No EV Boom, No Rare Earth Magnet Boom: The Demand Reality Facing Critical Minerals for the U.S. Market

written by Jack Lifton | February 17, 2026

The recent *Wall Street Journal* report on the Detroit automakers' $50 billion reckoning over electric vehicles reads as though the story begins and ends with balance sheets. It does not. It begins in the mines and ends in the magnet factories.

The Journal chronicles the retreat of **General Motors Company (NYSE: GM)**, **Ford Motor Company (NYSE: F)**, and **Stellantis** from the mandated EV boom. It notes that U.S. EV sales fell more than 30% in the fourth quarter after the expiration of the $7,500 federal tax credit. It tallies the write-downs. What it does not mention is the immediate and profound consequence for the American critical minerals industry.

Let me state it plainly: if there is no mandated surge in EV production, there will be no surge in demand for rare earth permanent magnet motors. And if there is no surge in magnet motor production, then the demand for the heavy rare earths dysprosium and terbium collapses in tandem.

These two elements are not decorative additives. Dysprosium and terbium are used to allow neodymium-iron-boron magnets to operate at high temperatures—precisely the requirement of traction motors in electric vehicles and large wind turbines. Remove the exponential growth assumption in EVs and wind, and you remove the principal growth driver for heavy rare earth demand in the United States.

Wind turbine demand is also softening domestically. Thus, the two pillars upon which American projections for rare earth magnet growth were constructed—EVs and wind—are both weakening simultaneously.

Yet we have announced plans to build roughly 40,000 tons per year of rare earth permanent magnet capacity in the United States.

Forty thousand tons.

Against what demand?

Even with optimistic assumptions, the American EV market over the coming decade is unlikely to exceed 10% of total U.S. light-vehicle sales. Under such a scenario, total annual domestic demand for dysprosium and terbium for automotive traction motors would struggle to exceed 50 tons combined. For the light rare earths—primarily neodymium and praseodymium—the total demand for magnet production serving both internal combustion accessory motors and EV traction motors would likely aggregate around 15,000 tons per year. Of that, roughly 5,000 tons would represent contained neodymium and praseodymium metals.

The remainder is commodity magnet material, currently selling into a China-dominated global market at approximately $50 per kilogram.

This is not a market that tolerates high cost structures. In a free-market economy, the business to supply 5,000 tons of neodymium-praseodymium and 50 tons of dysprosium-terbium will go to the lowest-cost producer. It always has. It always will.

The United States military’s demand for rare earth permanent magnet motors is classified, but the Department of War has given us a clue. It has financed a magnet facility in South Carolina

with capacity under 2,000 tons per year. That figure suggests the true defense requirement is modest—measured, not monumental.

Yet federal agencies have underwritten substantial expansions of magnet and materials capacity, often taking equity stakes in companies that have no history of commercial production. These commitments were justified on the premise of a burgeoning domestic EV market. That premise is now visibly impaired.

One can understand why OEM automotive manufacturers invested aggressively in batteries and motors when regulatory mandates and subsidies signaled inevitability. What is harder to understand is why federal agencies guaranteed floor prices and extended capital to projects disconnected from demonstrable, durable demand—beyond the limited needs of defense procurement.

Meanwhile, the domestic battery build-out is retrenching. OEM demand for lithium, cobalt, nickel, and manganese is uncertain at best. Billions in previously announced EV and battery investments have already been cancelled. Plants designed for EV motors are pivoting back to V-8 engines.

This is not ideology; it is arithmetic.

A sharp reduction in projected U.S. EV penetration implies a commensurate reduction in domestic demand for rare earth permanent magnets and their constituent materials. The mining and refining sector will not be insulated from this recalibration. Projects justified on growth curves that no longer exist will face the discipline of markets.

There will be a Darwinian cull.

Only the lowest-cost, most technically competent, and financially disciplined producers will survive. That is not pessimism; it is the operating principle of every manufacturing

and supply industry in history.

The end of the mandated EV boom is not merely an automotive story. It is a minerals story, a magnet story, and a capital allocation story. And it is one that the mining industry would do well to read—carefully.