America Is Financing Critical Minerals Projects Without Rebuilding Industry

written by Jack Lifton | November 6, 2026

“A new factory without the knowledge, suppliers, customers, and economic incentives necessary to operate it is not industrial recovery. It is a capital expenditure.” — Jack Lifton, Co-Founder & Co-Chair, Critical Minerals Institute (CMI)

I have been involved in producing, processing, and marketing metals and materials for more than sixty years. During that time, I have watched the American industrial economy undergo a fundamental transformation, not simply in what it produces, but in how those who manage it think about production. The industrialists I encountered early in my career understood that manufacturing was a system of interdependent operations, each of which had to function efficiently and economically if the final product was to be competitive in the marketplace. Today’s corporate managers seem increasingly to regard manufacturing as a financial activity whose objective is to maximize the return on invested capital, preferably in the shortest possible time, rather than to create and maintain the industrial capabilities necessary to produce goods competitively over the long term. I believe that this change in thinking is one of the principal reasons for the decline of American manufacturing and, more importantly, for our apparent inability to restore it.

The great American industrial enterprises of the twentieth century were built by men who understood that a manufactured product resulted from a sequence of physical, chemical, mechanical, and commercial operations. The automobile industry is perhaps the best example. Henry Ford did not simply design an

automobile and then ask financial markets to determine how to source its components. He understood that reliable automobile production required steel, glass, rubber, electrical equipment, machine tools, skilled labor, transportation, and energy, all coordinated in a system designed to continuously produce a finished product at a price the customer could afford. Ford's River Rouge complex was an extraordinary demonstration of this holistic approach to industrial organization. It was not simply an automobile assembly plant. It was an integrated industrial system designed to control the availability, quality, cost, and timing of the materials and components necessary for automobile production.

I am not suggesting that every manufacturer should return to the vertical integration practiced by Ford Motor Company (NYSE: F) or General Motors (NYSE: GM) in the mid-20th century. Global specialization, when properly managed, can improve efficiency and reduce costs. But specialization becomes a vulnerability when a manufacturer loses the knowledge needed to understand the operations it depends on. The adoption of just-in-time inventory management, combined with the progressive outsourcing of manufacturing operations, was justified as a way to reduce working capital and improve financial performance. In many cases, it accomplished precisely that. What it also did, however, was shift responsibility for essential industrial capabilities to suppliers whose financial circumstances, technological limitations, and geographic locations were increasingly outside the original equipment manufacturer's control. Financial statements improved, but the industrial system's resilience often deteriorated.

A fundamental difference exists between managing production costs and managing the financial appearance of a manufacturing enterprise. The former requires an understanding of engineering, metallurgy, chemistry, logistics, energy, labor, and the markets

for both raw materials and finished products. The latter can be accomplished by manipulating inventories, outsourcing costs, restructuring debt, repurchasing shares, and altering the composition of the corporate balance sheet. I do not deny that financial management is essential to industrial success. Capital is as necessary to manufacturing as energy and raw materials. But capital is a means to an industrial end, not the end itself. When corporate management compensation is determined principally by short-term financial performance and the market value of shares, it should surprise no one that management increasingly focuses on financial results rather than the long-term maintenance of industrial capability.

I believe that this change has been reinforced by a corresponding change in the education of those who manage American industry. Our business schools have produced generations of highly trained financial analysts, investment bankers, consultants, and corporate managers who are exceptionally proficient at evaluating financial performance. But where are the managers who understand how an ore body becomes a refined metal, how that metal becomes an alloy, how the alloy becomes a component, and how that component becomes part of a manufactured product that must meet the customer’s specifications at a competitive price? Where are the managers who understand that the failure of a single chemical processing operation can make an otherwise impressive multibillion-dollar manufacturing investment economically useless? I am not suggesting that engineering education has disappeared. I am asking why engineering knowledge and industrial experience seem subordinate to financial modeling in the decisions that determine America’s industrial future.

