

# The New York Times

SOURCE : LE NEW YORK TIMES

## CANADIAN FIRMS STEP UP SEARCH FOR RARE-EARTH METALS

BY REUTERS / PUBLISHED: SEPTEMBER 9, 2009

BANGALORE — China may lose its near-monopoly on producing so-called rare-earth metals used in hybrid cars and computer hard disks as a host of smaller Canadian companies develop fresh sources of supply over the coming years.

The drive to open new mines comes as Beijing shows signs of tightening restrictions on exports of the metals. Their great magnetic capacity and resistance to high temperatures make the minerals essential components in a variety of technologies, including fuel-efficient cars and wind energy turbines.

Demand for rare-earth metals is likely to increase between 10 percent and 20 percent each year, analysts say, thanks to growing demand for elements like neodymium, which is used in making hybrid electric vehicles and generators for wind turbines.

But supplies are limited. China, which produces about 97 percent of world's rare-earth metals, curbs exports through quotas and additional duties. In addition, rare-earth metals like neodymium, terbium, dysprosium and yttrium are difficult to mine and process.

Against that backdrop, a handful of Canadian miners are exploring for new supplies in South Africa, Brazil and the United States while pushing ahead with existing projects. Their success could ease fears that manufacturers may find themselves with few, if any, reliable sources of vital rare-earth metals. Such concerns have also raised the share prices of many of these speciality miners.

"There has been increased interest to look into ways to mine rare earth out of China, specially given the protectionism China is applying to its resources," said Frederic Bastien, an analyst at Raymond James.

Great Western Minerals Group, Rare Element Resources, Avalon Rare Metals and Neo Material Technologies are among the Canadian companies exploring for resources outside China. Their shares have surged in recent weeks amid strong volumes.

Analysts say the rally is partly fueled by speculation that these companies would stand to gain if China goes ahead with proposed export curbs.

In August, China's Ministry of Industry and Information Technology submitted a report on its rare-earth industry that includes proposals for further restrictions on exports and an outright ban on foreign shipments of a few key rare-earth metals.

But surely, Mr. Bastien said, companies face an uphill task to make their projects commercially viable, and it could take a few years for them to do so.

Jack Lifton, an independent rare-earth metals expert,

said that China had reduced exports of the metals since 2004. If that policy continues, the world could face a huge shortfall.

"At end of 2015, China will no longer be exporting rare-earth metals," he said. "If the West has not found its own manufacturing, then the West will be no longer making rare-earth-based end products."

Rare-earth metals companies outside China, mostly based in Canada, Australia and the United States, expect to begin their projects in next three to four years.

By 2014, said James Engdahl, chief executive of Great Western Minerals, China will essentially have shut off exports of the minerals because its industries will be requiring everything produced there. "We as a company have been preparing for that."

The junior explorer, which owns rare-earth properties in Canada and is based in the province of Saskatchewan, now gets raw materials from China to feed alloy plants in the United States. It expects to start production of the metals from its South African project within the next three years.

Constantine Karayannopoulos, chief executive of Neo Material Technologies, one of the few Western companies to have rare-earth processing plants in China, said that China would continue to regulate the sector.

However, he said he did not expect a complete ban on exports of heavy rare-earth metals like dysprosium and terbium.

Analysts expect demand for the metals to skyrocket as they are used in hybrid cars to preserve magnetic properties of metal alloys at high temperatures.

The draft report is more sort of a flagpole test for reaction reflecting Chinese policy," Mr. Karayannopoulos said.

"I think for any modern state and any state signatory to the W.T.O.," he said, referring to the World Trade Organization, "restricting the export of any material which has a stranglehold in the world is just a nonstarter."

That said, the relationship that Neo Material has cemented with Mitsubishi suggests the level of concern within Japan about Chinese rare-earth supplies.

Neo Material, which is also involved in development of heavy rare-earth resources at the Pitinga tin mine in Brazil, has signed an agreement with Mitsubishi under which the two companies would explore outside of China. The Japanese company is also financing development costs of Neo's Brazil project.

Japan is one of the largest consumer of rare-earth metals, using them mainly in manufacturing batteries, cameras and laser equipment. •

# The New York Times

SOURCE : LE NEW YORK TIMES

## CHINA TIGHTENS GRIP ON RARE MINERALS

BY KEITH BRADSHER / PUBLISHED: AUGUST 31, 2009

HONG KONG — China is set to tighten its hammerlock on the market for some of the world's most obscure but valuable minerals.

China currently accounts for 93 percent of production of so-called rare earth elements — and more than 99 percent of the output for two of these elements, dysprosium and terbium, vital for a wide range of green energy technologies and military applications like missiles.

Deng Xiaoping once observed that the Mideast had oil, but China had rare earth elements. As the Organization of the Petroleum Exporting Countries has done with oil, China is now starting to flex its muscle.

Even tighter limits on production and exports, part of a plan from the Ministry of Industry and Information Technology, would ensure China has the supply for its own technological and economic needs, and force more manufacturers to make their wares here in order to have access to the minerals.

In each of the last three years, China has reduced the amount of rare earths that can be exported. This year's export quotas are on track to be the smallest yet. But what is really starting to alarm Western governments and multinationals alike is the possibility that exports will be further restricted.

Chinese officials will almost certainly be pressed to address the issue at a conference Thursday in Beijing. What they say could influence whether Australian regulators next week approve a deal by a Chinese company to acquire a majority stake in Australia's main rare-earth mine. The detention of executives from the British-Australian mining giant Rio Tinto has already increased tensions.

They sell for up to \$300 a kilogram, or up to about \$150 a pound for material like terbium, which is in particularly short supply. Dysprosium is \$110 a kilo, or about \$50 a pound. Less scarce rare earth like neodymium sells for only a fraction of that.

(They are considerably less expensive than precious metals because despite the names, they are found in much higher quantities and much greater concentrations than precious metal.)

China's Ministry of Industry and Information Technology has drafted a six-year plan for rare earth production and submitted it to the State Council, the equivalent of the cabinet, according to four mining industry officials who have discussed the plan with Chinese officials. A few, often contradictory, details of the plan have leaked out, but it appears to suggest tighter restrictions on exports, and strict curbs on environmentally damaging mines.

Beijing officials are forcing global manufacturers to move factories to China by limiting the availability of rare earths outside China. "Rare earth usage in China will be increasingly greater than exports," said Zhang Peichen, the deputy director of the government-linked Baotou Rare Earth Research Institute.

Some of the minerals crucial to green technologies are extracted in China using methods that inflict serious damage on the local environment. China dominates global rare earth production partly because of its willingness until now to tolerate highly polluting, low-cost mining.

The ministry did not respond to repeated requests for comment in the last eight days. Jia Yinsong, a director general at the ministry, is to speak about China's intentions Thursday at the Minor Metals and Rare Earths 2009 conference in Beijing.

Until spring, it seemed that China's stranglehold on production of rare earths might weaken in the next three years — two Australian mines are opening with combined production equal to a quarter of global output.

