

# Energy Fuels and Neo Performance Materials Announce Contract Signing and Launch of Commercial Shipments of Rare Earth Product to Europe in Emerging U.S.-Based Rare Earth Supply Chain

written by Raj Shah | July 7, 2021

July 7, 2021 ([Source](#)) – *Physical shipment of commercial quantities of rare earths from Energy Fuels' White Mesa Mill in Utah to Neo Performance Materials' plant in Estonia represents an important milestone in creation of new rare earth supply chain*

Energy Fuels Inc. (NYSE American: UUUU) (TSX: [EFR](#)) ("**Energy Fuels**") and Neo Performance Materials Inc. (TSX: [NEO](#)) ("**Neo**") are pleased to announce that the first container (approximately 20 tonnes of product) of an expected 15 containers of mixed rare earth carbonate ("**RE Carbonate**") has been successfully produced by Energy Fuels at its White Mesa Mill in Utah (the "**Mill**") and is en route to Neo's rare earth separations facility in Estonia, creating a new United States-to-Europe rare earth supply chain. Additional shipments of RE Carbonate are expected as Energy Fuels continues to process natural monazite sand ore ("**Monazite**") mined in Georgia (U.S.) by Chemours (NYSE: CC) for both the rare earth elements and naturally occurring uranium that it contains.



Rare Earth Carbonate processed by Energy Fuels at its White Mesa, Utah plant is loaded into a shipping container for transport to Neo Performance Materials' rare earth separations facility in Europe (Sillamae Estonia) (CNW Group/Energy Fuels Inc.)

This new supply chain will initially produce rare earth products from monazite that is processed into RE Carbonate at Energy Fuels' Mill in Utah. The RE Carbonate is then processed by Neo at its Silmet rare earth processing facility in Sillamäe, Estonia ("**Silmet**") into separated rare earth oxides and other value-added rare earth compounds. Neo is the only commercial producer of separated rare earth oxides in Europe.

Monazite, which is produced as a byproduct of existing heavy

mineral sands mining, also contains naturally occurring uranium that Energy Fuels recovers for use in the generation of carbon-free nuclear energy.

This commercial-scale production of RE Carbonate by Energy Fuels from a U.S. mined rare earth resource positions Energy Fuels as the only company in North America that currently produces a Monazite-derived, enhanced rare earth material. The physical delivery of this product also represents the launch of a new, environmentally responsible rare earth supply chain that allows for source validation and tracking from mining through to final end-use applications for manufacturers in North America, Europe, Japan, and other nations.

Energy Fuels and Neo are further pleased to announce the signing of a definitive supply agreement (the **"Agreement"**) by the companies' respective affiliates. Under the Agreement, Colorado-based Energy Fuels will ship all or a portion of its RE Carbonate to Neo's Silmet rare earth separations facility. Neo will then process Energy Fuels' RE Carbonate into separated rare earth materials for use in rare earth permanent magnets and other rare earth-based advanced materials. Because of increasing demand for value-added rare earth materials in European manufacturing, Toronto-based Neo seeks to expand and diversify its current supplies of rare earth feedstock at Silmet, which is the only operational rare earth separations facility in Europe. Silmet has been separating rare earths into commercial value-added products for more than 50 years.

Representatives from both Energy Fuels and Neo were on hand at the White Mesa Mill to celebrate the launch of this new critical supply chain.

In addition to supplying RE Carbonate to Neo, Energy Fuels is also evaluating the potential to develop its own separation

capabilities at its White Mesa Mill in Utah (U.S.), or nearby, and possibly adding metals, alloys, and rare earth permanent magnets manufacturing capabilities. As a first step, the Company has hired the French firm, Carester SAS, a leading global expert in rare earth separation and supply chains, to produce a scoping study including capital and operating costs for a full rare earth separations capability at the White Mesa Mill, which would be the next important step towards fully integrating a U.S. rare earth supply chain in the coming years, in addition to continuing to supply RE Carbonate to European markets over the long-term.

