

America's Leading Producer of Critical Materials for the Clean Energy Transition



Uranium

Rare Earths

Vanadium

Medical Isotopes

Recycling











Forward Looking Statements & Notice Regarding Technical Disclosure

Certain of the information contained in this presentation constitutes "forward-looking information" (as defined in the Securities Act (Ontario)) and "forward-looking statements" (as defined in the U.S. Private Securities Litigation Reform Act of 1995) that are based on expectations, estimates and projections of management of Energy Fuels Inc. ("Energy Fuels") as of today's date. Such forward-looking information and forward-looking statements include but are not limited to: the business strategy for Energy Fuels expectations with regard to current and future uranium, vanadium and rare earth element ("REE") market conditions; the uranium industry's ability to respond to higher demand; the impacts of recent market developments; business plans; outlook; objectives; expectations as to the prices of U3O8, V2O5, and REE's; expectations as to reserves, resources, results of exploration and related expenses; estimated future production and costs; changes in project parameters; the expected permitting and production time lines; the Company's belief that it has significant production growth potential and unmatched flexibility to scale-up production; the potential for additional business opportunities including vanadium, REE, alternate feed materials, and the cleanup of historic mines on the Navajo Nation and in the Four Corners Region of the U.S.; the potential for optimizing mining and processing; the Company's belief in its readiness to capitalize on improving markets; expectations with regard to the potential for U.S. government support of U.S. uranium miners; global uranium supply risks; expected worldwide uranium supply and demand fundamentals; any expectation that the proposed Uranium Reserve will continue to be implemented and if implemented, the manner in which it will be implemented and the timing of implementation; 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, or oth

All statements contained herein which are not historical facts are forward-looking statements that involve risks, uncertainties and other factors that could cause actual results to differ materially from those expressed or implied by such forward-looking information and forward-looking statements. Factors that could cause such differences, without limiting the generality of the foregoing include: risks that the synergies and effects on value described herein may not be achieved; risks inherent in exploration, development and production activities; volatility in market prices for uranium, vanadium and REEs; the ability to sustain production from mines and the mill; competition; the impact of change in foreign currency exchange; imprecision in mineral resource and reserve estimates; environmental and safety risks including increased regulatory burdens; changes to reclamation requirements; unexpected geological or hydrological conditions; a potential deterioration in political support for nuclear energy; changes in government regulations and policies, including trade laws and policies; demand for nuclear power, vanadium and REEs; replacement of production and failure to obtain necessary permits and approvals from government authorities; weather and other natural phenomena; ability to maintain and further improve positive labor relations; operating performance of the facilities; success of planned development projects; other development and operating risks; the Company not being successful in selling any uranium into the proposed Uranium Reserve at acceptable quantities or prices, or at all in the future; available supplies of monazite sands; the ability of the White Mesa Mill to produce REE Carbonate to meet commercial specifications on a commercial scale at acceptable costs; market factors, including future demand for REEs; the ability of Nanoscale and Energy Fuels to finalize definitive agreements; the ability of Energy Fuels to potentially recover radioisotopes from its existing process streams for use in TAT t