But both companies developing mines — Lynas Corporation and smaller rival, Arafura Resources — lost their financing last winter because of the global financial crisis. Buyers deserted Lynas's planned bond issue and Arafura's initial public offering.

Mining companies wholly owned by the Chinese government swooped in last spring with the cash needed to finish the construction of both companies' mines and ore processing factories. The Chinese companies reached agreements to buy 51.7 percent of Lynas and 25 percent of Arafura.

The Arafura deal has already been approved by Australian regulators and is subject to final approval by shareholders on Sept. 17. The regulators have postponed twice a decision on Lynas, and now face a deadline of next Monday to act.

Matthew James, an executive vice president of Lynas, said that the company's would-be acquirer had agreed not to direct the day-to-day operations of the company, but would have four seats on an eight-member board.

Expectations of tightening Chinese restrictions have produced a surge in the last two weeks in the share prices of the few non-Chinese producers that are publicly traded. In addition to the two Australian mines, Avalon Rare Metals of Toronto is trying to open a mine in northwest Canada, and Molycorp Minerals is trying to reopen a mine in Mountain Pass, Calif.

Unocal used to own the Mountain Pass mine, which suspended mining in 2002 because of weak demand and a

→ delay in an environmental review. State-owned Cnooc of China almost acquired the mine in 2005 with its unsuccessful bid for Unocal, which was bought instead by Chevron; Chinese buyers tried to persuade Chevron to sell the mine to them in 2007, but Chevron sold it to Molycorp Minerals, a private American group.

A single mine in Baotou, in China's Inner Mongolia, produces half of the world's rare earths. Much of the rest — particularly some of the rarest elements most needed for products from wind turbines to Prius cars — comes from small, often unlicensed mines in southern China.

China produces over 99 percent of dysprosium and terbium and 95 percent of neodymium. These are vital to many green energy technologies, including high-strength, lightweight magnets used in wind turbines, as well as military applications.

To get at the materials, powerful acid is pumped down bore holes. There it dissolves some of the rare earths, and the slurry is then pumped into leaky artificial ponds with earthen dams, according to mining specialists.

The Ministry of Industry and Information Technology has cut the country's target output from rare earth mines by 8.1 percent this year and is forcing mergers of mining companies in a bid to improve technical standards, according to the government-controlled China Mining Association, a government-led trade group.

General Motors and the United States Air Force played leading roles in the development of rare-earth magnets. The magnets are still used in the electric motors that control the guidance vanes on the sides of missiles, said Jack Lifton, a chemist who helped develop some of the early magnets.

But demand is surging now because of wind turbines and hybrid vehicles.

The electric motor in a Prius requires 2 to 4 pounds of neodymium, said Dudley Kingsnorth, a consultant in Perth, Australia, whose compilations of rare earth mining and trade are the industry's benchmark.

Mr. Lifton said that Toyota officials had expressed strong worry to him on Sunday about the availability of rare earths.

Toyota and General Motors, which plans to introduce the Chevrolet Volt next year with an electric motor that uses rare earths, both declined on Monday to comment.

Rick A. Lowden, a senior materials analyst at the Defense Department, told a Congressional subcommittee in July that his office was reviewing a growing number of questions about the availability of rare earths.

China is increasingly manufacturing high-performance electric motors, not just the magnets.

"The people who are making these products outside China are at a huge disadvantage, and that is why more and more of that manufacturing is moving to China," Mr. Kingsnorth said. ▀

# RARE EARTH ELEMENTS: THREE WAYS TO PROFIT FROM MINING CRUCIAL PRECIOUS METALS

BY DAVID FESSLER ON OCTOBER 20, 2009 | MORE POSTS BY DAVID FESSLER | [AUTHOR'S WEBSITE](#)

What do your cell phone, a Euro banknote, superconductors, fiber-optic communications systems and the motor for your car's windshield wiper all have in common? They (and thousands of other everyday products) contain minute quantities of some of the most obscure chemical elements on the planet. They're known as "rare earth metals" or simply "rare earths."

## What's the big deal about them?

Simply put, trillions of dollars of modern devices wouldn't be possible without their existence. These "rare earths" are critical elements in many industrial processes and the United States Geological Survey (USGS) has identified 17 of them.

Let's take a quick look at "rare earths" to get an idea of just how pervasive and critically important they are and, of course, how to do something that very few other investors even consider, profit from them...

## Little-Known, Rare Earths... Critical to Everyday Life

The term "rare earths" comes from the fact that the minerals that contain these unusual elements were quite rare when first found in Ytterby, Sweden.

And occupying slots 21, 39 and 57-71 in the periodic table of the elements, here are a few of the most commonly used "rare earths"...

Cerium is the most abundant of the "rare earths." It's found in automobile catalytic converters and other pollution control equipment. And it helps to reduce sulfur oxide emissions. It's also added to diesel fuel to help it burn better.

Neodymium is used in magnets to make the magnetic field incredibly strong. Cell phones, computers and audio speakers wouldn't exist without neodymium magnets. And miniature motors wouldn't be possible at all without it.

Holmium has the greatest magnetic strength of any element, and is used in medical and dental lasers and nuclear control rods. It's also a colorant for glass.

Dysprosium's magnetic strength properties make it a useful material for certain lasers, fuel injectors for diesel engines, compact discs, and other various data storage applications.

Thulium is one of the rarest and most expensive of the "rare earth" metals. It has unique properties that make it ideal for laser-based surgical tools.

Yttrium is primarily utilized to make red phosphors for

use in red LED's and superconductors.

Europium is a key ingredient in certain types of lasers and is a part of the chemical process to screen for Down's Syndrome.

Erbium is a silvery white metal created for use in photographic filters and as a coloring agent in cheap sunglasses and jewelry. It's also a key element in optical amplifiers widely used in fiber-optic communications systems.

## Rare Earth Elements and The China Factor - Again...

While found in relatively high concentrations in the Earth's crust, until 1948 most of the world's "rare earth" supply came from sand deposits in Brazil and India.

But in the 1950s, South Africa became the primary source, with U.S. supplies ramping up and continuing well into the late 1980's.

And while there is still some residual production from those sources, China has stepped to the front of the pack. Its "rare earth" metal production dwarfs everyone else. As you can see on the chart, the Red Dragon is responsible for nearly 95% of the world's "rare earth" production.

Over the past decade or so, rare metal usage has increased dramatically, which has resulted in a significant strain on supplies. In fact, there's growing concern that the world may soon face a shortage that could rise to over 40,000 tons annually.

With China using nearly two-thirds of what it produces, it's naturally keen to protect its own interests. The country is stockpiling its supplies and continuing to reduce annual exports of "rare earths." The real concern is that within a few years China may decide to keep everything it produces.

As a result of this threat from China, the "rare earth" sector is on fire, with a worldwide flurry of "rare earth" exploration. A mine in California is set to reopen by 2012 and Australia is currently developing the richest "rare earth" deposits outside of China.

## Three Mining Stocks for "Rare Earth" Element Speculators

Unfortunately, the Chinese haven't yet converted the state-owned Inner Mongolia Baotou Steel Rare-Earth Hi-Tech Company into a publicly traded entity, so you can't buy shares. Moreover, it's unlikely that it ever will become publicly traded, given the strategic nature of "rare earths" and China's dwindling reserves.

