# Energy Fuels Announces Updated Feasibility Study for Toliara Rare Earth and HMS Project in Madagascar Confirming World-Class Scale and Economics, Including $1.8 Billion NPV and Ramping Up to Over $500 Million of Expected Annual EBITDA

written by Raj Shah | January 8, 2026

*Company also announces renaming of Toliara Project to Vara Mada to better reflect the project's positive benefits to Madagascar and its global importance as a major new source of titanium, zircon, and rare earth minerals.*

January 8, 2026 (Source) – Energy Fuels Inc. (NYSE: UUUU) (TSX: EFR) (Energy Fuels or the Company), a leading U.S. producer of uranium, rare earth elements (REEs), and critical materials, today released the results of its updated Feasibility Study (FS) for its 100%-owned Vara Mada project in Madagascar (formerly known as the Toliara Project). The FS confirms the project's exceptional economics, its world class quantities of high-quality rare earth, titanium, and zircon Mineral Reserves and Resources, and an initially modeled 38-year mine life which the Company expects to be significantly expanded with planned refinements to the mine plan and additional drilling. The FS for

Vara Mada can be found [here].

Highlights include:

- ***$1.8 billion NPV*** *(10% discount rate, post-tax, pre-debt (real), post final investment decision (FID)).*
- ***$7.30 per share NPV*** *(10% discount rate, post-tax, pre-debt (real), post FID), based on current outstanding shares.*
- *Monazite from Vara Mada to be processed at Energy Fuels' 100%-owned White Mesa Mill (Mill) in the U.S. into separated REE oxides at expected low capital and operating costs, setting a new paradigm for responsible, globally competitive U.S.-centered REE oxide production.*
- ***Ramping up to over $500 million of expected annual EBITDA*** *(referred to as Operating Profit in the FS) from the project alone, not including the expected additional downstream EBITDA from processing the recovered monazite at the Mill, which is expected to be the subject of a separate feasibility study to be published in the coming weeks.*
- *At full capacity, monazite produced from Vara Mada and Energy Fuels' other HMS projects has the potential to supply up to 30% of U.S. demand for light REE oxides and 85% of U.S. demand for heavy REE oxides like dysprosium and terbium, as compared to Benchmark Mineral Intelligence's 2032 REE supply forecast.*
- *FS prepared in compliance with S-K 1300 (U.S.) and NI 43-101 (Canada), which consolidates and supersedes the 2021 definitive feasibility study (DFS) and 2024 monazite-focused prefeasibility study (PFS) prepared in compliance with JORC (Australia).*

"The FS confirms what we've known since we acquired the project in 2024. Vara Mada is a generational, one-of-a-kind project that

has the potential to positively alter the dynamics of global rare earth and critical mineral supply chains," said Mark S. Chalmers, CEO of Energy Fuels.

Vara Mada is a world-class, advanced-stage, and large-scale heavy mineral sand (HMS) project located in southwest Madagascar containing significant low-cost ilmenite (titanium), zircon (zirconium), and monazite (REE) Mineral Reserves and Resources. Monazite concentrates produced from Vara Mada, and other HMS projects globally, are a rich source of both light and heavy 'magnet' REEs, used in a variety of clean energy and advanced technologies, including electric and hybrid vehicles, advanced robotics and manufacturing, consumer electronics, renewable energy, and key defense technologies. The Company plans to import monazite concentrates from Vara Mada into the U.S. for processing into high-purity separated light and heavy REE oxides at Energy Fuels' 100%-owned White Mesa Mill in Utah for commercial and government customers in the U.S. and allied nations.

Chalmers continued, "Over the past six years, Energy Fuels has pursued a unique and aggressive strategy that is now seeing success where other 'western' rare earth companies have struggled. A significant proportion of China's dominant rare earth industry begins with the importation of monazite concentrates produced as a low-cost byproduct of HMS mining. Energy Fuels is pursuing a similar strategy, because we believe it enjoys numerous competitive advantages over traditional 'pure-play' rare earth approaches. This includes larger-scales, lower-costs, and availability of superior concentrations of both light and heavy rare earth oxides."

