

The Wall Street Journal

Pentagon in Race for Raw Materials

Stockpiling Minerals Takes on Greater Urgency as Global Supply Gets Squeezed

By LIAM PLEVEN, May 3 2010

The U.S. military is gearing up to become a more active player in the global scramble for raw materials, as competition from China and other countries raises concerns about the cost and availability of resources deemed vital to national security.

The Defense Department holds in government warehouses a limited number of critical materials—such as cobalt, tin and zinc—worth about \$1.6 billion as of late 2008. In the coming weeks, the Pentagon is likely to present a plan for Congress to overhaul its stockpiling program,

The U.S. may stockpile lithium, thin pieces of which are shown here at the Center for Lithium Energy Advanced Research lab in North Carolina.



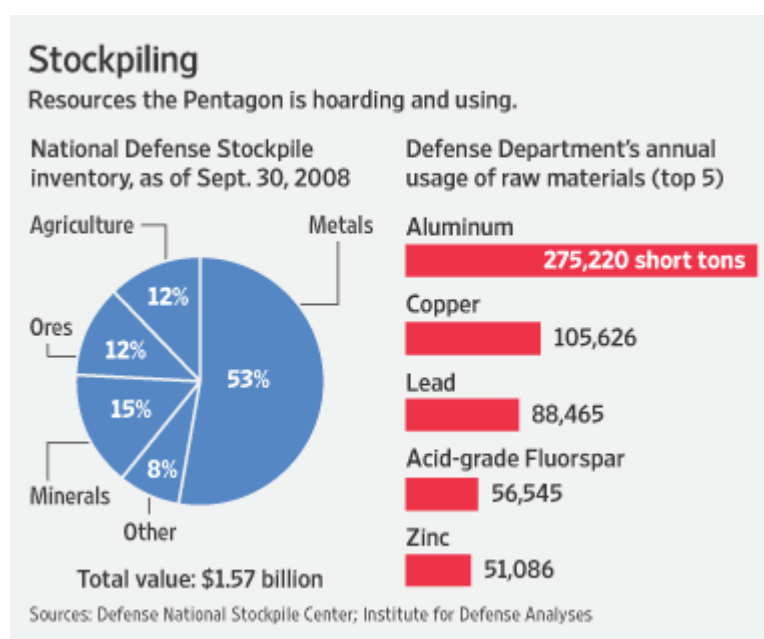
The new plan, dubbed the Strategic Materials Security Program by the Pentagon, would give the military greater power to decide what it stockpiles and how it goes about buying the materials. It would also speed up decision making at a time when military technology evolves rapidly, commodity markets swing widely and countries around the world fight to secure access to natural resources.

"It's a risk-management program," said Paula Stead, who oversees the effort for the Defense National Stockpile Center at Fort Belvoir, in Virginia. The goal is to be able to obtain "a much broader" array of materials in "a much shorter time," she said.

Right now, the military can't add to the stockpile list without congressional approval, a process that can take as long as two years. The military wants to remove that restriction. It also wants the authority to strike long-term deals with companies or allied nations to provide emergency supplies of materials that the military says are irreplaceable for making weapons, jet engines, high-powered magnets and other gear.

U.S. allies are also increasingly alert to possible supply threats. Last year, Australia blocked a Chinese firm's bid for control of a company that was developing a mine for rare-earth elements, which are used in products such as alloys, electronics and computer monitors.

China controls more than 90% of global production of rare-earth elements, which the U.S. military uses in lasers and high-powered magnets. The U.S. in October added several of these elements to its list of materials that it might warehouse.



The proposed changes to the stockpile system are part of a broader overhaul of the way the Pentagon buys raw materials. The military currently uses hundreds of millions of dollars worth of raw materials annually, for building weapons and equipment, among other things.

The military has recently tested a system of bulk-buying commodities—by putting in joint orders across the armed services—which could cut purchasing costs. The military also wants the latitude to have private companies stockpile materials in "buffer stocks" that the military can tap if other supplies dry up.

Critics argue the current stockpiling system—set up in 1939 for World War II and shaped by the Cold War—is outdated and leaves the U.S. vulnerable to a shortage of critical supplies. That could weaken the military's negotiating position or leave it at the mercy of wild price swings in the market, or unable to get the material it needs for key weapons.

The huge purchasing power of other nations such as China and India makes this even more critical, according to a Department of Defense report given to Congress

last year. Worries about potential shortages of strategic materials escalated in 2007 and 2008, as commodity prices jumped and demand from emerging economies soared.

At a hearing on the stockpile last July, a Defense Department official told Congress that the price of rhenium, whose heat-resistant qualities help jet engines operate at higher speeds, at one point shot up 1,000%. Rhenium is one of many materials the department already screens for stockpiling.

China looms large in the debate. In addition to dominating production of rare-earth elements, China is an aggressive deal maker with countries and companies that produce raw materials. The Chinese government also stockpiles a range of natural resources.

The rising competition for raw materials has sparked fears in the U.S. military that some materials that once seemed abundant could suddenly become hard to get at any price. In 2008 the military suspended or limited sales of 13 commodities it had previously considered excess. Last year it added 14 materials to its list of resources it considers for stockpiling, including specialty steels, lithium and some rare-earth elements, taking the total to 68. More additions are expected, said Ms. Stead of the Defense National Stockpile Center.

The changes being proposed by the military have the potential to move prices, especially on materials for which the market is small. If the military decides to add a commodity to the stockpile, it could cause "some upward pressure on price," said Roderick Eggert, a mineral economist at the Colorado School of Mines, who has tracked the proposal.

The Defense Department is also a major buyer of raw materials for immediate consumption, as opposed to stockpiling. It purchases about three-quarters of a million tons of raw materials a year for immediate consumption, and it uses almost 1% of U.S. steel production and nearly 5% of its aluminum.

The stockpiling system evolved over the past few decades into a network of warehouses containing material that, after the Cold War, the military largely concluded it no longer needed. Much of what was stored has since been sold off, shrinking the hoard and netting about \$7 billion.

In 1995, the stockpile held 90 different commodities at 85 different locations. Today, it holds 20 commodities in 10 locations, Ms. Stead said.

The system amounted to "putting stuff into big piles," said Robert Latiff, a retired Air Force major general and lead author of a recent study on managing raw materials for the National Academies. The process for adding new material was "not only lengthy but torturous," said Mr. Latiff, who is now a professor at George Mason University.

The military has been caught flat-footed in the past. A special type of steel was needed early in the Iraq war to reinforce Humvees to protect soldiers from powerful explosives used by insurgents. The Defense Department didn't have the steel in its stockpile, and couldn't find a domestic firm to produce all it needed.

The rules were changed to allow the military to use material from Mexico, according to testimony to Congress last year.

At the same time, the military has also adapted to emergencies. When it was racing to build bomb-resistant trucks to use in Iraq, the Pentagon invoked authority it hadn't used in decades to force contractors to give key projects top priority access to essential material, because it feared shortages of ballistic glass and other components.

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