➔ But many other “rare earth” mining stocks are up over 100% since China announced a change to its “rare earth” export quotas in August. Here are a few to consider...

Lynas Corporation (LYSCF.BB: 0.00 N/A N/A): The company is behind the big Western Australian “rare earth” deposit at Mt. Weld and has seen its shares soar by 141% over the past six months.

Avalon Rare Metals (AVARF.BB: 0.00 N/A N/A) and Rare Element Resources (RRLMF.BB: 0.00 N/A N/A) are two other rare element miners that have enjoyed a huge surge over the past six months. Their share prices are up 510% and 596%, respectively.

A note of caution, however: like most junior gold mining stocks, all three are highly speculative. As such, they’re subject to wild price swings.

That said, “rare earths” are in short supply and that means there will be profitable opportunities, as new suppliers emerge and try to offset the dwindling supply from China.

## RARE EARTH ELEMENTS GET RARER

BY GREENMOMENTUM STAFF / SEPTEMBER, 2, 2009

**China currently accounts for 99% of the production of dysprosium and terbium, two of the most valuable rare earth materials used in green technology. Trying to limit their use and application outside China, the government is considering limiting its production and export of these minerals.**

Dysprosium and terbium are two of the so called "rare earth elements" used in both green energy and military technologies. These rare yet precious rare elements are mostly found in China, which today accounts for 99 percent of the output of these two elements.

Trying to limit its use and application outside China, the government is now considering limiting its production and export in order to ensure China has the supply for its own technological and economic needs. This, the government expects, will force manufacturers to open production plants in China.

During the last three years, China has reduced the amount of REE that can be exported. This policy is now alarming European countries as well as the United States, as well as many multinational corporations even when they have plants in China.

Multinationals see the problem as limiting their projects as they would also have to comply with the policy that limits exports of these materials after being processed in China.

To extend its grip on the production of these elements, China has tried to acquire the rights to exploit a REE mine in Australia, and today is waiting for a resolution by the Australian regulators on whether the deal will be approved.

The cost of these materials vary, with terbium going at around \$300/kg, and dysprosium at \$110/kg. Other rare elements such as neodymium sell for much less than that.

China's Ministry of Industry and Information Technology has drafted a six-year plan for rare earth production and submitted it to the State Council. A few details of the plan have leaked out, but it appears to suggest tighter restrictions on exports, and strict curbs on environmentally damaging mines.

Beijing officials are forcing global manufacturers to move factories to China by limiting the availability of rare earths outside China. "Rare earth usage in China will be increasingly greater than exports," said Zhang Peichen, the deputy director of the government-linked Baotou Rare Earth Research Institute.

The extraction of these materials is also a matter of concern to western countries. The methods employed by China may cause serious environmental damage for the local communities. One of the reasons China accounts for 93% of

all REE (99% for the two most precious) is that it is the only country willing to pay the environmental cost of their extraction.

With two Australian mines opening with combined production equal to a quarter of global output, Western countries believed that China's grip on the materials would have to slowly ease. However, following the global financial crisis, both companies - Lynas Corporation and Arafura Resources - ran out of money last winter having no choice but to seek financing in China.

A single mine in China's Inner Mongolia, produces half of the world's rare earths. Much of the rest, particularly some of the rarest elements most needed for products from wind turbines to Prius cars, comes from small, often unlicensed mines in southern China.

Dysprosium, terbium and neodymium are considered vital for the production of green energy technologies, including high-strength, lightweight magnets used in wind turbines. Toyota's Prius, the leading hybrid vehicle in terms of sales, consumes 2 to 4 pounds of neodymium for every electric motor. This has led Toyota officials to express strong worry about the availability of REE.

China is increasingly manufacturing high-performance electric motors and magnets. "The people who are making these products outside China are at a huge disadvantage, and that is why more and more of that manufacturing is moving to China," said Dudley Kingsnorth, a consultant whose compilations of rare earth mining and trade are the industry's benchmark, to the New York Times. •



# FINANCIAL POST

SOURCE : FINANCIAL POST

## RARE EARTH METALS EXPLODE INTO THE MAINSTREAM

BY PETER KOVEN, FINANCIAL POST / PUBLISHED: THURSDAY, SEPTEMBER 24, 2009

The latest commodity craze is taking place in metals that the average investor would have trouble spelling properly.

They go by names like cerium, europium, dysprosium, and promethium. Collectively they are the rare earth metals, and they have exploded into the mainstream in recent weeks due to concerns about future supply out of China.

Rare earths are a tiny and illiquid industry, with global demand of about 125,000 tonnes a year. They are used to make high-strength magnets, and have applications in many electronic devices.

Experts said that demand has been growing about 10% a year, but there are expectations that it could accelerate over the next decade because of growing use in green technology sources like hybrid cars and wind turbines.

That is an issue, because more than 90% of global supply of these metals comes from one place: China. And, it's no surprise, China is looking to keep more for itself.

In the past few weeks, the Chinese government has talked about placing export quotas on some rare earth metals, and outright export bans on others.

China seems especially keen on using its dominance in rare earths to bring more value-added manufacturing into the country.

"There are lots of geopolitical overtones to it and it's highlighting the vulnerability of the rest of the world to the fact that right now, China is largely the sole source of supply," said Don Bubar, chief executive of junior mining company Avalon Rare Metals Inc.

China seems keen to control the rest of the rare earth market as well. In recent months, state-controlled companies have sought out investments in two rare earth miners outside its

borders: Australian firms Lynas Corp. and Arafura Resources Ltd.

Concerns about creeping Chinese domination of rare earths finally came to the forefront Thursday as Australian regulators blocked a US\$220-million investment in Lynas by China Non-Ferrous Metal Mining Group Co. The proposed deal would have given the Chinese company a majority stake in Lynas.

At the same time, a report Thursday said China Investment Corp., the country's main sovereign wealth fund, may launch its own domestic rare earth company.

The one major North American source of rare earth metals is the Mountain Pass mine in California, which is owned by private company Molycorp Minerals LLC.

In Canada, there are very few ways to play rare earths. The best-known junior is Toronto-based Avalon, which has advanced-stage properties and hopes to be in production in the next four years. Shares of the company are up about 350% since the spring.

Mr. Bubar said the fact that production is a few years away is a good thing, because it will take some time before global supply is stretched.

"Right now, rare earth supply is adequate. The issue is where it will come from in three or four years," he said.

Smaller Canadian juniors include Rare Element Resources Ltd. and Quest Uranium Corp. Quest was a total unknown until it made a very well-timed foray into the rare earth business in April. Since then it has acquired land in Quebec and made a discovery, and the stock has gone on an astounding run, up more than 5,000%.