"Energy Fuels is committed to operating Vara Mada to the highest global standards of health, safety, sustainability, and environmental protection, while advancing the economy of

Madagascar, enhancing the quality of life of local communities, and serving as an important component of U.S. and allied rare earth and critical mineral supply chains. We believe the project's large scale, long mine life, and unmatched economics create a foundation for Energy Fuels to provide the most competitive and responsible rare earth production in the western world."

**Key Economic Metrics:**

- $1.8 billion NPV (10% discount rate, post-tax, pre-debt (real), post FID);
- $7.30 per share NPV (10% discount rate, post-tax, pre-debt (real), post FID), based on current outstanding shares;
- 24.9% IRR (post-tax, pre-debt, post-FID);
- Ramping up to over $500 million of expected annual EBITDA (referred to as Operating Profit in the FS) ($387 million of expected average annual EBITDA over the modelled life of the project);
- 72% expected average annual EBITDA margin over the modelled life of the project;
- $264 million of expected average annual free cashflow, over the modelled life of the project; and
- FS applied price forecasts from TZ Minerals International Pty Ltd (TZMI) (mineral sands) and Adamas Intelligence Inc. (REEs).

**Annual Production Averages** (excluding first and last partial operating years):

- Expected production of 959,000 tonnes of ilmenite (sulphate, slag, and chloride), 66,000 tonnes of zircon, 8,000 tonnes of rutile, and 24,000 tonnes of monazite.
- 73% of expected revenue from external sales of ilmenite,

zircon, and rutile to global customers, and 27% from internal sales of monazite concentrate to Energy Fuels' White Mesa Mill for further processing into light and heavy REE oxides (the additional expected margins from refining the monazite into REE oxides at the Mill are not included in this FS, but are expected to be included in a separate feasibility study to be published within the coming weeks).

**Mineral Reserves and Resources:**

- The scale of Vara Mada is underpinned by the project's Ranobe deposit, which contains significant Mineral Reserves and Mineral Resources and the long-term supply-demand outlook for rare earths and mineral sands:
  - Ranobe's Mineral Reserves are estimated at point of feed to the dry mining unit (DMU) at 904 million tonnes of Proven and Probable Mineral Reserves with an average heavy mineral grade of 6.1%. The Proven and Probable heavy mineral assemblage includes 73.0% ilmenite, 1.0% rutile, 1.0% leucoxene, 5.9% zircon and 1.9% monazite, supporting an initially modeled mine life of 38 years.
  - Ranobe's Mineral Resources (exclusive of Mineral Reserves) are estimated in situ at 485 million tonnes of Measured and Indicated Mineral Resources with an average heavy mineral grade of 3.3%. The Measured and Indicated heavy mineral assemblage includes 69.6% ilmenite, 1.1% rutile, 1.1% leucoxene, 6.0% zircon and 2.0% monazite.
  - Additionally, there are 1.2 billion tonnes of Inferred Mineral Resources with an average heavy mineral grade of 3.3%. The Inferred heavy mineral assemblage includes 69.2% ilmenite, 1.0% rutile,

1.0% leucoxene, 5.8% zircon and 2.0% monazite.

- Key assumptions for the Mineral Reserve and Mineral Resource estimates include:
    - A cut-off grade of 1.5% heavy mineral.
    - Assumed price per metric tonne for Ilmenite $199, Rutile $1,250, Leucoxene $0 (when processed, Leucoxene reports to Ilmenite and Rutile products), Zircon $1,200, Monazite $6,600.
    - Assumed recovery for Ilmenite 89.6%, Rutile 49.9%, Leucoxene 17.5%, Zircon 77.2%, Monazite 78.6%.
    - Assumed operating costs $1.00/tonne mined, $0.64/tonne feed to WCP, $13.38/tonne feed to mineral separation plant (MSP) ilmenite, $18.04/tonne feed to MSP rutile, leucoxene, zircon, monazite, $3.45/tonne product transport to port, $8.91/t product wharf cost, $1.71/tonne mined overhead cost.