The critical minerals industry, in which I have spent much of my professional life, provides an almost perfect illustration of the consequences. The United States is now committing

substantial public and private capital to develop domestic supplies of rare earths and other critical materials. We are financing mines, separation plants, metal-making facilities, alloy production, and permanent magnet manufacturing. These investments are often described as creating domestic supply chains, but I question how many of the people making the investment decisions understand the full chain of operations required to produce a commercially qualified permanent magnet. A mineral deposit is not a supply chain. A separation plant is not a supply chain. A metal-making facility is not a supply chain. Even a magnet factory is not a supply chain unless it has reliable access to qualified raw materials and customers willing to purchase its products at prices that sustain the entire system.

Consider producing a rare earth permanent magnet. The process begins with a mineral resource whose composition, mineralogy, and recoverability must be established. Mining and beneficiation must produce a suitable feedstock for chemical processing. The rare earths must then be extracted, separated, and purified to specifications determined by the subsequent metallurgical operations. The separated compounds must be converted into metals, the metals into alloys, and the alloys into magnets whose magnetic properties, mechanical characteristics, dimensional tolerances, and long-term reliability meet the ultimate customer’s requirements. At every stage there are losses, costs, technical limitations, capital requirements, and qualification procedures. You cannot understand the economics of the finished magnet by examining any one of these operations in isolation. Yet that is precisely how many proposed industrial projects are presented to investors and, I fear, to the government agencies being asked to finance them.

The most serious error is to start with a mineral deposit and assume that the existence of a valuable resource justifies

building a processing industry. Industrial planning must begin at the other end of the supply chain, with the requirements of the manufacturer who will use the finished material. What does the customer need? In what quantities? At what specifications? At what price? Under what delivery and qualification conditions? Only after answering these questions can the industrial planner work backward through the manufacturing system to determine the necessary processing technologies, capacities, raw material requirements, and capital investments. This is not a new concept. It is how successful industrial enterprises have always been built. What seems new is the extent to which this elementary principle has been displaced by promoting projects whose principal attraction is their ability to raise capital.

I have become increasingly concerned that the federal government is reproducing the same mistakes on a national scale. Washington has correctly identified the vulnerability created by America's dependence on foreign sources of critical materials and manufactured components. But recognizing a problem is not the same as understanding how to solve it. Government agencies appear to evaluate industrial proposals largely through financial projections, announced capacities, employment promises, and claims of strategic importance. These are not irrelevant considerations, but none establishes whether a proposed facility can actually operate as part of a complete, commercially sustainable manufacturing system. A government can finance a mine, a refinery, or a factory. It cannot, by appropriating money alone, create the technical knowledge, operational experience, supplier relationships, customer qualifications, and industrial discipline needed to make those facilities successful.

I would like to know who is advising the federal government on the industrial realities of its critical minerals strategy. Are these advisers people who have actually built and operated

chemical separation plants, metallurgical facilities, alloy production lines, and manufacturing operations? Have they purchased industrial raw materials in competitive markets, dealt with production failures, qualified products for demanding customers, and learned firsthand the difference between installed capacity and saleable production? Or are they principally financial analysts, academic specialists, consultants, and corporate executives whose experience is in raising capital, evaluating projects, or administering public funds? Each of these professions has something useful to contribute, but none substitutes for the practical experience of people who understand how an entire industrial supply chain functions.

The problem is not that America lacks such people. We do not seem to know how to find them, recognize their value, or bring them into the decision-making process. Across the country, retired and active engineers, metallurgists, chemists, production managers, purchasing specialists, toolmakers, and industrial entrepreneurs have spent their working lives solving manufacturing problems. Many have knowledge you can’t get from textbooks, consulting reports, or financial models. They understand the consequences of impurities in a feedstock, the difficulty of scaling a chemical process from the laboratory to continuous production, the importance of equipment reliability, and the time required to qualify a new supplier. Most importantly, they understand that the failure of one essential operation can prevent the entire manufacturing system from functioning, regardless of how much capital has been invested elsewhere.