Financial Post / pkoven@nationalpost.com  
rare element



SOURCE : [HTTP://RESPONSIBLEENERGY.BLOGSPOT.COM/](http://responsibleneergy.blogspot.com/)

## RARE EARTH ELEMENTS: VITAL TO STRENGTHENING AMERICA'S ECONOMY/SECURITY

BTURSDAY, OCTOBER 8, 2009

Following the publication of the commentary "Happy Talk on Green Jobs" and in conversations surrounding the topic, CARE's executive director, Marita Noon, is often asked a question, "What are rare earths?" Rare earth elements such as lanthanum, cerium, and many others are of great importance to the energy sector of our economy and are vital to preserving America's national security interests. The green energy revolution that environmentalists advocate is impossible to achieve without a secure supply of rare earth elements. REEs are used in the construction of wind turbines, hybrid vehicles, and emerging energy technologies. REEs are also vital to our national security, such as in the construction of jet fighter engines, missile guidance systems, underwater mine detectors, space-based satellite power plants, and military communication systems. And here's the scary part—China controls 95% of the world's REE production and environmental extremists are repeatedly blocking American companies from mining efforts that would allow reaching the REEs that we need to keep America free and prosperous. This is an energy issue and a national security issue. Found in one of our favorite sources, Whiskey and Gunpower (an investment newsletter) we discovered a good overview of Rare Earths and the current situation. Most of our posting from Whiskey and Gunpowder come from their Energy Editor Byron King, but this posting introduces a new writer: Doug Hornig.

### Why All the Fuss Over Rare Earths?

Rare earth elements (REEs) have been the mystery metals of the mining world for years. Now, suddenly, everyone's heard about them.

Before we delve into the reasons behind all the publicity, here's the basic skinny on REEs: One, they are rare, at least sort of. Two, they are indispensable to modern technology. Three, the number of active, dedicated producers is tiny, with more than 90% of the world's supply coming from China.

If you took high school chemistry, you probably remember the periodic table of the elements. But if you're like most of us, even if you pulled a 95 on the chem final, you may not recall many of the details today. And there's a better than even chance you never bothered to memorize the names of the REEs. It's time to get reacquainted.

They're generally clustered in a separate grouping at the bottom of the table, are known collectively as the lanthanoids, and these are their names, in order of atomic number (57-70): lanthanum, cerium, praseodymium, neodymium, promethium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, and ytterbium. Yttrium (39) and lutetium (71) are also sometimes included.

### Need to Know, Point 1: Rarity

Fact is, we begin with something of a misnomer. These elements are not, strictly speaking, rare. Earth's crust is full of them. True, they're not as common as iron, carbon, or silicon, but are about on a par with nickel, copper, and zinc. Even the scarcest is way more abundant than gold, platinum, or palladium.

What is rare about them is that they're widely dispersed. Very seldom are they found in economically exploitable deposits. Complicating matters further is that there are so many of them, and they clump together. They have to be separated first from the ore and then from each other.

Thus REE production comes primarily from other mines' byproducts. The miner strips off the metal he's really after, then sends the REE clusters to a specialty refiner.

### Need to Know, Point 2: Applications

It's safe to say that life as we know it would be very different without the REEs. The more our technological accomplishments pile atop one another, the more crucial these metals become. Because of their unique properties, there are generally no substitutes for them.

Of all the REEs, the one people may have heard of is neodymium. Alloys containing it have revolutionized permanent magnet technology, allowing miniaturization of all sorts of electronic components in appliances, A/V equipment, computers, communication systems, and military gear. Your hard drive probably has neodymium in it. So does your DVD player.

Liquid crystal displays depend on europium. Fiber-optic cables can't function without erbium. Virtually all specialty glass products, from mirrors to precision lenses, are polished with cerium oxide. Several REEs are essential constituents of both petroleum fluid cracking catalysts and auto emissions-control catalytic converters. Half a dozen REEs go into the manufacture of the energy-efficient fluorescent bulbs that will soon be mandatory. Lanthanum-nickel-hydride rechargeable batteries are replacing older ones based on lead or cadmium. And no REEs, no electric cars. Nor next-generation wind turbines.

That's only a partial list. But what makes REEs an increasingly sensitive topic is their role in national defense. Here are a few small items that have become dependent on them: jet fighter engines, missile guidance systems, underwater mine detectors, range finders, space-based satellite power plants, and military communications systems.

Think the Pentagon is very, very interested in maintaining a steady REE supply? →



➔ **Need to Know, Point 3: Supply**

95% of the world's REE production originates in China. If you're looking for reasons why we're so nice to the premier Communist power left standing, this is a biggie.

We weren't always so dependent. Not long ago, mines such as Mountain Pass in California made us nearly self-sufficient in REEs. But in the early '90s, China flooded the market with cheaper product, until it had driven all of its competitors out of business.

Today, Mountain Pass is being revived, but the start-up of an old mine is a lengthy and costly process. There are also some from-scratch REE development projects under way in the U.S., as well as Canada and Australia. But for the moment, China holds the hand with all of the high cards in it.

Forget your hard drive. Forget 11th-grade chemistry experiments. This is a national security issue. The American government cannot afford to lose that supply source, period. Maybe someday, but not now. And that's what's behind the recent furor over these obscure elements. Because China threatened just that, a cutoff. The one thing that really gets Washington's knickers in a twist. In August, the story broke in the mainstream press. Sources in China leaked news of a draft copy of a report from the Ministry of Industry and Information Technology. It allegedly calls for a total export ban on five of the rare earths, with the rest restricted to a combined export quota of 35,000 metric tons a year, far below annual global consumption of 125,000 tons, and rising fast.

This doesn't look like a move they'd follow through on, if only because of the lost trade revenues. And it's only a recommendation; final approval rests with China's State Council. But consider it an opening shot across our bow, if you wish. Or perhaps they're telling us they need their REEs for the domestic economy, and we'd best go find our own supplies. Either way, the scramble is on to find alternatives.

That could backfire. REE prices and demand were already dropping last fall as the recession deepened, and China maintains a decided competitive advantage beyond control of supply: lax environmental standards (many REEs are highly toxic). Thus the new companies could spend the fortunes required to come on line, only to find themselves victims of yet another market glut engineered by the

Chinese. Still, these metals are so important, it wouldn't surprise us if the U.S. government subsidized domestic production, rather than risk a squeeze.

**The Market**

The market took due notice of the China story, driving the stocks of Western REE producers, and would-be producers, nearly straight up. Since late August, Avalon Rare Metals has gained 120%, Arafura Resources is up 75%, Rare Element Resources has added 72%, and Lynas Corp. is 50% higher (China, ever the master strategist, exploited the credit crisis to grab 25% of Arafura and more than 50% of Lynas). Lurking in the background is Molycorp, the private company redeveloping Mountain Pass. It's planning an IPO that may well come out of the gate red hot.

With market action this frantic, the sector is on the frothy side at the moment. The heady market caps being awarded to these companies are obviously not based on fundamentals, and a savvy investor takes care not to get caught on the wrong side of a bubble.

Even though the Chinese export ban may never materialize, the ever-growing need for REEs is dead serious. And while the current bubble may pop any day, the long-term prospects for successful miners are outstanding. ▀

Doug Hornig--A former Edgar Award nominee, finalist for the Virginia Prize in both fiction and poetry, and a past winner of the Virginia Governor's Screenwriting competition, Doug Hornig lives on 30 mountainous acres in a county that just got its first stop light.

