

# Energy Fuels Engages Leading Consultant to Support Development of Rare Earth Separation at White Mesa Mill in Utah

written by Raj Shah | April 27, 2021

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- Carester SAS is recognized as one of the leading global experts on rare earth separation
- Significant experience in processing natural monazite feeds into value-added rare earth products
- Potential to restore a fully-integrated commercial U.S. rare earth supply chain within the next two to three years

**Energy Fuels Inc.** (NYSE: UUUU) (TSX: [EFR](#)) ("**Energy Fuels**" or the "**Company**") is pleased to announce that it has engaged Carester SAS ("**Carester**") to prepare a scoping study for the development of a solvent extraction ("**SX**") rare earth element ("**REE**") separation circuit at the Company's White Mesa Mill in Utah. Based in Lyon, France, Carester is one of the world's leading global consultants on rare earth supply chains, with expertise in designing, constructing, operating and optimizing REE production facilities globally.

Carester has been engaged to support Energy Fuels' planned development of REE separation capabilities at the White Mesa Mill, utilizing the Mill's existing equipment and infrastructure to the extent applicable, to create a continuous, integrated and optimized rare earth production sequence. Carester's scoping

work will include an evaluation of the Mill's current monazite leaching process, preparation of an REE separation flow sheet, capital and operating expense estimates, incorporation of new technologies where applicable, and recommendations on equipment vendors.

On March 1, 2021, Energy Fuels and Neo Performance Materials ("**Neo**") announced the joint launch of a U.S.-Europe rare earth supply chain. With today's announcement, the Company is now taking another important step toward launching a fully integrated "mine to market" U.S. rare earth supply chain in the coming years.

The Company is currently purchasing a minimum of 2,500 tons per year of natural monazite sands ("**Monazite**") from Chemours' Georgia (USA) heavy mineral sand operations. The Company is also in the process of securing additional supplies of Monazite from the U.S. and internationally, with an initial goal of processing approximately 15,000 tons of Monazite per annum for the recovery of REEs and uranium. Beginning in late-March, Energy Fuels began ramping up processing of Monazite at the White Mesa Mill, to produce a clean, mixed REE carbonate ("**Carbonate**"), an intermediate REE product ready for separation, the next step in a fully integrated REE supply chain. Energy Fuels intends to sell this intermediate product to an REE separation facility in Europe owned by Neo.

As previously announced, Energy Fuels is evaluating the potential to produce separated REE oxides, REE metals, REE alloys, and other value-added REE products at the White Mesa Mill (or nearby), with the intent of creating a fully integrated U.S. REE supply chain in the coming years. Engaging Carester to prepare a scoping study represents the next step in Energy Fuels' development of these capabilities.

Carester's REE separation and purification techniques utilize proven liquid-to-liquid SX extraction processes that have been successfully deployed around the world to produce REE products from feeds including Monazite. Carester's team includes several individuals with significant experience processing Monazite for the recovery of REEs in France, China and elsewhere. The White Mesa Mill has utilized SX technology to produce uranium and vanadium products since the facility was commissioned in 1980. Therefore, the Company believes that Carester's REE extraction processes can be incorporated into the Mill's existing infrastructure in an efficient and cost-effective manner.

"Energy Fuels is absolutely focused on building fully integrated rare earth supply capabilities at our White Mesa Mill in the coming years, and we are pleased to have Carester on the team to support our efforts," stated Mark S. Chalmers, President and CEO of Energy Fuels. "Since we began evaluating the potential to produce rare earth products in late-2019, Energy Fuels has partnered with only the best global experts at every opportunity, and the agreement with Carester is just another example of how our Company is advancing our strategy on the complete REE production sequence. The Carester team is widely recognized as one of the world's foremost authorities in producing separated rare earth oxides and other value added rare earth products. Rare earth extraction, separation and purification can be complex. We believe that our extensive in-house processing experience, combined with Carester's expertise, places the Company in an excellent position to successfully and cost-effectively help to restore critical domestic rare earth capabilities in the USA at the White Mesa Mill.

"As more clean energy and advanced technologies are deployed, more rare earth products will be required. However, technologies are only clean if every step in the supply chain from the mine to the final consumer product is clean. An electric vehicle is

not 'green' if the raw materials that go into the vehicle are not responsibly produced. The U.S. has the highest standards for safety, efficiency, and environmental responsibility in the world when it comes to mining, processing, refining and manufacturing. Energy Fuels is working towards establishing a 'clean' and 'green' U.S. option for manufacturers who demand the highest standards in their rare earth raw materials."

**About Energy Fuels:** Energy Fuels is a leading U.S.-based uranium mining company, supplying  $U_3O_8$  to major nuclear utilities. The Company also produces vanadium from certain of its projects, as market conditions warrant, and is in the process of 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, and 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 currently on standby and has a licensed capacity of 2 million pounds of  $U_3O_8$  per year. The Alta Mesa ISR Project is also currently on standby. 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 Note Regarding Forward-Looking Statements:** This news release contains “forward-looking information” within the meaning of applicable securities laws in the United States and Canada. Forward-looking information may relate to future events or future performance of Energy Fuels. All statements in this release, other than statements of historical facts, with respect to Energy Fuels’ objectives and goals, as well as statements with respect to its 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 as to the outcome of Carester’s Scoping Study; any expectation that the White Mesa Mill will be successful in producing REE Carbonate on a commercial basis; any expectation that Energy Fuels will be successful in developing U.S. separation, metals or metal/alloy capabilities at the White Mesa Mill or nearby, or otherwise fully integrating a low cost U.S REE supply chain in the future; any expectation with regard to the cost of producing and separating REE Carbonate at the White Mesa Mill;. any expectation that Caresters’ REE extraction processes can be incorporated into the Mill’s existing infrastructure in an efficient and cost-effective manner; and any expectation that Energy Fuels is establishing a ‘clean’ and ‘green’ U.S. option for manufacturers who demand the highest standards in their rare earth raw materials. 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: technical difficulties; processing difficulties and upsets; commodity price levels and fluctuations; competition from other facilities domestically and internationally; available supplies of Monazite that meet commercial specifications; the availability of long-term purchase and supply agreements; capital requirements; the ability of the White Mesa Mill to produce REE Carbonate or separated REE products that meet commercial specifications on a commercial scale at acceptable costs; market factors, including future demand for REEs; permitting and licensing matters; and legal and regulatory challenges. 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 assumes no obligation to update the information in this communication, except as otherwise required by law.