The reserve estimate, on which the economic analysis is based, is considered to be conservative, as it is based on the cutoff grade and mine plan originally determined before monazite recovery was added to the project. The Company plans to revise its mine plan using a revised cutoff grade that takes into account the economic margins from the added monazite recovery, which is expected to increase the amount of Reserves within the existing Mineral Resource. The Company also plans to undertake an exploration drilling program in the Lower Sandy Unit (LSU) at the site which is described as an Exploration Target in the FS that is prospective for further HMS delineation up to an

estimated additional 1,200-1,600 million tonnes of mineralized material. To the extent these activities generate additional Reserves and Resources, the life of the project would be expected to extend beyond the initially modeled mine life of 38 years.

**Capital**:

- Pre- FID CAPEX is expected to total $121 million.
- Post-FID, Stage 1 CAPEX to establish a 13 million tonnes per annum (tpa) mineral processing operation is expected to total $769 million.
- Stage 2 CAPEX adds $142 million to nearly double operation to a 25 million tpa mining rate.

***Vara Mada's Synergies with Energy Fuels' Existing U.S. Rare Earth Production:***

Vara Mada is a key component of Energy Fuels' diversified critical materials business, as it significantly expands the Company's REE and HMS capabilities. Vara Mada offers valuable synergies with the Company's White Mesa Mill in Utah, where monazite from Vara Mada is expected to be processed into valuable, high-purity, separated REE oxides. The Mill has its current "Phase 1" capability to process up to 10,000 tpa monazite concentrate into up to 1,000 tpa neodymium-praseodymium (NdPr) oxide. The Company plans to expand its "Phase 1" capability to also produce up to 48 tpa dysprosium (Dy) and 14 tpa terbium (Tb) oxides, which could be operational as soon as Q4 2026.

The Company is also in the process of permitting its "Phase 2" expansion at the Mill, which is currently expected to be commissioned as early as Q4 2028. Upon completion, the "Phase 2" expansion is expected to increase the Mill's processing

capability to up to 60,000 tpa of monazite concentrate into approximately 6,000 tpa NdPr, 275 tpa Dy, 80 tpa Tb, and potentially other REE oxides.

“Phase 2” is designed to be sufficient to accommodate all the monazite produced from Vara Mada at full capacity, along with the monazite concentrate produced from all planned phases of Energy Fuels’ Donald Project joint venture in Australia, Bahia Project in Brazil, and third-party suppliers.

***Additional Details on Vara Mada:***

The Company, through its subsidiary Base Toliara SARL, holds a mining permit for the Vara Mada Project allowing for the production of Ilmenite, rutile and zircon. In order for a positive FID to be made for the project, the Company and the Government of Madagascar will need to formalize the fiscal, stability and other terms applicable to the project, including the addition of monazite production to the existing mining permit, through an investment agreement, amendments to existing laws or other mechanisms as appropriate. Energy Fuels and the Government of Madagascar are continuing to progress fiscal terms negotiations based generally on the previously disclosed memorandum of understanding signed by the parties in December 2024. Aspects intended to facilitate the inclusion of monazite in the project’s mining permit as soon as reasonably practicable are included in the scope of current negotiations. However, there can be no assurance of achieving sufficient legal and fiscal stability or the timing thereof or obtaining approval of the addition of monazite to the mining permit or the timing thereof. If such legal and fiscal stability and approvals are not obtained, or obtained on terms less favorable than expected, this could delay or prevent any FID in relation to the project or prevent or otherwise have a significant effect on the development of the project or ability to recover monazite from

the project.