He is an admitted political junkie, but hates all political parties. Doug has authored 10 books and has written articles for BusinessWeek and other renowned publications. In addition he produces original analysis for Casey Research.

Posted by Citizens' Alliance  
for Responsible Energy at 10:09 AM

# WORLD FACES HI-TECH CRUNCH AS CHINA EYES BAN ON RARE METAL EXPORTS

BY AMBROSE EVANS-PRITCHARD / PUBLISHED: 5:58PM BST 24 AUG 2009

**Beijing is drawing up plans to prohibit or restrict exports of rare earth metals that are produced only in China and play a vital role in cutting edge technology, from hybrid cars and catalytic converters, to superconductors, and precision-guided weapons.**

China mines over 95pc of the world's rare earth minerals and is looking to hoard its resources.

A draft report by China's Ministry of Industry and Information Technology has called for a total ban on foreign shipments of terbium, dysprosium, yttrium, thulium, and lutetium. Other metals such as neodymium, europium, cerium, and lanthanum will be restricted to a combined export quota of 35,000 tonnes a year, far below global needs.

China mines over 95pc of the world's rare earth minerals, mostly in Inner Mongolia. The move to hoard reserves is the clearest sign to date that the global struggle for diminishing resources is shifting into a new phase. Countries may find it hard to obtain key materials at any price.

Alistair Stephens, from Australia's rare metals group Arafura, said his contacts in China had been shown a copy of the draft -- 'Rare Earths Industry Development Plan 2009-2015'. Any decision will be made by China's State Council.

"This isn't about the China holding the world to ransom. They are saying we need these resources to develop our own economy and achieve energy efficiency, so go find your own supplies", he said.

Mr Stephens said China had put global competitors out of business in the early 1990s by flooding the market, leading to the closure of the biggest US rare earth mine at Mountain Pass in California - now being revived by Molycorp Minerals.

New technologies have since increased the value and strategic importance of these metals, but it will take years

for fresh supply to come on stream from deposits in Australia, North America, and South Africa. The rare earth family are hard to find, and harder to extract.

Mr Stephens said Arafura's project in Western Australia produces terbium, which sells for \$800,000 a tonne. It is a key ingredient in low-energy light-bulbs. China needs all the terbium it produces as the country switches wholesale from tungsten bulbs to the latest low-wattage bulbs that cut power costs by 40pc.

No replacement has been found for neodymium that enhances the power of magnets at high heat and is crucial for hard-disk drives, wind turbines, and the electric motors of hybrid cars. Each Toyota Prius uses 25 pounds of rare earth elements. Cerium and lanthanum are used in catalytic converters for diesel engines. Europium is used in lasers.

Blackberries, iPods, mobile phones, plasma TVs, navigation systems, and air defence missiles all use a sprinkling of rare earth metals. They are used to filter viruses and bacteria from water, and cleaning up Sarin gas and VX nerve agents.

Arafura, Mountain Pass, and Lynas Corp in Australia, will be able to produce some 50,000 tonnes of rare earth metals by the mid-decade but that is not enough to meet surging world demand.

New uses are emerging all the time, and some promise quantum leaps in efficiency. The Tokyo Institute of Technology has made a breakthrough in superconductivity using rare earth metals that lower the friction on power lines and could slash electricity leakage.

The Japanese government has drawn up a "Strategy for Ensuring Stable Supplies of Rare Metals". It calls for 'stockpiling' and plans for "securing overseas resources". The West has yet to stir. •



SOURCE : WWW.METAL-PAGES.COM

## TOSHIBA, SUMITOMO PARTNER WITH KAZAKHSTAN ON RARE METALS AND RARE EARTHS

LONDON (Metal-Pages) 27-Oct-09. Japanese electronics manufacturer, Toshiba Corporation, and commodities major Sumitomo Corporation, have signed agreement with Kazatomprom, the Republic of Kazakhstan's state-owned uranium miner, to establish a joint venture to recover rare metals and rare earths.

Toshiba said the planned joint venture aims to effectively recover and use the by-products of Kazatomprom's uranium mining such as dysprosium, neodymium and rhenium.

The documents, signed on 22 October in Astana, at the 10th Joint Session of the Kazakh-Japanese and Japanese-Kazakh Committees for Economic Cooperation included the letter of intent between Kazatomprom and Toshiba regarding potential rare metals joint venture, a memorandum of understanding and a preparatory agreement with Sumitomo to advance the feasibility study for rare earth metals production.

The agreement between the major corporations follows the signing in April 2007 of an agreement between Japan and Kazakhstan to develop a strategic partnership in the field of nuclear energy. Toshiba and Kazatomprom have subsequently developed a complementary partnership, with Toshiba's participating in the Kharassan uranium mine development project in Kazakhstan, and Kazatomprom becoming an indirect minority shareholder in Toshiba's subsidiary, Westinghouse Electric Company LLC. In June last

year, Toshiba and Kazatomprom signed a memorandum of understanding on advancing studies of possible cooperation in rare metals related to nuclear energy, such as beryllium and tantalum. The two companies have now stated their intent to broaden their co-operation beyond the field of nuclear power.

Under the letter of intent signed last week, the two companies will now study setting up joint venture production of rare metals, including rare earths. According to Toshiba, the envisaged JV will take advantage of Kazatomprom's expertise in front-end business, such as mine development and creating concentrate, and Toshiba's prowess in manufacturing high value-added products.

"Demand for rare metals is increasing, as they are used in diverse energy-saving, environmentally friendly products, such as motors for electric vehicles and hybrid electric vehicles," said Toshiba Corp. "Alongside this development, assuring stable supply has become more important than ever." The partnership aims to achieve stable supply of rare metals for use in Toshiba's products, and to help lessen the environmental impact from exploitation of mineral resources, it added. Kazatomprom said the joint ventures will enable the company and its Japanese partners to launch industrial-scale manufacture of high-tech products based on rare-earth metals in Kazakhstan. •



SOURCE : WWW.METAL-PAGES.COM

## GADOLINIUM OXIDE PRICES CONTINUE TO RISE

BEIJING (Metal-Pages) 02-Nov-09. Prices for gadolinium oxide have been firming up in recent days, and some suppliers have been inclined to hold on to their stockpiles as they wait for much higher prices.

Market players told Metal-Pages today that suppliers have increased their offer prices for 99% gadolinium oxide to about Rmb 33,000/tonne (\$5,569/tonne) over the past few days, in comparison with prices in the range of Rmb 27,000-29,000/tonne (\$4,556-4,894/tonne) seen last week.

A Jiangxi-based consumer confirmed the price increase. "We purchased some rare earth oxide at Rmb 31,000/tonne (\$5,231/tonne) a few days ago, and suppliers are currently quoting Rmb 33,000/tonne (\$5,569/tonne) for the material," said an executive of the southern company.

The consumer, which is a downstream producer of rare earth metal, has in turn raised its prices for ferro-gadolinium (Gd 70%) to about Rmb 47,000/tonne (\$8,276/tonne) after duty and Rmb 43,000/tonne before duty, on the back of the rise in gadolinium oxide prices.