I am not proposing that the government establish another advisory committee populated by representatives of companies seeking subsidies or by academics whose research depends on government funding. Nor am I suggesting that financial

professionals should be excluded from industrial planning. I am proposing that the United States establish an independent industrial capability advisory function, staffed principally by people with demonstrated experience in the actual production of materials and manufactured goods. Select its members for what they have accomplished industrially, not for the size of the companies they have managed, the amount of capital they have raised, or the prominence of their institutional affiliations. Their responsibility should be to examine proposed industrial investments as parts of complete manufacturing systems and to determine whether the necessary technical, commercial, and logistical relationships exist or can realistically be created.

Such an advisory function should be required to answer questions that are too often absent from government investment announcements. Where will the raw materials come from, and are their specifications suitable for the proposed process? Has the technology been demonstrated at the scale and operating conditions required for commercial production? Are the necessary skilled workers, equipment, energy supplies, and chemical reagents available? Who will purchase the output, and has that purchaser qualified the product? What happens to the economics of the project if one upstream supplier fails or one downstream customer refuses qualification? Most importantly, will the completed industrial system be capable of producing goods at a cost that permits it to survive without indefinite government financial support? These are industrial questions, not merely financial ones, and they require industrial answers.

I would go further. Before committing public funds to reconstructing a strategic manufacturing industry, the government should require an independent assessment of the entire supply chain, beginning with the finished product and working backward to the natural resources and industrial inputs required to produce it. This assessment should identify not only

missing production capacity but also missing technical capabilities, workforce skills, qualification procedures, and supplier relationships. It should distinguish between technologies that have been commercially demonstrated and those that remain experimental. It should identify the critical operations whose failure would prevent the entire system from achieving commercial production. Above all, it should establish whether the proposed investments form a coherent industrial strategy or merely a collection of individually financed projects.

An important distinction also exists between creating industrial capacity and restoring industrial capability. America once had extensive capabilities in producing magnesium metal, specialty alloys, industrial chemicals, machine tools, and a wide range of metallurgical products now imported. These industries disappeared not necessarily because of a shortage of natural resources or scientific knowledge. It often resulted from economic decisions that made foreign sourcing more attractive than domestic production. Restoring these industries therefore requires more than financing new plants. It requires understanding why the original capabilities disappeared, what industrial knowledge has been lost, and what economic conditions must exist for domestic production to become sustainable again. A new factory without the knowledge, suppliers, customers, and economic incentives necessary to operate it is not industrial recovery. It is a capital expenditure.

I recognize that outstanding industrial managers still exist in the United States and that many American companies continue to demonstrate extraordinary technical and manufacturing competence. My criticism is not directed at every corporate executive or every business school. It targets a system of incentives and decision-making that increasingly rewards financial transactions more immediately and generously than the

patient development of productive industrial capability. A society that rewards the rearrangement of ownership more than the creation of competitive manufacturing capacity should not be surprised when its most ambitious people gravitate toward finance rather than production. Nor should it be surprised when the financial markets become more proficient at valuing the promise of industrial production than the industrial economy is at delivering it.

The United States does not need another generation of industrial announcements unsupported by operating realities. It needs to recover the habit of thinking about manufacturing as an integrated system in which technology, materials, energy, labor, logistics, capital, and customers must all function together. It needs to restore the authority of practical industrial knowledge in corporate management, financial investment, and public policy. And it needs to understand that the objective of industrial policy is not to finance industrial projects but to create industries capable of producing commercially competitive goods.

My appeal to Washington is simple. Before spending additional billions of dollars in the name of industrial independence, find the people who understand how industry actually works. Find those who have built and operated the facilities, solved production problems, managed suppliers, and satisfied customers. Ask them to examine the entire supply chain, not merely the financial attractiveness of its individual components. Give them an independent voice in determining whether public investments are technically and commercially justified, and ensure their judgments are not subordinated to the interests of those seeking the funding.

America’s industrial future will not be secured by financial engineering alone. People who understand the engineering,

economics, and organization of production as a whole will secure it. We have spent decades learning how to finance industry while progressively losing the ability to make many of the things industry requires. It is time to reverse that process.

We must stop asking only whether an industrial project can be financed and start asking whether an industrial system can actually produce.