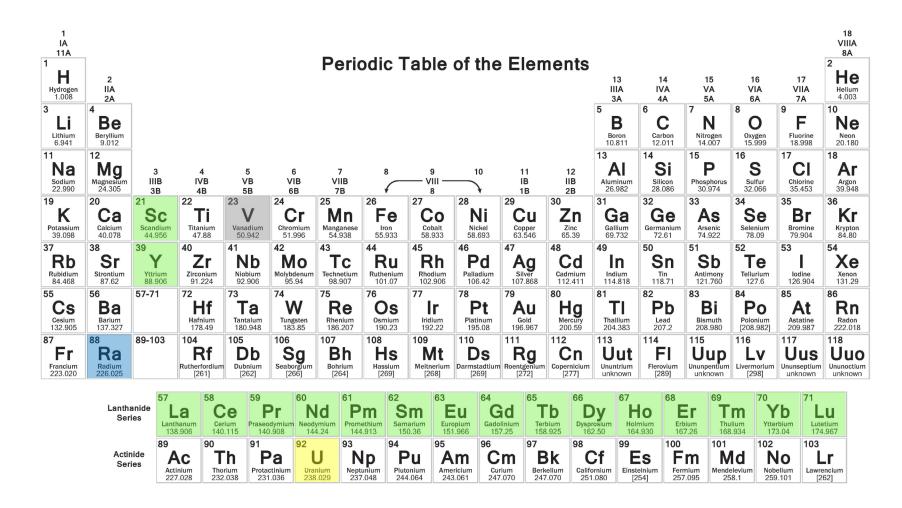
Additional information about the material factors or assumptions on which forward looking information is based or the material risk factors that may affect results is contained under "Risk Factors" in Energy Fuels' annual report on Form 10-K for the year ended December 31, 2022. The annual report on Form 10-K is available on SEDAR at www.sec.gov.

All technical information including mineral estimates constituting mining operations that are material to our business or financial condition included in this presentation, have been prepared in accordance with both 17 CFR Subpart 220.1300 and 229.601(b)(96) (collectively, "S-K 1300") and Canadian National Instrument 43-101 - Standards of Disclosure for Mineral Projects ("NI 43-101") and are supported by pre-feasibility studies and/or initial assessments prepared in accordance with both the requirements of S-K 1300 and NI 43-101. S-K 1300 and NI 43-101 both provide for the disclosure of: (i) "Inferred Mineral Resources," which investors should understand have the lowest level of geological confidence of all mineral resources and thus may not be considered when assessing the economic viability of a mining project and may not be converted to a Mineral Resources," which investors should understand have a lower level of confidence than that of a "Measured Mineral Resource" and thus may be converted only to a "Probable Mineral Resource"; and (iii) "Measured Mineral Resources," which investors should understand have sufficient geological certainty to be converted to a "Proven Mineral Reserve" or to a "Probable Mineral Reserve." Investors are cautioned not to assume that all or any part of Measured or Indicated Mineral Resources will ever be converted into Mineral Resource.

Energy Fuels is the leading U.S. producer of uranium, vanadium & rare earth elements creating clean energy for a better world.

Energy Fuels Produces – or Can Produce – Materials Needed for Many Clean Energy & Medical Applications

Uranium
Rare Earths
Vanadium
Radium



Our Products Power Many Clean Energy Technologies











High Value Product Line

<u>URANIUM</u> – Fuel for nuclear energy which provides the U.S. with 50% of our zero-carbon electricity UUUU is the largest U.S. uranium producer, with more production facilities, capacity & experience than other US companies

RARE EARTHS – Critical elements used in powerful magnets needed for EVs, wind & other tech UUUU today produces America's most advanced rare earth product, while developing a fully integrated U.S.-centric supply chain

<u>VANADIUM</u> – Critical element used in high-strength steel, aerospace and grid-scale batteries UUUU is the largest primary producer of V₂O₅ in US; significant inventory & ability to quickly turn on production in strong markets

MEDICAL ISOTOPES – Critical for emerging cancer therapies

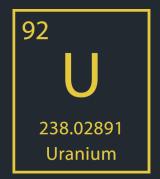
Developing ability to recover radium from existing uranium and rare earth production; needed for emerging treatments & potential cures

RECYCLING – Uranium & vanadium bearing materials

Promoting sustainable sourcing; reducing carbon emissions & saving the world's scarce resources

FINANCIAL STRENGTH - Significant Cash + Inventory

\$134.4 million in working capital as of June 30, 2023, including \$99.7 million of cash & marketable securities; large U_3O_8 & V_2O_5 inventories