"Producers are currently offering Rmb 33,000-34,000/tonne (\$5,569-5,738/tonne) for the oxide, and some suppliers have been reluctant to sell the material, as they anticipate much higher prices in the days to come," said an official of a Jiangxi-based producer.

The producer sold some of its oxide at either side of Rmb 28,000/tonne (\$4,725/tonne) last week. "Recent demand appears to have warmed up," the company official added. •

■ SOURCE : [WWW.METAL-PAGES.COM](http://WWW.METAL-PAGES.COM)

## GADOLINIUM PRICES EXPECTED TO MOVE HIGHER

BEIJING (Metal-Pages) 28-Oct-09. Many Chinese rare earth producers have increased their offer prices for gadolinium oxide in past days as they anticipated much higher prices in the days to come.

Market players told Metal-Pages that suppliers are currently offering Rmb 30,000/tonne (\$5,063/tonne) for the 99% rare earth oxide, and it has become difficult to obtain the oxide at less than Rmb 28,000/tonne (\$4,725/tonne).

"Some suppliers are quoting Rmb 30,000/tonne (\$5,063/tonne) for the material, while some are not offering as they are bullish on the market in the near future," said a Jiangxi-based consumer.

The company executive said that prices of about Rmb 29,000/tonne (\$4,894/tonne) would be acceptable to some suppliers right now. "Little of the oxide has been available at less than Rmb 28,000/tonne (\$4,725/tonne) recently," he added, however.

"Most suppliers have increased their offer prices to Rmb 29,000-30,000/tonne (\$4,894-5,063/tonne) for gadolinium oxide, in comparison with prices of about Rmb 26,000/tonne (\$4,388/tonne) seen last week," said an official of a Guangdong-based buyer. "Some suppliers have been inclined to lift their prices higher in the days to come because of the strong praseodymium/neodymium market," he added. •

■ SOURCE : [WWW.METAL-PAGES.COM](http://WWW.METAL-PAGES.COM)

## CHINESE RARE EARTH EXPERT CALLS FOR IMMEDIATE STOCKPILING

BEIJING (Metal-Pages) 2-Nov-09. China should use its reserves of foreign currency to buy rare earths for stockpiling in a bid to protect strategic resources, said a senior Chinese researcher on rare earths.

"I hope the Chinese government can invest about \$ 1 billion to buy rare earths and thorium for stockpiling as China presently has sufficient reserves of foreign currencies and market prices for rare earths are comparatively low at this moment," said Mr. Xu Guangxian, professor at Peking University in an interview with the China Economy Times.

"We must set up a stockpiling system for rare earths and thorium and support leading domestic producers like Baogang, Minmetals and Jiangxi Copper to implement the stockpiling," Mr. Xu, also an academician at the Chinese Academy of Sciences said. He is regarded as the "Father of Rare Earths" in the industry in China.

China produces over 95% of the world's rare earth supply. However, there has been much criticism in China that the country's rare earths have been overproduced and undersold in the last decade.

"Japan and South Korea have built up stockpiles which are enough for 20 years of consumption by taking advantage of low market prices before 2008 when China began to restrict production but China hasn't set up a stockpiling system yet," Xu criticized.

"We must take action soon to protect rare earth reserves otherwise they could be exhausted in only ten years in some major producing regions," Xu warned. "There were around 1.5 million tonnes of industrial reserves of medium and heavy rare earths in southern China but now only 600,000 tonnes is there after years of overexploitation."

Besides production restrictions and a stockpiling system, Mr. Xu also called for industry integration to prevent waste of resources.

"China has around 70-80 producers for rare earth separation but there is only one in Europe. Most of them are very small and harmful because they cause unfair trade by undercutting each other when market prices fluctuate. So we must support major producers like Baogang, Minmetals and Jiangxi Copper to lead the integration," Xu said. •

SOURCE : [WWW.METAL-PAGES.COM](http://WWW.METAL-PAGES.COM)

## LANTHANUM HAS EDGE OVER LITHIUM FOR RECHARGEABLE BATTERIES IN HYBRIDS — ANALYST

NEW YORK (Metal-Pages) 30-Oct-09. Rechargeable batteries containing lanthanum hold greater near-term promise than those based on lithium-ion technology for large scale use in electric and hybrid vehicles, according to a high-profile rare earths and minor metals researcher and analyst.

US carmaker General Motors (GM) has said it plans to produce a hybrid electric vehicle based on a lithium-ion battery technology. But US-based rare earths analyst Jack Lifton says such technology is as yet "immature and untested" in large-scale rechargeable battery applications.

A number of car makers, including Toyota, Honda and Ford, already produce hybrid-electric vehicles that use nickel metal hydride (NiMH) rechargeable batteries. Demand has been growing at a rapid pace for such vehicles.

Rechargeable lithium-ion batteries in theory are twice as efficient as NiMH batteries and four times as efficient as conventional lead-acid batteries, according to Lifton, a rare earths researcher who is a member of the recently established Rare Earth Industry and Technology Association. Lithium-ion batteries have increasingly been used in smaller applications such as portable electronics since being introduced by Sony in 1992 as a substitute for nickel-cadmium batteries.

But research into lithium-ion batteries for vehicles hasn't progressed rapidly enough, Lifton indicates in information posted on his website. Toyota considered the technology for its vehicles and has said it will develop a limited number of lithium batteries for testing purposes. The automaker decided to continue using NiMH batteries for the time being, however.

Honda and Ford also are making vehicles using NiMH batteries, production of which requires significant amounts of lanthanum. Supply of this rare earth element is seen as problematic in the future—a factor that will constrict market growth for vehicles dependant on NiMH batteries unless significant new production comes on stream in the near future. In fact, there are ample indications from Lifton and market observers, that these three car makers have essentially tied up the available near-term supply of lanthanum.

"The main reason that GM has suddenly discovered lithium batteries is that there is no other technology available to them," says Lifton. As long ago as 2005 it was clear that GM would never be able to obtain enough rare earth elements to build cars using NiMH batteries, Lifton says.

On the other hand, if lithium technology for large-scale battery applications can be perfected, there would be no shortage of lithium, Lifton indicates.

"I believe that there may well be one day an economical, safe, durable, reliable, long-lived lithium-ion battery technology for vehicle power train direct electrification," Lifton says, but indicates that he does not see this happening any time soon.

The largest proportion of electrified small passenger vehicles over the next decade will continue to rely on NiMH batteries, which have already been proven, Lifton predicts.

China largely controls the world's supply of lanthanum at present, accounting for better than 95% of production. Meanwhile, Chile is the world's largest lithium producer, with accounting for more than 50% of current world output. •

■ SOURCE : [WWW.METAL-PAGES.COM](http://WWW.METAL-PAGES.COM)

## INDUSTRY CONSULTANTS JOIN USMMA TO ADVANCE DOMESTIC RARE EARTH ISSUES

LONDON (Metal-Pages) 30-Oct-09. The United States Magnet Materials Association (USMMA) announced Wednesday that three industry consultants - Jack Lifton, Stan Trout, and Tony Morcos - have joined the association as members of its newly-created advisory board to focus on rare earth materials and the rare earth magnet supply chain.