“The launch of this new supply chain is a real gamechanger for Neo and our growing customer base in Europe,” said Constantine Karayannopoulos, Neo’s Chief Executive Officer. “This innovative U.S.-to-Europe supply chain will supplement Neo’s existing rare earth supply from our long-time Russian supplier. It will enable Neo to expand value-added rare earth production in Estonia to meet growing demand in Europe for these materials. It begins to unlock the extraordinary economic and environmental potential presented by utilizing low-cost rare earth feedstock from monazite ore that is a byproduct of existing mining. And, it helps Neo ramp up rare earth production in Estonia just as Europe accelerates vehicle electrification and other initiatives aimed at mitigating climate impacts.”

“Today, Energy Fuels and Neo took significant steps toward restoring critical U.S. and European rare earth supply chains,” stated Mark S. Chalmers, President and CEO of Energy Fuels. “Energy Fuels has methodically ramped up our mixed rare earth carbonate production since we first started feeding Georgia monazite ore into our Utah mill in March. Successfully producing this rare earth product, and physically delivering the first containers of Rare Earth Carbonate to Neo,

is an important achievement, not only for Energy Fuels and Neo, but also for U.S. government efforts to restore critical rare earth supply chains. This is also very good news for end-users of rare earth products in the U.S., Europe, Japan and elsewhere who seek alternative sources of rare earths produced in the U.S. and Europe to the highest global standards of environmental protection and sustainability.”

Significant quantities of Monazite are produced around the world as a byproduct of zircon and titanium production from heavy mineral sand operations, including large resources in the U.S., Australia, Brazil, South Africa, and other nations. Energy Fuels is in discussions with several parties to secure additional quantities of Monazite that it can use to expand this quickly emerging rare earth initiative. Energy Fuels has a goal of processing 15,000 tons of Monazite or more per year in the future. For perspective, 15,000 tons of Monazite per annum would contain rare earths equal to roughly 50% of total current U.S. demand, while only utilizing approximately 2% of the White Mesa Mill’s existing throughput capacity and less than 1% of its existing tailings capacity.

Monazite from the southeast U.S. typically contains roughly 55% total rare earth oxides (“**TREO**”) of which the magnetic elements neodymium and praseodymium (“**NdPr**”) comprise approximately 22% of the TREO. NdPr are among the most valuable of the rare earth elements, as they are the key ingredient in the manufacture of high-strength permanent magnets that are essential to the lightweight and powerful motors required in electric vehicles, permanent magnet wind turbines used for renewable energy generation, and a variety of other modern technologies, including, mobile devices and defense applications. U.S. Monazite also contains approximately 14.4% “heavy” rare earths on a TREO basis, including roughly 1.5% dysprosium and terbium which have additional important magnet and national defense

applications.

## **ABOUT NEO PERFORMANCE MATERIALS**

Neo manufactures the building blocks of many modern technologies that enhance efficiency and sustainability. Neo's advanced industrial materials – magnetic powders and magnets, specialty chemicals, metals, and alloys – are critical to the performance of many everyday products and emerging technologies. Neo's products help to deliver the technologies of tomorrow to consumers today. The business of Neo is organized along three segments: Magnequench, Chemicals & Oxides and Rare Metals. Neo is headquartered in Toronto, Ontario, Canada; with corporate offices in Greenwood Village, Colorado, US; Singapore; and Beijing, China. Neo operates globally with sales and production across 10 countries, being Japan, China, Thailand, Estonia, Singapore, Germany, United Kingdom, Canada, United States, and South Korea. For more information, please visit [www.neomaterials.com](http://www.neomaterials.com).

## **ABOUT ENERGY FUELS**

Energy Fuels is a leading U.S.-based uranium mining company, supplying  $U_3O_8$  to major nuclear utilities. Energy Fuels also produces vanadium from certain of its projects, as market conditions warrant, and is ramping up to commercial production of REE carbonate in 2021. Its corporate offices are in Lakewood, Colorado, near Denver, and all of its assets and employees are in the United States. Energy Fuels holds three of America's key uranium production centers: the White Mesa Mill in Utah, the Nichols Ranch in-situ recovery ("ISR") Project in Wyoming, and the Alta Mesa ISR Project in Texas. The White Mesa Mill is the only conventional uranium mill operating in the U.S. today, has a licensed capacity of over 8 million pounds of  $U_3O_8$  per year, has the ability to produce vanadium when market