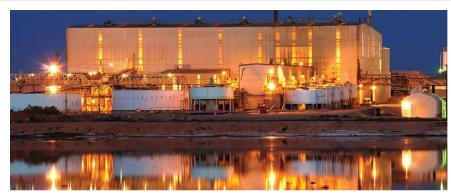


Core Business: Uranium



Proven U.S. Uranium Production

Leading U.S. Portfolio – Up to 2 Million Lbs. of Short-Term, Low-Cost Production



White Mesa Mill (Utah) - Producing

• Only conventional uranium & vanadium mill in US – plus REE's & recycling



Pinyon Plain Mine (Arizona) – Pre-Production

· Licensed & substantially developed high-grade uranium mine



Nichols Ranch ISR (Wyoming) - Standby

• Fully-licensed & developed; 1.2 million lbs. of U₃O₈ produced (2014 -2019)



La Sal Complex (Utah) – Pre-Production

• Licensed & developed uranium & vanadium mines; preparing 2 for production

3 large-scale projects in permitting (Sheep Mountain; Roca Honda & Bullfrog) have potential to produce additional 4+ million lbs. per year

Securing New Uranium Sales Contracts

Providing New Revenues & Cashflows for 2023 – 2030

Multiple market tailwinds enabling us to book long-term sales contracts with U.S. utilities at sustainable pricing

- U.S. government providing support for nuclear energy (bipartisan)
- Russia's invasion of Ukraine sharpening utility focus on security of supply
- Intermediaries buying physical uranium
- Transportation issues from Russia & Kazakhstan

Energy Fuels offers buyers a reliable, low-cost source of U.S. uranium production

Utility contracts entered to date:

- Base quantity of 3.0 million pounds of total U₃O₈ deliveries over next 8 years (starting in 2023)
- Up to a total of 4.1 million pounds of deliveries, if all options are exercised
- Pricing formula maintains exposure to market upside, while limiting downside & adjusting for inflation
- 560,000 lbs. of total deliveries in 2023 at an expected price of \$58 \$60 per pound



Market Position – Uranium

North American Space as of October 5, 20231

COMPANY	MARKET CAP (US\$M)	WORKING CAPITAL (US\$M)	2023 NET INCOME/(LOSS) (US\$M)	URANIUM INVENTORY (M LBS.)	URANIUM	RARE EARTHS	VANADIUM	MEDICAL ISOTOPES	RECYCLING
Cameco	\$16,518	\$1,918	\$13 ²	12.0	\checkmark	×	×	×	×
NexGen Energy	\$2,754	\$75 ²	(\$13) ²	×	\checkmark	×	×	×	×
Uranium Energy Corp	\$1,966	\$394	(\$14)	0.84	\checkmark	×	×	×	×
Denison Mines	\$1,311	\$38 ²	(\$2)	2.5	\checkmark	×	×	×	×
CF ENERGY FUELS	\$1,193	\$134	\$109	1.2 ⁵	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
Fission Uranium	\$448	\$34 ²	(\$6)	×	\checkmark	×	×	×	×
enCore Energy	\$446	\$5	(\$14) ⁶	×	\checkmark	×	×	×	×
Ur-Energy	\$385	\$67	(\$8)	0.2	\checkmark	×	×	×	×

¹ This chart reflects the most recent publicly available information; Energy Fuels' information is disclosed in its Form 10-Q for the quarter ended June 30, 2023

² Cdn\$ = US\$0.728

³ Au\$ = US\$0.635

⁴ Announced additional purchases of 1.8 million lbs. uranium on the open market with deliveries to occur during 2023 – 2026 for an average price of \$42.24 per pound.

 $^{^{5}}$ Includes 766,000 lbs. of finished $\rm U_3O_8$ inventory, plus 403,000 lbs. of work-in-progress and raw materials.

⁶ enCore owes Energy Fuels \$60 in a convertible note due February 2025, bearing 8% annual interest, secured by the Alta Mesa property.

