

# China's stranglehold on tungsten

China's edge on the vital metal is a disadvantage for the U.S.

By [Myra P. Saefong](#)

**SAN FRANCISCO (MarketWatch) - Used in everything from light bulbs to bullets, tungsten is a metal that's all but monopolized by China, which produces about 85% of the world's supply -- leaving the U.S. at a handicap.**

Tungsten is actually "One of those seldom considered metals that contribute broadly to modern life," said Eric Coffin, editor of the HRA Journal and other publications focused on metals exploration, development and production stocks.

And "The need for new tungsten supplies has created a business opportunity for new suppliers," said Lawrence Roulston, editor of the investment newsletter Resource Opportunities.



Unfortunately, the U.S. does not mine tungsten, though it does have a few "Large plants that take tungsten concentrate and produce intermediate products and finished products from it," said Coffin. Some companies like lighting manufacturer OSRAM Sylvania have "long-term supply contracts that ensure at least some of the concentrate will keep showing up." But, "this doesn't guarantee supply per se."

Tungsten's used in light filaments and in the military to make armor-piercing bullets, but the biggest use is as cemented carbides, or "hardmetals," in industrial applications such as tools and dies.

The metal's extremely-high melting point also means that it's useful for things like drill bits, where hardness and ability to withstand high heat and friction are a must, said Coffin. That's particularly important given the growth in drilling in the oil and mining industries.

Tungsten's increasing uses and growing economic demand for the metal has helped prices climb more than 300% in almost 10 years to average \$254.50 per metric ton unit of ammonium paratungstate, as of Nov. 8, according to Maria Smirnova, a research associate at Sprott Asset Management Inc. Ammonium paratungstate, or APT, is a product of tungsten concentrates, according to the International Tungsten Industry Association.

Prices are up around 180% in just the last two years, said Smirnova, emphasizing that prices didn't really begin to rise until about 2005.

And China, "Has by far the largest resources base" in the world for tungsten," said Coffin. It's been the dominant supplier for decades and that's unlikely to change.

That bodes well for China, especially since global demand for the metal has been climbing at a pace of 5%-6% a year, "Thanks to industrialization and use of tungsten in a wider variety of products," according to Coffin.

Global mine production of tungsten in 2005 was estimated at 76,500 metric tons, according to the U.S. Geological Survey. China's mine production that year was estimated at 69,000.

The biggest problem is that China has become a "Net importer of ore and only exports finished goods containing tungsten," said Robert Hinchcliffe, chief executive officer at Elko, Nevada-based Galway Resources.

## China 's pull

China 's strength in the market has been more than apparent. The country has gone through periods in the past where it undertook - intentionally or otherwise - "Predatory pricing that wiped out almost all Western production of the metal," said Coffin.

Part of that was due to its drive for foreign currency when it first started opening up its economy, he said. And the last extended run up in tungsten prices happened in the late 1970s to early 1980s, "Following a terrible earthquake in one of China's main-producing areas that cut back supplies for years," he said.

Now tungsten is experiencing the same process the metals market has seen with other metals, he said. "The domestic (Chinese) market has increased a vast amount and is now absorbing most of the internal production."

"It no longer needs to sell at a loss or generate foreign reserves and ... has gone from offering exporters credits on sales of concentrate or APT to charging excise in the past couple of years," he said.

Indeed, "We have seen moves by the Chinese authorities to tighten what metals leave the economy," said Smirnova. At the start of this year, China cut its tungsten export quotas by 500 metric tons, and now it says it'll cut the quota by another 400 metric tons, she said, citing news reports. If it does that, the export quota will be 15,400 metric tons for 2007. The country produced 69,000 metric tons in 2005, according to the USGS.

Meanwhile, "After decades of depressed pricing, no one invested in finding or developing new tungsten mines," said Hinchcliffe.

And there are limited reserves of the metal left in China, he said. The Chinese only have 15 to 20 years of remaining tungsten ore reserves, Hinchcliffe said, citing a recent statement made by the head of the Chinese Tungsten Association.

Coffin expects the market to be, "Tight for a couple of years at least, and perhaps longer, especially if another area like India also starts consuming more."

So with "The continued growth in demand [and] no new projects coming online anytime soon, the outlook looks quite positive for tungsten," said Hinchcliffe.

## **Profit potential**

While tungsten's price was low, "Several small companies acquired tungsten deposits that were identified in the past, but had little value with the price down," according to Resource Opportunities' Roulston.

Now the higher metal price has made some of those projects economically viable, he said. But the "Higher tungsten price has not yet been reflected in the values of some of those companies."

It's important to note that "There is a long lead time to develop new tungsten mines - in the order of several years - meaning that the metal price is likely to stay high for a number of years," he said.

And since there is no market for investors to participate directly in tungsten metal, they can participate via companies involved in mining or developing new mines, he said.

One of the largest known deposits outside of China is being developed by Tiberon Minerals (CA; TBR) in Vietnam, said Roulston. "Tiberon is in the planning/financing stage and expects to start construction soon," according to HRA's Coffin.

Roulston said he toured a small "past-producing mine" earlier this year in Thailand, a country which used to be a major producer of tungsten, which came from small, very high-grade deposits. A small company called Amanta Resources (CA: AMH) "Is looking at it as a possible larger, lower-grade mine," he said. Roulston owns shares in Amanta, as well as Galway and Playfair Mining Ltd.

Meanwhile, Coffin called Vancouver-based Primary Metals Inc. (CA: PMI) "One of the few survivors of China's period of predatory pricing." It owns a 100% interest in the Panasqueira tungsten mine in Portugal. That mine, "Has been going for a hundred years and should have enough ore to go for a lot more," said Coffin, who owns shares in PMI and Playfair Mining.

"PMI has a very small float (about 15 million shares out) so it flies under the radar, but it has been very profitable and should continue to be so," he said. The stock is "Fairly cheap relative to the profits they can generate," he said, though it is not very liquid.

North American Tungsten (CA: NTC) owns the Cantung mine site in the Northwest Territories, which the company said is the Western world's largest tungsten supplier. It also owns the Mactung deposit which lies on the Yukon Territory and Northwest Territories border. Coffin said Mactung is the biggest undeveloped tungsten deposit in the West.

Playfair Mining (CA: PLY) has said it has four "advanced-stage" Canadian tungsten projects. "PLY probably has the best upside since they are just starting to get their story out," said Coffin.

Over in the U.S., Galway Resources has resumed work on the Indian Springs tungsten property in northeastern Nevada that was dropped in the early 1980s by Utah International (later acquired by BHP Billiton (BHP) because of low prices for the commodity, according to Hinchcliffe.

The new, increased pricing environment for tungsten will enable the company to move quickly into the scoping-study level for the property, likely by March 2007, he said. Other than that property, he said he believes there are no other "serious" tungsten projects in the U.S.

Permitting is a crucial issue at the Indian Springs property, but it's possible that if all goes well with the continued development of the project, Galway could begin mining the deposit in "Something like four years," said Hinchcliffe.

In the meantime, Coffin expects the APT price to "Exceed \$300 metric ton units in the next year, and maybe exceed \$350."

"Tungsten buyers won't be thrilled, but most of it goes into high margin products like specialty tools and there really are not any practical substitutes for many of its applications," he said.

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