Only through a Secure Supply of EV Metals (Rare Earths) can a Hegemony Be.

written by Jack Lifton | May 26, 2021

It has been reported today that the Biden administration is looking to allied nations as primary sources of critical mined raw materials, and that it, the administration, will focus on supporting the domestic American processing of such imported ores into useful products focused on domestic production of EVs, their batteries, and components. This is an example of a complete disregard by the Biden administration for America's competitive advantage, safety, and, ironically, its economy to placate a loud anti-mining luddism that pervades the American left. It is in two words, hypocritical and stupid. It's hypocritical because it assumes that out-of-sight, out-of-mind, will placate the left's "greens" into thinking that pollution in Australia, Canada, or Brazil and its attendant costs doesn't exist. It's stupid, because it makes no economic sense. Transporting raw material concentrates to the USA for processing is rarely cheaper than mining and processing them domestically. In the case of cobalt, for example, its "ore" is mostly a byproduct of copper or nickel production, and there is no cobalt mine in the USA and there is only one facility in North America (Canada) capable of processing the ore concentrate into "battery grade" cobalt. In the case of the rare earths almost all ores are radioactive and thus have to be "cleaned" at licensed and specialized facilities. Only one such private facility exists today in the USA.

There is today no commercial rare earth separation, metal making, alloy making, or rare earth permanent magnet

manufacturing in the USA. The combined annual demand of the military and consumer industries in the USA for rare earth permanent magnets is between 10,000 and 15,000 tons per year. Never in American history has so much of any of these forms of rare earths been produced in a single year.

Yet Washington believes that the annual processing into fine chemicals and metallurgical forms of 170,000 tons each of lithium and cobalt (the amount required annually for 17 million BEVs if each has a 60 kWh battery [the smallest battery now offered by Tesla]) and of 50,000 tons per year of rare earth permanent magnets (the amount required by 17 million EVs annually if each uses one rare earth permanent magnet motor) could be accomplished by 2030.

The Biden administration's plan for sourcing critical materials for EVs is also an indication of the end of American dominated natural resource globalization and the acceptance of the fact that China has already constructed and is operating a global sourcing system for critical materials for China's domestic economy, which includes an emphasis on domestic Chinese processing of the ores of critical materials and a total domestic Chinese supply chain for the end-use products that depend on downstream forms of the critical materials for their operation and use both in the civilian and military markets. China today processes 60% of the world's lithium and 80% of the cobalt as well as 90% of the rare earths!

China has published its China2025 plan to become independent in 10 key technologies by 2025. Its globalization of secure sources of technology materials to ensure the success of China2025 is for all practical purposes already complete, as planned.

It is said that we live in the age of technology, and that we are all enjoying the fruits of applied science (aka,

technology), but we have to ask “What is the purpose of a technology, in human terms?” Is it the jobs and spin-offs from the manufacturing and distribution of high-tech, consumer-oriented, and quality-of-life-improvement -goods to the general population through the economies of miniaturization, which alone makes them economically available? Is it primarily for military uses? Is it for both, the civilian and military markets, needs, and satisfaction?

For the fifty years from the successful conclusion of the manned lunar landing program in 1969 until today the target of technology has been upon making economically available business and leisure travel (civilian jet passenger and freight airliners), making individual wireless mass communication, both audio and video, cheap and available, and making electrical energy universally available and affordable.

The last of these, the universality of cheap available electric power, is now the basis of our technological civilization!

Unquestionably it was military patronage of science and engineering from 1940 to 1970 that brought about the discovery of deposits, production, and processing of the technology metals that enable the miniaturization, and thus widespread consumer availability, in today’s society, of high-tech goods and services. But since President Nixon canceled the Space Shuttle Program in 1973 original research for product development in the USA has been the purview of private industry.

We are now at a turning point.

There are two directions to go for the need to have secure supplies of **technology enabling metals.**

One is to let the free market system as practiced in the USA make sure that items are always available through demand driven

supply. The USA maintains a (ridiculously) small supply of critical materials for the Defense Department in case of emergencies, and private industry balks at inventory costs.

The other is to formulate and act upon an industrial policy, with which the State mandates a supply agenda and sets production quotas for all companies involved in a particular technology enabling metal supply chain. The Chinese government maintains large stocks of technology enabling metals to smooth out both demand spikes and prices.

The United States' financial system, known as free market capitalism, operates as if profit is the sole purpose of the existence of any manufacturing or service enterprise. China has adopted a Capitalism with Chinese Characteristics in which the sole purpose of any Chinese venture is to do something which is good for China. Private enterprise is allowed, and individuals may accumulate enormous wealth if and only if this purpose, the good of China, is the goal.

A hegemon is the first among equals. Athens was the first to be known as a hegemon, followed by Alexander's Macedon, then Imperial Rome, and more recently, the British Empire, and the United States. In 1947 America had half of the world's gold, produced half of the world's steel, the most powerful military in history, and was embarking on an unparalleled era of technological brilliance.

There can only be one hegemon, by definition.

Globalization of the sourcing of critical materials with American characteristics (Neoliberal, free market, economics) can't work. It's too late.

To paraphrase the poet: This is how hegemony ends. Not with a bang but with a whimper.