57	58	59	60	61	62	63	64
La	Ce	Pr	Nd	Pm	Sm	Eu	Gd
138.90547 Lanthanum	140.116 Cerium	140.90766 Praseodymium	144.242 Neodymium	145 Promethium	150.36 Samarium	151.964 Europium	157.25 Gadolinium
65	66	67	68	69	70	71	
Tb	Dy	Но	Er	Tm	Yb	Lu	
158.92535 Terbium	162.500 Dysprosium	164.93033 Holmium	167.259 Erbium	168.93422 Thulium	173.054 Ytterbium	174.9668 Lutetium	

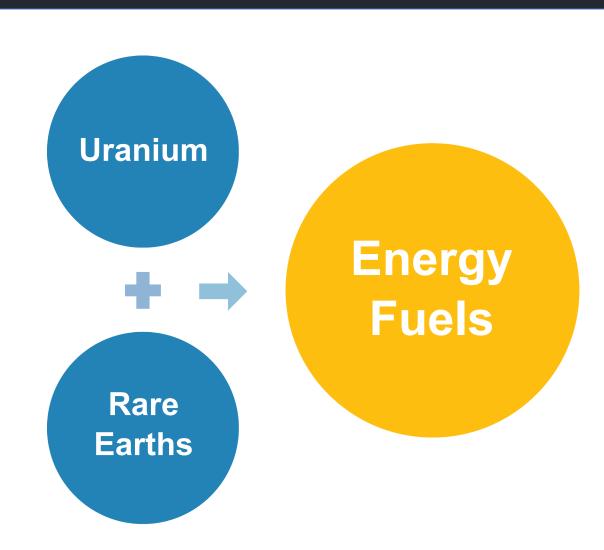
Growth Driver: Rare Earths



Complementary Business Opportunities

Energy Fuels is leveraging its existing assets to fill the gap in U.S. rare earth element (REE) production

- The highest-value REE-bearing minerals including monazite – are naturally radioactive when they are mined, due to the presence of uranium & other elements.
- Energy Fuels' White Mesa Mill is the <u>only</u> existing facility in North America with the licenses and capabilities to process monazite & produce advanced REE products.
- We also recover the uranium, are evaluating the potential to recover the thorium, and dispose of the other impurities.



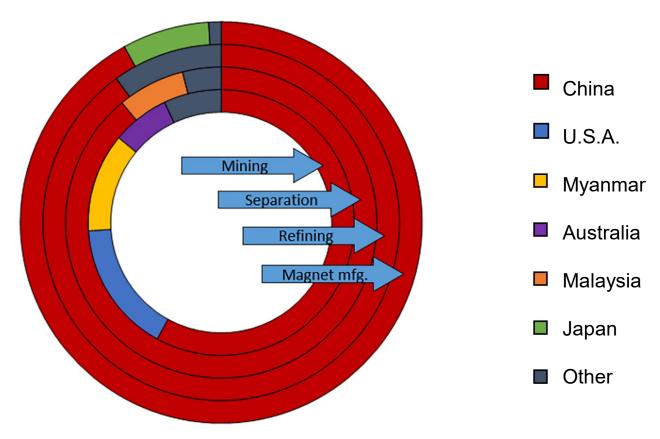
Global REE Market

Dominated by China

Geographic concentration of the supply chain stages for sintered NdFeB magnets

Energy Fuels is currently restoring U.S. capabilities in the mining & separation steps.

The value of the materials produced increases significantly from the inner to the outer concentric circles.



From U.S. Department of Energy report, "Rare Earth Permanent Magnets: Supply Chain Deep Dive Assessment", dated February 24, 2022



April 2020

Q

Nov. 2021



Feb. 2023



2026¹

Energy Fuels announces entry into REE sector Began pilot-scale REE separation; producing 99.8% purity NdPr oxide Closed acquisition of Bahia Project; 58.3 square mile heavy mineral sand (HMS) project in Brazil that contains significant quantities monazite (REE), titanium (ilmenite/rutile) & zirconium (zircon) **Phase 2 Separation**

Produce larger-scale light REE products (1,500 – 3,000+ MT NdPr oxide per year)