conditions warrant, as well as REE carbonate from various uranium-bearing ores. The Nichols Ranch ISR Project is on standby and has a licensed capacity of 2 million pounds of  $U_3O_8$  per year. The Alta Mesa ISR Project is also on standby and has a licensed capacity of 1.5 million pounds of  $U_3O_8$  per year. In addition to the above production facilities, Energy Fuels also has one of the largest NI 43-101 compliant uranium resource portfolios in the U.S. and several uranium and uranium/vanadium mining projects on standby and in various stages of permitting and development. The primary trading market for Energy Fuels' common shares is the NYSE American under the trading symbol "UUUU," and the Company's common shares are also listed on the Toronto Stock Exchange under the trading symbol "EFR." Energy Fuels' website is [www.energyfuels.com](http://www.energyfuels.com).

#### **CAUTIONARY STATEMENTS REGARDING FORWARD LOOKING STATEMENTS**

*This news release contains "forward-looking information" within the meaning of applicable securities laws in Canada and the United States. Forward-looking information may relate to future events or future performance of Neo or Energy Fuels. All statements in this release, other than statements of historical facts, with respect to Neo's or Energy Fuels' objectives and goals, as well as statements with respect to their beliefs, plans, objectives, expectations, anticipations, estimates, and intentions, are forward-looking information. Specific forward-looking statements in this discussion include, but are not limited to, the following: any expectation that the White Mesa Mill will continue to be successful in producing RE Carbonate on a commercial basis; any expectation that Silmet will be successful in separating the White Mesa Mill's RE Carbonate on a commercial basis; any expectations with regard to the cost of producing and separating RE Carbonate; any expectation that Energy Fuels will be successful in increasing its supplies of monazite sand ore supplies, developing U.S. separation, metals*

or metal/alloy capabilities at the White Mesa Mill or nearby, or otherwise fully integrating the U.S RE supply chain in the future; any expectation with regard to the future demand for rare earth materials, including any expectation that Europe will continue to accelerate vehicle electrification and other initiatives aimed at mitigating climate impacts; any expectation with regard to the economic and environmental potential presented by utilizing rare earth feedstock from monazite ore; any expectation with respect to the quantities of monazite ore to be acquired by Energy Fuels, the quantities of RE Carbonate to be produced by the White Mesa Mill or the quantities of contained TREO to be acquired by Silmet for separation; and any expectation that the rare earths produced by Energy Fuels and Neo will continue to be produced to the highest global standards of environmental protection and sustainability. Often, but not always, forward-looking information can be identified by the use of words such as “plans”, “expects”, “is expected”, “budget”, “scheduled”, “estimates”, “continues”, “forecasts”, “projects”, “predicts”, “intends”, “anticipates” or “believes”, or variations of, or the negatives of, such words and phrases, or state that certain actions, events or results “may”, “could”, “would”, “should”, “might” or “will” be taken, occur or be achieved. This information involves known and unknown risks, uncertainties and other factors that may cause actual results or events to differ materially from those anticipated in such forward-looking information. Factors that could cause actual results to differ materially from those anticipated in these forward-looking statements include risks associated with: processing difficulties and upsets; available supplies of monazite sands; the ability of the White Mesa Mill to produce RE Carbonate to meet commercial specifications on a commercial scale at acceptable costs; the ability of Silmet to separate the RE Carbonate to meet commercial specifications on a commercial scale at acceptable costs; the capital and operating costs



*associated with separation, metal, alloy and/or magnet production facilities; permitting and regulatory delays; litigation risks; competition from others; market factors, including future demand for and prices realized from the sale of rare earth elements; and the policies and actions of foreign governments, which could impact the competitive supply of and global markets for rare earth elements. Forward-looking statements contained herein are made as of the date of this news release, and Neo and Energy Fuels disclaim, 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. Neo and Energy Fuels assume no obligation to update the information in this communication, except as otherwise required by law.*

SOURCE Energy Fuels Inc. 

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