Jack Lifton of Jack Lifton, LLC is an independent consultant, focusing on the sourcing of nonferrous strategic metals, platinum group metal products, rare earth compounds, and ceramic specialties as well as locating and analysing new and recycled supplies of minor metals and the rare earth metals. Lifton has more than 45 years of experience in the global OEM automotive, heavy equipment, electrical and electronic, smelting and refining industries.

Stan Trout of Spontaneous Materials holds over 30 years experience in the permanent magnet and rare earth industries. He is a registered Professional Engineer, and has a B.S. in Physics from Lafayette College and an M.S. and Ph.D. in Metallurgy and Materials Science from the University of Pennsylvania.

Tony Morcos of ACM Magnetics is an expert in magnetic circuit design and analysis, with more than 25 years of both theoretical and hands-on experience in permanent magnet manufacturing and electric motor/electromagnetic device design and manufacturing. With specialties in high-performance permanent magnet motors, actuators and sensors for use in Military/Aerospace, Medical, Automotive, Power Tool, Appliance and Commercial/Industrial applications.

Under its remit, the USMMA's new advisory board will commit itself to the support of work by U.S. mining interests to identify and retrieve highly usable rare earth elements from reliable domestic and North American property holdings; to revive the ability of industry to convert rare earth elements into usable metal for domestic magnet manufacturing, and to advance the manufacturing efforts of U.S. magnet producers whose products are critical to renewable energy applications and national security systems.

The U.S. rare earth supply chain has been decimated by unfair trade practices of foreign competitors. Currently, China dominates the magnet materials industry and has successfully manipulated the rare earth metals market.

Worldwide demand for these materials is escalating rapidly, and over 95% of currently available rare earth mining occurs in China or is controlled by Chinese-led interests. Nevertheless, sizable deposits of the materials exist in the United States and Canada and are available for large scale mining operations.

Chinese rare earth export quotas and taxes have placed U.S. magnet manufacturing at a competitive disadvantage. This has led to an increase in Chinese manufacturing and driven Chinese firms up the value chain. No significant production of rare earth metals takes place today in North America or anywhere outside of China.

Experts worry that Chinese domestic demand for rare earth elements could easily equal the Chinese production capacity as early as 2012, further limiting material available in the United States. Additionally, China's Ministry of Industry and Information Technology is calling for a total ban on exports of some rare earth elements in the near future, cutting off the international community's access to vital materials.

The USMMA argues that the ability to domestically manufacture permanent magnets including rare earth magnets and supporting materials is vital to the nation's ability to innovate new technologies, create green jobs, and advance next generation national security systems. The USMMA is committed to providing a long-term reliable source of supply to the North American market.

The USMMA was founded in 2006 by magnet manufacturers Thomas & Skinner, Inc. of Indianapolis, Indiana; Hoosier Magnetics of Ogdensburg, New York; and Electron Energy Corporation of Landisville, Pennsylvania, to advocate on behalf of the specialty metals clause found at 10 U.S.C. 2533b. Thorium Energy, Inc, an American natural resources development company based in Salt Lake City and New York City, joined the organisation in September. ■



## RARE EARTH WEEKLY ROUNDUP

### --- PR-ND MOVE HIGHER IN THIN TRADE

BEIJING (Metal-Pages) 30-Oct-09. This week Chinese suppliers have been holding praseodymium/neodymium prices at higher levels, and market sources reported that some small parcels have been concluded at the high offer prices. However, many participants have been watching the market from the sidelines.

Prices for lanthanum and cerium oxides have been firming up over the past week, and much higher prices for rare earth carbonate have been visible. Elsewhere, lower prices for terbium oxide have disappeared in recent days, although domestic stockpiles have remained large.

Meanwhile outside China more investment in rare earth production is starting to take shape. US producer Molycorp Minerals, which is currently producing about 127,000 pounds of didymium and 300,000 pounds of lanthanum a month from stockpiled concentrate at the Mountain Pass mine in California, is aiming to boost interim production by 50% starting in January, CEO Mark Smith told Metal-Pages. It will also start making additional products.

Meanwhile in Kazakhstan, Japanese electronics manufacturer, Toshiba, and commodities major Sumitomo, this month signed agreements with state-owned uranium miner Kazatomprom, on a potential joint venture to recover rare metals and rare earths, such as dysprosium and neodymium, which are by-products of uranium mining. The Japanese partners are also hoping to recover rare metals such as tantalum, beryllium and rhenium, all present in Kazakhstan's rich polymetallic ores.

#### PRASEODYMIUM/NEODYMIUM

Many Chinese suppliers have significantly hiked their offer prices for praseodymium/neodymium metal this week.

Higher offers of Rmb 148,000/tonne (\$26,591-27,141/tonne) for 99% praseodymium/neodymium metal have been heard in the market recently. Supplier sources reported that some small transactions have taken at Rmb 142,000-145,000/tonne (\$26,050-26,591/tonne) over the past few days.

Some small business has also taken place for 99% praseodymium/neodymium oxide at either side of Rmb 105,000/tonne (\$17,715/tonne), although lower prices at about Rmb 100,000/tonne (\$16,871/tonne) were also still visible in the market this week. However, some suppliers have raised their quoted prices to about Rmb 110,000/tonne (\$18,565/tonne).

#### NEODYMIUM

Prices for neodymium oxide and metal have continued to rise

this week, on the back of the firm market prices for praseodymium/neodymium.

Some domestic suppliers have raised offer prices for 99% neodymium metal to as high as Rmb 165,000/tonne (\$27,846/tonne) in the last few days, and many producers have hiked prices to either side of Rmb 155,000/tonne (\$26,159/tonne) recently.

Prices for 99% neodymium oxide have moved up to about Rmb 115,000/tonne (\$19,408/tonne) in recent days. "Suppliers would not like to sell the oxide even at Rmb 110,000/tonne (\$18,564/tonne) at present," said a Jiangsu-based buyer.

#### GADOLINIUM

Many producers raised their offer prices for gadolinium oxide in recent days in anticipation of much higher prices in the days to come. Suppliers are currently offering Rmb 30,000/tonne (\$5,063/tonne) for the 99% rare earth oxide, and it has become difficult to obtain the oxide at less than Rmb 28,000/tonne (\$4,725/tonne).

#### DYSPROSIUM

Chinese prices for ferro-dysprosium have moved further up over the past few days, on the back of the recent increase in dysprosium oxide prices.

Prices for ferro-dysprosium ( Dy 80%) are now holding at about Rmb 630/kg (\$111/kg), in comparison with prices of around Rmb 610/kg (\$107/kg) seen one week ago.

Meanwhile prices for 99% dysprosium oxide has been trading in the range of Rmb 595-600/kg (\$109-110/kg) in recent days, and higher prices of Rmb 605-610/kg (\$111-112/kg) for the rare earth oxide have also been reported in the market.

#### CERIUM

Suppliers have raised prices for cerium oxide further in recent days, although some rare earth oxide has remained available at relatively low prices.

