U.S. Mined and Processed Rare Earths Successfully Manufactured into Permanent Magnets for Use in EVs and Hybrids

written by Raj Shah | September 9, 2025

U.S.-based Energy Fuels receives final confirmation from leading global automotive supplier that its high-purity NdPr oxide, mined in Florida and Georgia and processed in Utah, has been qualified for use in rare earth permanent magnets (REPMs) for drive unit motors used in electric vehicles (EVs) and hybrid EVs.

September 9, 2025 (Source) – Energy Fuels Inc. (NYSE American: UUUU) (TSX: EFR), a leading U.S. producer of uranium, rare earth elements and other critical minerals, today announced that high-purity neodymium-praseodymium (NdPr) oxide produced at its White Mesa Mill in Utah has been manufactured into commercial scale REPMs by South Korea's largest manufacturer of drive unit motor cores, pursuant to a previously announced MOU, and has passed all quality assurance and quality control (QA/QC) benchmarks for use in EV drive unit motors sold to major automotive manufacturers. This included the successful manufacture of Energy Fuels' NdPr oxide into NdPr metal, neodymium-iron-boron (NdFeB) alloy sintered blocks (45H grade), and high-performance, high-temperature NdFeB REPMs.

NdFeB alloy sintered blocks (45H grade) using Energy Fuels' NdPr oxide; Sintered blocks are REPMs prior to milling and magnetization (CNW Group/Energy Fuels Inc.)

The successful production of REPMs from Energy Fuels' NdPr oxide marks a decisive breakthrough in building a "mine-to-magnet" supply chain independent of China, using rare earth oxides (REOs) produced in the United States. Energy Fuels' NdPr oxide has now been qualified for use in high temperature drive units, which are installed in EV and hybrid vehicles manufactured by major automotive companies across North America, the EU, Japan, and Korea. Drive units powered by Energy Fuels' NdPr oxide are expected to be installed in new vehicles and be available in the marketplace within the next few months. Now that Energy Fuels' NdPr has been validated, the parties now intend to engage in negotiations for a potential longer-term supply arrangement.

"We are excited to announce that rare earth oxides mined, processed and produced in America are expected to be powering EVs and hybrids for sale around the world very soon, representing a major achievement in restoring domestic critical mineral supply chains" said Mark S. Chalmers, CEO of Energy

Fuels. “Commercial validation of our rare earth oxides at scale is a significant triumph for Energy Fuels, proving we have the capacity and expertise to produce rare earth materials that meet both commercial and defense requirements, at scale and to appropriate purity and performance specifications. Energy Fuels also recently announced that we are producing pilot quantities of 99.9% purity dysprosium oxide, a critical ‘heavy’ rare earth and another key ingredient in NdFeB magnets. We plan to construct ‘heavy’ rare earth oxide capacity in 2026 at our White Mesa Mill in Utah, thereby ‘closing the loop’ on this important non-China supply chain.”

The 1.2 metric tonnes of NdPr oxide supplied by Energy Fuels earlier this year was processed into approximately 3.0 metric tonnes of REPMs, which is enough to power approximately 1,500 new electric and hybrid electric vehicles. Energy Fuels has received 25 kilograms of the 45H grade NdFeB sintered block alloys (shown below) as a testament to this landmark achievement.

The REOs produced by Energy Fuels were derived from monazite concentrates mined in Florida and Georgia U.S.A. at heavy mineral sand (HMS) operations owned and operated by The Chemours Company. Chemours’ monazite concentrate was processed into high-purity NdPr oxide at Energy Fuels’ White Mesa Mill in Utah. The White Mesa Mill is the only facility in North America currently licensed and capable of producing high-purity REOs from monazite.

About Energy Fuels

Energy Fuels is a leading U.S.-based, global critical minerals company, focused on uranium, rare earth elements, heavy mineral sands, vanadium and medical isotopes. The Company owns and operates several conventional and in-situ uranium projects in

the western U.S., as well as the White Mesa Mill, which is the only operating conventional uranium mill in the U.S. The Mill also houses the Company's commercial-scale rare earth processing circuits. Additionally, Energy Fuels is developing heavy mineral sand projects around the world to supply titanium and zirconium minerals to global markets, along with monazite to the Mill for processing into separated rare earth oxides.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This news release contains certain "Forward Looking Information" and "Forward Looking Statements" within the meaning of applicable United States and Canadian securities legislation, which may include, but are not limited to, statements with respect to: any expectation the Company will be successful in building a "mine-to-magnet" supply chain independent of China, using REOs produced in the United States; any expectation that drive units powered by Energy Fuels' NdPr oxide will be installed in new vehicles and be available in the marketplace within the next few months; any expectation that Energy Fuels has or will continue to have the capacity and expertise to produce rare earth materials that meet both commercial and defense requirements, at scale and to appropriate purity and performance specifications; any expectation that Energy Fuels will construct 'heavy' rare earth oxide capacity in 2026 at its White Mesa Mill in Utah; any expectation that the Company will continue to be a leading U.S.-based, global critical minerals company, focused on uranium, rare earth elements, heavy mineral sands, vanadium and medical isotopes; and any expectation that the Company will be successful in developing its heavy mineral sands deposits or its medical isotopes business. Generally, these forward-looking statements can be identified by the use of forward-looking terminology such as "plans", "expects," "does not expect," "is expected," "is likely," "budgets," "scheduled," "estimates," "forecasts,"

"intends," "anticipates," "does not anticipate," or "believes," or variations of such words and phrases, or state that certain actions, events or results "may," "could," "would," "might" or "will be taken," "occur," "be achieved" or "have the potential to." All statements, other than statements of historical fact herein are considered to be forward-looking statements. Forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements to be materially different from any future results, performance or achievements express or implied by the forward-looking statements. Factors that could cause actual results to differ materially from those anticipated in these forward-looking statements include risks associated with: commodity prices and price fluctuations; engineering, construction, processing and mining difficulties, upsets and delays; permitting and licensing requirements and delays; changes to regulatory requirements; legal challenges; competition from other producers; government and political actions or inactions; market factors, including future demand for rare earth elements; and the other factors described under the caption "Risk Factors" in the Company's most recently filed Annual Report on Form 10-K, which is available for review on EDGAR at www.sec.gov/edgar.shtml, on SEDAR at www.sedar.com, and on the Company's website at www.energyfuels.com. Forward-looking statements contained herein are made as of the date of this news release, and Energy Fuels disclaims, other than as required by law, any obligation to update any forward-looking statements whether as a result of new information, results, future events, circumstances, or if management's estimates or opinions should change, or otherwise. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, the reader is cautioned not to place undue reliance on forward-looking statements. Energy Fuels

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Investor and Media Contact: Energy Fuels Inc., Kim Ronkin Casey, Investor Relations Manager, 303-389-4165, KCasey@energyfuels.com, www.energyfuels.com