***About Energy Fuels***

*Energy Fuels is a leading U.S.-based critical materials company, focused on uranium, rare earth elements (REEs), heavy mineral sands, vanadium and medical isotopes. Energy Fuels, which owns and operates several conventional and in-situ recovery uranium projects in the western United States, has been the leading U.S. producer of natural uranium concentrate for the past several years, which is sold to nuclear utilities for the production of carbon-free nuclear energy. Energy Fuels also owns the White Mesa Mill in Utah, which is the only fully licensed and operating conventional uranium processing facility in the United States. At the Mill, Energy Fuels also produces advanced REE products, vanadium oxide (when market conditions warrant), and is evaluating the potential recovery of certain medical isotopes from existing uranium process streams needed for emerging Targeted Alpha Therapy cancer treatments. Energy Fuels is also developing three (3) heavy mineral sands projects: the 100% owned Vara Mada Project in Madagascar; the 100% owned Bahia Project in Brazil; and the Donald Project in Australia in which Energy Fuels has the right to earn up to a 49% interest in a joint venture with Astron Corporation Limited. Energy Fuels, based near Denver, Colorado, trades its common shares on the NYSE American under the trading symbol "UUUU," and is also listed on the Toronto Stock Exchange under the trading symbol "EFR." For more information on all Energy Fuels does, please visit [http://www.energyfuels.com](http://www.energyfuels.com)*

**Qualified Person**

The technical information in this press release has been prepared in accordance with U.S. Subpart 1300 of Regulation S-K (S-K 1300) and Canadian National Instrument 43-101 (NI 43-101)

standards, all of which technical information has been reviewed on behalf of the Company by Daniel Kapostasy, Vice President, Technical Services of the Company, a qualified person under both S-K 1300 and NI 43-101.

***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 as to resource and reserve estimates, including whether the resource and reserve estimates are within reasonable bounds of accuracy; any expectation as to capital, development, operational and/or reclamation costs associated with the Vara Mada project; any expectation that any such costs may be low or globally competitive; any expectation as to the expected mine life of the Vara Mada project, or that the mine life of the project may be significantly expanded or expanded at all with planned refinements to the mine plan and/or additional drilling; any expectation that the Vara Mada project will set a new paradigm for responsible, low-cost, globally competitive U.S.-centered rare earth oxide production; any expectation as to any of the key economic metrics discussed in this press release; any expectation as to annual production averages; any expectation that the recovery of monazite as a by-product from HMS mining enjoys competitive advantages over traditional 'pure-play' rare earth approaches; any expectation with respect to any sales of products from the Vara Mada project; any expectation regarding required capital expenditures for the Vara Mada project; any expectation regarding future processing of monazite from the Vara Mada project at the White Mesa Mill; any expectation as to processing capacities or costs at the White Mesa Mill; any expectation as to development timelines with respect to the Vara Mada project, the planned*

*expansion of Phase 1 at the Mill and the planned development of Phase 2 at the Mill; any expectations as to planned capabilities at the Mill's Phase 1, as may be expanded, and Phase 2; any expectation that an FS for monazite processing operations at the Mill will be published in the coming weeks or at all; any expectation that monazite produced from Vara Mada and Energy Fuels' other HMS projects has the potential to supply up to 30% of total U.S. light REE oxide requirements and up to 85% of U.S. demand for 'heavy' REEs like dysprosium and terbium; any expectation that Energy Fuels will successfully operate Vara Mada to the highest global standards of health, safety, sustainability, and environmental protection; any expectation that the development of the Vara Mada project will advance the economy of Madagascar, enhance the quality of life of local communities, and serve as an important component of U.S. and allied rare earth and critical mineral supply chains; any expectation that the Vara Mada project's large scale, long mine life, and economics will create a foundation for Energy Fuels to provide the most competitive and responsible rare earth production in the western world; any expectation that the Company will obtain all required approvals from and achieve sufficient legal and fiscal stability with the government of Madagascar, including the inclusion of monazite in the relevant permits for the Vara Mada project, to justify a positive final investment decision for the project, or the timing thereof; any expectation with respect to future REE production at the Mill; any expectation as to the timing of commercial scale production of REE or heavy REE oxides at the Mill; any expectation that market conditions may support rare earth production; any expectation as to the Company's production capacity or expected timelines to production; any expectation that any of the Company's development projects will be brought into commercial production; any expectation that the Company will be successful at recovering certain medical isotopes from existing uranium*

*process streams needed for emerging Targeted Alpha Therapy cancer treatments; and any expectation that the Company is or will continue to be a leading producer of uranium, REEs and critical materials in the U.S. or otherwise. 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 REEs, titanium and zirconium; 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 assumes no obligation to update the information in this communication, except as otherwise required by law.*

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