agency and others.

China isn't alone in looking to stockpile rare-earth metals. The Japanese and South Korean governments say they have amassed some reserves and U.S. analysts have called for a similar effort. But China appears to be ahead of other countries.

The Chinese stockpiling, under the direction of the Ministry of Land and Resources, began with a pilot project almost a year ago in China's primary mining region of Baotou in Inner Mongolia and is related to the ministry's assertion of authority in recent years over mining regions. At least 10 storage facilities are being built and managed by the world's largest producer of rare-earth metals, government-controlled Baotou Steel Rare-Earth (Group) Hi-Tech Co. Chinese state media reports say stockpiles may eventually top 100,000 metric tons.

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The ministry and Baotou Steel Rare-Earth didn't respond to questions for this article.

While China says its deposits of rare-earth minerals account for only about a third of the global total, the country mines most of the world's marketed supply, which has raised concerns that China could deplete the supply too quickly.

In their limited comments about strategic reserves of rare-earth minerals, Chinese officials have cited the need to protect national resources, reduce pollution and save energy, the same factors used to explain China's export quotas.

A 2009 policy paper on minerals by the Resources Ministry cited a need "to regulate the supply-demand relationship in the market and implement government industrial policy."

The move to build reserves comes as China's supply of rare-earth metals to the rest of the world already is shrinking despite growing demand for the elements, which have strategic industrial and military value in such products as night-vision goggles and wind turbines. China's exports of rare-earth metals fell 9.3% last year.

U.S. Rep. Mike Coffman called China "an unreliable trade partner" in rare-earth minerals and said he plans to introduce a bill in coming weeks that may require the U.S. military to hold an unspecified amount of such elements. "The goal of the legislation is to establish a competitive supply chain in the U.S.," and that may include mandating a stockpile or setting conditions on when to form one, the Colorado Republican said in an interview.

The American Security Project think tank in a report released Tuesday recommended stockpiling as "one of the best ways to prepare for a future shortage" of rare-earth metals before U.S. mining and processing capability is expanded. The group, whose board includes retired military officers and former Sen. Gary Hart and Sen. John Kerry, who have specialized in defense policy, cites a Pentagon estimate that while only 5% of demand for rare-earth metals in the U.S. comes from the military, the U.S. is nevertheless "completely reliant on China for the production of some of [the Pentagon's] most powerful weapons."

But some politicians warn that official stockpiling by the U.S. would only make the government a new competitor in an already strained supply chain that, despite its strategic importance, is relatively small. China's exports of rare-earth ore, metals and compounds last year was valued at just \$940 million. Sen. Lisa Murkowski, who plans soon to reintroduce a bill to support the U.S. rare-earth industry, favors first studying the merits of a strategic reserve rather than mandating the creation of one, a spokesman for the Alaska Republican said.

The U.S. Department of Energy in 2009 proposed a middle road. It outlined how a Strategic Military Stockpile Program would include "limited physical stockpiles" of metals and other resources but be supplemented by "friendly nation agreements and long-term supply-chain partnerships."

In recent months, the high-tech-focused nations of Japan and South Korea, both of which are dependent on China for rare-earth supplies, have highlighted stockpiling strategies. The European Union is weighing reserves too, Reuters recently reported, and British lawmakers last month discussed their country's strategic-materials strategy.

It is unclear how much day-to-day control Beijing authorities actually have of their rare-earths industry. The Resources Ministry in policies dating to 1999 repeatedly has described rare-earth production as disorderly. Nor has the government spelled out what supplies will get diverted to national stockpiles.

But the ministry increasingly is asserting authority over rare-earth mining as part of a broader program that has seen the government move to manage more than 50 commodity-production zones producing coal and iron ore. Eight rare-earth zones were put under national administration in 2006, while Beijing has specified that more than 1,600 mining blocs are subject to central-government planning policies and hundreds of mines will be closed.

The ministry extended its reach in January to include a region in southeastern Jiangxi Province where a particularly scarce class of rare-earth minerals is prevalent. That move, announced in a one-paragraph notice dated Jan. 4, covers 11 rare-earth mining blocks over a little more than half an acre in the Jiangxi area of Ganzhou. The area is known for deposits of particularly rare, premium-priced "heavy" rare-earth metals, such as terbium, which is used in fuel cells.

"The announcement is to promote an overall planning over the rare-earth mining industry," said Chen Zhenheng, deputy director of the Chinese Society of Rare Earths industry association.

#### Corrections & Amplifications

Vanadium isn't a rare-earth metal. An earlier version of this story incorrectly described it as one.

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