

For lithium, party like its 1790

written by Jack Lifton | August 18, 2021

The demand for Green Energy Metals (GEMs) as processed fine chemicals and high purity metals and alloys, ready for use in both consumer and military goods, already exceeds their supply. A good example of this is Tesla's decision to put back its pickup truck introduction, originally scheduled for Fall 2021, until sometime in 2022 due to a "shortage" of the correct type of battery cells. This is explained as a shortage of processing capacity, but, in fact, is obscuring an even more important shortfall, that of the supply of mineral raw materials, such as those of lithium, cobalt, and the rare earths – the heavy rare earths.

One primary reason that the Soviet Union collapsed in 1991 was its central planning of industrial output with no other goal than increasing supply with the assumption that the demand was infinite. This was not socialism, fascism, or capitalism. It was stupidity in the form of the intellectual commandments of a self-appointed elite class of bureaucrats who knew what was good for the "masses." These Communist apparatchiks proved even more inept at understanding economics than their predecessors of the Tsar's bureaucracy.

China has now learned from the Soviet experience what not to do in managing a national economy. Its long-time mandarin class, still ruthlessly chosen on merit, has been retained and co-opted by the Chinese Communist Party, the CCP, to review the Party's long-term goals and recommend, get approval for, and carry out the steps required to achieve them, in five-year steps.

One brilliant achievement by the mandarin class has been the

construction of a mineral resource acquisition and conversion (to industrially useful forms) system sufficient to achieve the long-term technological infrastructure mandates of the CCP.

I think, for example, that the [EV revolution](#) has already been won by China through economic imperialism focused on the acquisition of intellectual and mineral resources necessary to transform China's domestic transportation sector into the sole use of electricity for its power trains.

Just one generation ago China had essentially no original domestic production of automobiles, trucks, railroad engines, cars, airplanes, or ocean-going ships, except for its military and even that was limited to copies of foreign designs in factories themselves copied from or supplied by friendly foreign powers, such as the then just recently collapsed Soviet Union.

The Soviet Union, like the United States, was a landlocked empire gifted with essentially all of both the fuel and non-fuel resources it needed until the end of World War II, which saw the dawn of the age of miniaturized electronic technology. China adopted internal self sufficiency as a national program in the 15th century, but lost that advantage in the 19th century to the great European seaborne empires that were seeking natural resources and markets globally to make up for deficiencies in both in their home markets.

China seems to have learned again how to become self-sufficient in both critical structural and critical technology mineral resources by adapting both its signature socialism and state-supported limited capitalism, which even China's Communist Party recognizes as Socialism/Capitalism with "Chinese characteristics." China is determined to recapture its 1790 position as the richest nation in the world.

With the long term planning that is very characteristic of

Chinese thinking applied as a modifier to market capitalism's prohibition of price manipulation by government, China has acquired ownership of and access to both fuel and non-fuel mineral resources globally while limiting the building of resource processing to only domestic operations to ensure that its long term program for domestic self-sufficiency in both fuel and non fuel mineral resources is achieved in five-year steps that are intended to make China not only self-sufficient but also the world's leading economic power by 2049.

From the perspective of the human race, the distribution of both fuel and non-fuel mineral deposits is random. It can be argued that beginning in antiquity one important driver for imperialism has been at heart a quest to secure sufficient supplies of those mineral resources for one nation state to meet its demand for those resources within its own political control. From earliest times desirable or necessary resources were sought out first by trade and then by military or (lately) economic conquest.

I've been reading the Magazine of Fantasy & Science Fiction since it began (originally) as the Magazine of Fantasy "and" Science Fiction in 1949. Full disclosure: in the summer of 1955 my friend's older brother went off to college and he gifted me with most of the Astounding, Galaxy, and F and SF magazines published since the end of World War II. I spent that summer reading them voraciously and have continued to do so ever since.

The latest announcement by the analytical data service, Benchmark Minerals' Intelligence, on lithium-ion battery cathode production in 2030, is something that I think should be in the Magazine of Fantasy & Science Fiction.

Benchmark tells us that their review of built and planned battery "giga factories" makes them predict a global total of

610 gigawatt hours of lithium-ion battery cathode production by 2030. This “prediction” is a projection that vitiates all of the EV transformation predictions except for the one within China.

To make 100 kWh batteries for one million vehicles, such as the Tesla Model 3s, would take 90 million gigawatt hours of batteries, which would require 16,000 tons of lithium measured as metal. To make the 5 million such vehicles mandated (required of it) by the Chinese OEM automotive industry for 2025 will require some 80,000 tons of lithium for the batteries. This would be equal to all of today’s annual production of lithium, globally. China today, in mid 2021, is well on its way to achieving that goal. It, today, already processes more than 60% of the world’s lithium mineral production into 82% of the world’s lithium-ion chemicals for battery cathodes, which is incorporated into its, today’s, 82% of world cathode production capacity!

China has made substantial investments, globally, in additional lithium production for its internal use. Many of these investments make no sense to Western capitalists because they do not seem to have profitability as their goal, but, rather, just supply increase. Western capitalism rejects this goal and calls it “discredited” state planning of supply. They are all wrong. The Chinese mandarin state is attempting to match future supply to future demand in China!

How much lithium will be processed in China in 2025? Enough to meet the EV production goal required by the current 5-year plan. How many lithium-ion batteries for vehicles will be produced in China in 2025? Enough to meet the production goal of the current 5-year plan.

These are the only predictions/projections that matter for EV battery demand in 2025.

Chinese money, externally, will continue to flow to the lithium exploration, early stage pilot production, and production sectors. Analysts will puzzle over China's strategy and bleat about nonsensical overpayment. They say the same about cobalt and puzzle over Chinese rare earths pricing.

But we know what they're doing.

Enjoy the Western GEMs rush while the Chinese are building their capacity for China 2025 and beyond(?).

Finally, I note that many Western economists are stating that the commodity markets are overpriced. Solely for Western demand they are, but not yet for Chinese demand.

1790 here we come.