Transactions for 99% cerium oxide have been concluded at about Rmb 17,500/tonne (\$2,953/tonne) in the last few days, and some parcels of 99.9% cerium oxide have traded at about Rmb 18,000/tonne (\$3,037/tonne).

#### TERBIUM

Prices for terbium oxide have been steady at relatively low levels over the past months. However, market sources reported that the lower prices for the rare earth oxide are no longer to be visible the market.

➔ It has been difficult to get 99.9% terbium oxide at less than Rmb 1,800/kg (\$330/kg) during the past days, whereas in the previous weeks many suppliers had been inclined to accept prices at either side of Rmb 1,700/kg (\$312/kg).

However, many market players predicted that terbium oxide prices might not be able to rise sharply in the near future, due to large stocks in the domestic market combined with the relatively limited consumer buying.

#### **YTTRIUM**

The yttrium oxide market is still in the doldrums, as there have been few interested buyers for the rare earth oxide, while suppliers have been reluctant to cut prices further to secure business.

Prices for 5N yttrium oxide have been holding at Rmb 40,000-42,000/tonne (\$7,338-7,704/tonne). However both higher prices of Rmb 43,000-44,000/tonne (\$7,888-8,071/tonne) and lower prices of Rmb 38,000-39,000/tonne (\$6,971-7,154/tonne) have been also visible in the market recently.

#### **RARE EARTH CARBONATE**

Prices for rare earth carbonate in northern China have seen a sharp increase over the past couple of days, and some consumers complain that they have been unable to obtain the carbonate even at higher prices.

Market players reported that prices of about Rmb 10,500/tonne (\$1,771/tonne) for carbonate with about 15% neodymium content have become unobtainable during the past few days, while in the later part of last week prices were still holding at Rmb 9,700-9,800/tonne (\$1,637-1,653/tonne).

"Prices of about Rmb 10,800/tonne (\$1,822/tonne) have been achievable for some carbonate recently, while some suppliers have been reluctant to sell even at this pricing level as they anticipate much higher prices in the days to come," said an official of a Baotou-based consumer.

Some market sources also reported that supply of rare earth carbonate has become so tight recently that many consumers have been unable to get the material. ▀

■ SOURCE : [WWW.METAL-PAGES.COM](http://WWW.METAL-PAGES.COM)

## US ECONOMY GROWS 3.5% IN Q3

LONDON (Metal-Pages) 29-Oct-09. The US economy grew for the first time in a year between July and September, according to the US Department of Commerce, with the government's fiscal stimulus said to have played a crucial role in turning the economy around.

Gross domestic product (GDP) increased at an annual rate of 3.5% in the third quarter compared with a year ago, according to the advance estimate released today by the department's Bureau of Economic Analysis (BEA). This compares with a 0.7% drop in GDP in the second quarter.

The increase in real GDP in the third quarter, which came despite an increase in imports in the same period, primarily reflected positive contributions from personal consumption expenditures (PCE), exports, private inventory investment, federal government spending, and residential fixed investment. There are still questions as to whether this is a genuine end to the recession, or whether the economic trend has been distorted by the government's \$787 billion stimulus package, and there's more trouble ahead.

Notably, output of motor vehicles contributed 1.66 percentage points to the third-quarter change in real GDP after

adding 0.19 percentage point to the second-quarter change, as US motorists took advantage of the state-aided scheme to swap old cars for new.

Real personal consumption expenditures increased 3.4% in the third quarter, in contrast to a decrease of 0.9% in the second. Durable goods were up 22.3% versus 5.6% drop in the second quarter. The third-quarter increase largely reflected motor vehicle purchases under the Consumer Assistance to Recycle and Save Act of 2009, the so-called "Cash for Clunkers" US car scrappage scheme.

The US real exports of goods and services increased 14.7% in the third quarter, in contrast to a decrease of 4.1% drop in the second. However real imports of goods and services also increased 16.4%, reversing a 14.7% decline in the second quarter.

The third quarter US economic growth was in line with analysts' expectation, according to a Bloomberg poll, however the BEA emphasized that the advance estimate released today is based on incomplete or potentially to-be-revised source data, and the second estimate for the third quarter, based on more complete data, will be released on 24 November. ▀

SOURCE : WWW.METAL-PAGES.COM

## HIGHER OFFER PRICES FOR LA/CE CHLORIDE

BEIJING (Metal-Pages) 29-Oct-09. Some Chinese suppliers have increased their offer prices for lanthanum/ cerium chloride in the recent days, although sources reported that little real business has been reported.

Market players told Metal-Pages that quotations of about Rmb 7,000/tonne (\$1,181/tonne) for lanthanum/ cerium chloride (La 35%, Ce 65%) have been visible in the recent market, in comparison with prices of about Rmb 5,400-5,500/tonne (\$911-928/tonne) seen over past weeks.

A Baotou-based producer confirmed the rise in the prices. "We are currently quoting Rmb 7,000/tonne (\$1,181/tonne) for the chloride, up from close to Rmb 6,000/tonne (\$1,012/tonne) seen during past weeks," said an executive of the northern producer.

The executive also admitted that it has done little real business at the quoted prices up till now. "Demand from downstream buyers has remained relatively steady although some suppliers claimed having received more enquiries for the material," said the source.

However, another Baotou-based supplier told Metal-Pages that it has been holding the price at Rmb 5,600-5,700/tonne (\$945-962/tonne), little changed in past few days.

Market participants suggested that the recent rise in prices for the oxides of lanthanum and cerium have encouraged more producers to process lanthanum/ cerium chloride further into lanthanum and cerium oxides, which has to some extent reduced supplies of the chloride and supported the market prices somewhat. •

SOURCE : WWW.METAL-PAGES.COM

## RARE EARTH CARBONATE PRICES SURGE IN NORTHERN CHINA

BEIJING (Metal-Pages) 27-Oct-09. Prices for rare earth carbonate in northern China have seen a sharp increase over the past couple of days, and some consumers complain that they have been unable to obtain the carbonate even at higher prices.

Market players told Metal-Pages today that prices of about Rmb 10,500/tonne (\$1,771/tonne) for rare earth carbonate (about 15% neodymium content) has become unobtainable during the past few days, while in the later part of last week prices were still holding at Rmb 9,700-9,800/tonne (\$1,637-1,653/tonne).

A Baotou-based consumer confirmed the jump in prices. "It has become difficult to obtain the rare earth carbonate at Rmb 10,500/tonne (\$1,771/tonne) as suppliers have been expecting prices to head further north," said an executive of the northern consumer.

According to the source, prices for the carbonate had been holding at either side of Rmb 9,700/tonne (\$1,637/tonne) last week. "A significant increase of around Rmb 1,000/tonne for the material was seen in the past few days," said the executive.

"Prices of about Rmb 10,800/tonne (\$1,822/tonne) have been achievable for some carbonate recently, while some suppliers have been reluctant to sell even at this pricing level as they anticipate much higher prices in the days to come," said an official of another Baotou-based consumer.

Some other sources also admitted that supply for rare earth carbonate has become so tight recently that many consumers have been unable to get the material. •