The Missing Element in Critical Minerals Begins with the Letter "E"

written by Jack Lifton | April 28, 2025

Learning from experience requires the experience of learning. That statement is not a tautology it is a prescription.

The critical minerals our contemporary society needs for its desired lifestyle, standard of living, and quality of life have not changed in the last two generations. What has changed is the relative importance of particular technologies. And this has altered the demand picture for critical minerals and has in this way changed the distribution and ranking of the need for supplies of those critical minerals.

The societal redistribution of demand is the source of the commodity investment cycles of the age of personal technology in which we live. Unfortunately, the driver of the perceived supply pressures is primarily the overestimate of demand created by financial analysts who worship the mantra of "the technology of the moment can never change its structural minerals demand, and it can never stop growing in utilization until everyone in the world has one. And even then, manufactured devices have life cycles, and recycling is limited by economics, so that the demand for the critical minerals for the manufacturing of the technologies (of the moment) will continue forever.

Unfortunately, almost all of those less than 150 years old can only have learned of the material and financial limitations of the extraction and processing into useful forms of natural resources from the records of those efforts. The few among us who actually participate in the discovery, development, and utilization of natural resources and who are in a chain of legacy handover of learned experience are not asked to review the practicality of commodity boom cycles.

It is the short term production of money (not capital) that is the goal of the financializers who have crippled American manufacturing. The accumulation of personal wealth is their sole driver, not the robust production of affordable products.

The result now is that cars and cellphones if manufactured domestically and sold into the American market would be absurdly expensive and would be unaffordable entirely if not sustained by subsidies and tariffs.

The domestic production of the currently necessary critical minerals to ensure domestic security of sufficient supply is an economic challenge, not simply one of finding new discoveries of the critical minerals of the moment. The total supply chain of the necessary mineral user forms must be understood, economically as well as technologically, and the overall costs among the supply chain components must be understood, minimized, and distributed so that the final product is competitive in the marketplace without continuing subsidies or protective tariffs.

An American industrial policy can be and must be focused upon kick-starting total domestic supply chains for critical minerals and their end-user forms, and can certainly incorporate friendly shored raw materials, but permanent subsidies and tariffs are the machinery of economic foolhardiness and decline, not strength.