Race to A New Age of Clean Energy

Current REE Prices²:

NdPr oxide = \$72.29/kg

Dy oxide = \$372.50/kg

Tb oxide = \$1,183/kg

Began processing monazite to mixed REE carbonate – the most advanced REE material being produced in the U.S. today

July 2021

High-Purity Mixed REE Carbonate

Began commercialscale REE separation & production of mixed REE carbonate, containing 32% - 34% NdPr

March 2022

Phase 1 Separation

Produce light REE products at White Mesa Mill (500 – 1,000 MT of NdPr oxide per year, 250,000 – 1M EV's per year)

2023/241

Phase 3 Separation

Produce heavy separated REE products, including Dy and Tb

2027¹

¹ Expected production, subject to successful construction, commissioning, and receipt of sufficient monazite and REE feed

² Asian Metal, August 29, 2023; 1 RMB = US\$0.139

A New Capital Efficient Rare Earth Supply Chain

Created by Energy Fuels – Centered in the U.S.



The Bahia Project (Brazil)

Control of Low-Cost REE Deposit in Allied Nation

Potential to supply REE-bearing monazite to the White Mesa Mill for decades

Completed acquisition in February 2023

Low-cost, long-term source of monazite (rare earths), titanium (ilmenite & rutile) & zirconium (zircon)

• Potential to produce 3,000 – 10,000 MT monazite sand per year (1,500 – 5,000 MT TREO)¹

58.3 square mile land position (~37,300 acres) on 17 mineral concessions

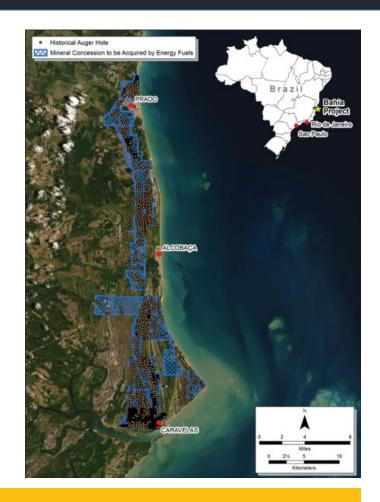
Several exploration & mining permits in place

Well-defined HMS mineralization

- At and near surface; relatively simple mining/concentrating methods
- ~3,300 historic holes drilled to water table (~5.86 meters depth) show significant mineralization

Sonic drilling program underway

- Confirming that HMS & REE mineralization continues below water table
- Phase 1 drilling (2,250 meters) completed in Q1-2023; Phase 2 drilling to commence in Q4-2023
- Plan to release S-K 1300 Initial Assessment (US) and NI 43-101 Technical Report (Canada) in 2024



Acquisition completed in February 2023

Energy Fuels' Rare Earth Production

White Mesa Mill (Utah)









Energy Fuels Has Many Unique Advantages

Short-Term, Low-Cost REE Production in U.S.

We currently have the licenses & infrastructure to handle the radionuclides in monazite

• We can recover the uranium (and possibly the thorium & radium) as significant value-adds – these are a problem for others

Monazite has more value relative to other REE feeds

• ~30% higher in NdPr + ~95% higher in heavy REEs with higher recoveries of magnetic REEs versus bastnaesite

Monazite is already mined in the U.S. & around the world as a low-cost HMS byproduct

Most mining costs carried by primary zircon & titanium production

Monazite is more straightforward to process than other REE minerals

• Chemically easier to recover the REEs from the phosphates in monazite vs the fluoro-carbonates in bastnaesite

Low cost & capital efficient

• Using existing licenses, personnel & facilities saves considerable time & money

Energy Fuels has used solvent extraction (SX) processing technology for uranium & vanadium recovery for 40+ year

• Relatively easy for us to pivot & apply existing SX know-how to REE recovery & separation

Focusing on proven REE separation technologies using SX

• We are not attempting to license & deploy new separation technologies

Utah is a relatively low-cost & supportive jurisdiction in which to operate

• Compared to other locations where REEs are produced (California, Australia, etc.)

