CAPABILITY BRIEF · 2026

Restoring U.S. permanent magnet sovereignty

Advanced Magnet Lab — designed-for-purpose magnets, made in America

WHY THIS MATTERS

Defense systems, EVs, and wind turbines depend on permanent magnets that the U.S. cannot reliably produce.

China
dominates global permanent magnet production

Dy + Tb
two heavy rare earths gate magnet performance

Limited
U.S. capacity for permanent magnet manufacturing at scale

WHAT AML DOES

AML engineers permanent magnets for the application — using less critical materials, made domestically.

1. **Designed for the mission**
   Shape, size, and magnetization optimized per application — manufacturing process is continuous, adaptable, scalable, and high-rate.
2. **Multiple magnet grades & types**
   NdFeB, SmFeN, MnBi, and (Mischmetal-Nd)FeB — smart magnet design expands magnet material options, reducing heavy rare earth dependence.
3. **Made in the U.S.A.**
   Domestic and allied supply chains. Mine-to-Magnet traceability. No China dependence.

PM-360 ™ - Single-Piece Halbach Array

Curved & flexible-shape magnets

THE PATH FORWARD — PHASED CAPACITY RAMP

Project MITUS — "Magnets In The U.S." scaling from 220 MTPA today to 10,000 MTPA by Phase IV.

Magnet Manufacturing	Phase I	Phase II	Phase III	Phase IV
Timing	**Current**	2026 – 2027	2028	Post 2028
Sintered	**20 MTPA**	+ 200 MTPA	+ 1,000 MTPA	+ 5,000 MTPA
Non-sintered	**200 MTPA**	+ 1,800 MTPA	+ 3,000 MTPA	+ 5,000 MTPA

MTPA = metric tonnes per annum. Phase I represents existing footprint across two facilities; subsequent phases add new domestic capacity.

TRACK RECORD

U.S. Department of Energy
Multiple prior programs for electrical machines and magnets.

U.S. Department of War
DIU pilot manufacturing line; DLA sintered magnet manufacturing (2020–present).

Industry partners
U.S. rare earth miners, magnet recyclers, and global magnet material partners.

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