U.S. Mining Reforms Are Crucial To Energy Security

By Jude Clemente, Published December 25, 2017

One quietly growing problem in the U.S. energy sphere is our rapidly growing reliance on foreign nations for commodities that are crucial to our economic growth and national security. Back in the mid-1950s, we were fully reliant on foreign sources for just 8 minerals. Today, that number has more than doubled to 20, most importantly including "rare earth" elements, manganese, and niobium. Our dependence on foreign minerals has doubled in the past 20 years. See this important USGS graphic **here** for exact numbers.

We have been spending $7-8 billion a year on these imported minerals, and costs are only going to go up. There are 17 rare earths and their price can boom 5- or 6-fold in a single year. For example, the price of lithium and cobalt – both essential for lithium ion batteries – continues to rise, **here**. Global lithium demand for electric cars, smart phones, and tablets, for instance, is expected to double or triple by 2020 alone, **here**. Not just for energy storage batteries, computer chips, and satellites, many of these minerals are critical to the required technological improvements for more wind turbines and solar panels.

That's why the Paris Agreement among 195 nations signed in December 2015 to cut CO2 emissions will surge the demand for these vital minerals, limiting our own environmental goals because of our increasing reliance on other nations for supply. For example, by 2040 BNEF projects that "54% of new car sales and 33% of the global car fleet will be electric," **here.** By then, there will be over 500 million electric cars on the roads, a staggering expansion of the few million out there today. Sone believe that lithium could become the new oil.

Both the USGS and CIA have been sounding the alarm on this excessive foreign dependence on these strategic commodities, **here** and **here.**

China, of course, realizes the increasing importance of these minerals, which is why they have been hoarding their own reserves, leading to trouble with the World Trade Organization, **here**. China's influence in the minerals sphere dwarves Saudi Arabia's influence on the global oil market.

China generally accounts for 80-90% of rare earth production (including almost all of the "heavy" rare earths). China still produces almost 8 times more rare earths by volume as does second place Australia.

We must buffer China's control over this increasingly important market. Simply put, it's been the our slowed mining regulatory regime that has led to our increasing reliance on foreign nations for vital commodities. Our companies need an overlapping approval from multiple federal and state agencies. Pushing investment elsewhere, the process in the U.S. can take 7-10 years, or five times longer than countries with comparable environmental standards such as Canada and Australia. "A typical mining project loses more than one-third of its value, as a result of bureaucratic delays in receiving the numerous permits needed to begin production," **here**.

Currently, the U.S. has just one active lithium mine, at Silver Peak in Nevada (it's actually the only one in

North America). And there are echoing calls to give mining companies greater access to mineral resources on public lands in the western U.S. The good news is that our mineral reserves are estimated to be at a whopping $6-7 trillion, **here**.

Started about a decade ago, the U.S. shale oil and gas revolution typifies how quickly we can increase our own self-sufficiency on vital commodities. There's no reason why we can't do the same with the minerals and rare earths that will not just allow us to enhance our own energy and national security but also our environmental security, leading us to a low-carbon future. The race to the future energy and technology world requires that we start to produce more of the domestic minerals that we have.

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