The #1 challenge
to unlocking
the value
of monazite
has been
the radionuclides.

Energy Fuels has solved this challenge.

Market Position – Rare Earths

Global Space as of October 5, 2023

	COMPANY	MARKET CAP (US\$MM)	PRIMARY MINERAL	ORE CONCENTRATE "BASKET VALUE" (US\$)3	ORE PRODUC	CTION	HIGH-PURITY REE CONCEN PRODUCT	TRATE	REE SEPARA	ATION
				` ′	CURRENT	PLANNED	CURRENT	PLANNED	CURRENT	PLANNED
	Lynas	\$3,890	Monazite (Australia)	\$11,081	\checkmark		\checkmark		\checkmark	
Icers	MP Materials	\$3,002	Bastnaesite (US-California)	\$5,272	\checkmark		×	✓	×	✓
al Producers	Iluka Resources	\$2,0025	Monazite (Australia)	\$12,301	\checkmark		×	✓	×	✓
Global	CF ENERGY FUELS	\$1,193	Monazite (US–Georgia; Bahia, Brazil)	\$13,580	×	√ 1	✓		×	√
	Neo Performance Materials ²	\$241 ⁵	n/a	n/a	×	2	×	2	\checkmark	
				IN SITU ORE VALUE PRE- BENEFICIATION (US\$)4						
elopers	Texas Mineral Resources	\$32	Bastnaesite (US-Texas)	\$28	×	✓	×	✓	×	✓
U.S. Developers	Rare Element Resources	\$110	Bastnaesite (US-Wyoming)	\$607	×	√	×	√	×	✓
	Ucore Rare Metals	\$31	Bastnaesite (US-Alaska)	\$237	×	√	×	✓	×	√

Not currently a miner, but recently purchased Bahia Project in Brazil; currently purchasing monazite from HMS operators and processing in Utah

² Neo purchases mixed REE concentrates (including from Energy Fuels)

³ Ore concentrate value, after beneficiation

⁴ In-situ ore values, <u>before beneficiation</u>

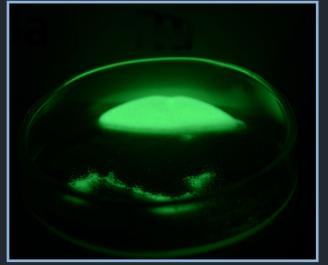
⁵ Cdn\$ = US\$0.728

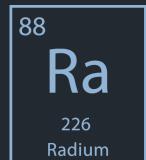
⁶ Au\$ = US\$0.635

Longer Term Growth: Vanadium & Medical Isotopes









Strong Position in Vanadium & Medical Isotopes

Optionality in Additional High-Growth Markets

Vanadium

- Used in steel, aerospace alloys, chemicals & "grid-scale" flow batteries used with renewable energy
- Energy Fuels' White Mesa Mill is a significant U.S. producer of vanadium (V₂O₅)
- 2019: We produced 1.9 million pounds of high-purity (99.7%+) V₂O₅ at the White Mesa Mill
- 2023: Sold about 79,000 lbs. at an average price of \$10.98/lb.
- ~0.9 million lbs. in inventory; selectively producing & selling into market strength
- We can quickly recover an additional 1.5M to 3.0M+ lbs. of V₂O₅ from mill tailings solutions

Medical isotopes

- Several isotopes required for emerging cancer therapies ("targeted alpha therapy") naturally occur in the White Mesa Mill's existing process streams
- We are evaluating the potential to recover radium to help establish this U.S. medical supply chain

Titanium & zirconium, in addition to rare earths, from Bahia Project in Brazil



Recycling & Commitment to Community



Our Products & Practices Address Key ESG Issues

<u>Uranium</u> The fuel for zero-carbon baseload nuclear energy

Rare Earths Critical for many clean energy technologies such as EVs, renewable energy, batteries & national defense

<u>Vanadium</u> High strength steel & other alloys; key for baseload renewable power via grid-scale batteries

Medical Isotopes Developing domestic supply chain for emerging cancer treatments now in human trials

Recycling Promote sustainable supply by recycling materials that contain natural uranium & vanadium

Sustainability Report details our unwavering commitment to safety, reclamation & environmental protection

Community Outreach

Sharing our success with neighboring communities

- Long-term commitment to improving the quality of life for people in San Juan County
- Established the San Juan County Clean Energy Foundation with an initial \$1 million contribution by Energy Fuels + ongoing funding equal to 1% of annual revenues from the White Mesa Mill
 - <u>Grants To Date</u>: American Indian Services (\$160,000), Canyonlands Field Institute Native Guide Program (\$25,000), Navajo Nation Chapters (\$15,000), The Dinosaur Museum Solar Energy Project (\$50,000), San Juan High School Football (\$5,000)
- Supporting existing & new programs in education, environment, health/wellness, economic advancement and Native American priorities
- The Mill's recycling programs reduce carbon emissions and help save the world's finite resources
- State-of-the-art facilities and a modern, comprehensive regulatory framework ensures protection of public health, worker safety & the environment to the highest global standards
- Pledge to help reclaim Cold War era uranium mines

Financials



Q2-2023 Financial Highlights

Strong Balance Sheet

- \$134.4 million of working capital as of June 30, 2023
 - \$35.6 million of cash & cash equivalents; \$64.1 million of marketable securities; \$33.0 million of product inventory (worth about \$50.5 million at current commodity prices¹)
 - Zero debt
 - 766,000 pounds of finished U_3O_8 , 906,000 pounds of finished V_2O_5 , and 37 tonnes of finished high-purity, partially separated mixed REE carbonate in inventory.

Undervalued Assets

\$134.4M

Working Capital¹

\$0

Debt

1,169,000

Lbs. uranium inventory (finished, in-process & raw material)

906,000

Lbs. vanadium inventory (finished)

Inventory worth ~\$50 million more than shown on balance sheet at current commodity prices

	Value on Books (\$/Lb)¹	Current Price (\$/Lb) ²¹	% Up/ (Down)
U ₃ O ₈	\$29.22	\$73.15	+150%
V_2O_5	\$6.94	\$7.38	+6%

¹ Per TradeTech (uranium) and Fastmarkets (vanadium) as of September 29, 2023

2023 Guidance + Focus

- 560,000 lbs. of total expected U₃O₈ sales in 2023 at a weighted-average expected sales price of \$58 \$60 per lb.
 - Completed sale of 300,000 lbs. in January 2023 to U.S. Uranium Reserve for \$61.57/lb. (\$18.5M)
 - Completed sale of 80,000 lbs. in May 2023 to a major U.S. utility for \$54.19/lb. (\$4.3M)
 - Additional 180,000 lbs. of sales into commercial contracts at expected sales price of \$54 \$58 per lb.
- Continue preparing uranium mines for production; expect to place 1 or more into production in 2023/24
- Seek additional long-term uranium supply agreements at increasingly higher price levels
- 2023 Production focused on REE with no finished uranium or vanadium production expected in 2023
- Process approximately 600 MT of monazite & recover approximately 150 170 MT of TREO in 2023
 - Expect to process an additional 400-700 MT of monazite in late-2023/early-2024 to produce NdPr upon commissioning of Phase 1 REE Separation Circuit
- Continue development of RE separation circuit at White Mesa Mill
 - Expected capacity to produce 800 1,000 MT NdPr oxide per year (~\$25 million investment) in late-2023 or early-2024
- Seek REE offtakes
- Advance Bahia Project
 - Perform additional drilling; engage consultants to prepare S-K 1300 Initial Assessment & NI 43-101 Technical Report



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Uranium

Rare Earths

Vanadium

Medical Isotopes

Recycling













www.energyfuels.com