GREENMET
GREENBRIER SMOKELESS
REE PROJECT

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Des Nëdhë Group
An English River First Nation Enterprise

GreenMet plans $150M rare earth processing hub in West Virginia

- GreenMet announced plans earlier this summer to develop a new rare earth processing hub at the Greenbrier Smokeless Metallurgical Coal Complex marking another important step toward strengthening America's domestic rare earth supply chain.
- The project will be led by Drew Horn and the team at GreenMet in partnership with Flash Metals USA, AmForge Corporation, and Greenbrier Smokeless Coal Company.
- The project builds on the legacy of the Greenbrier Smokeless Metallurgical Coal Complex, one of the nation's largest producers of high value mid vol metallurgical coal with an estimated 14.7 million tons of reserves, including nearly 10 million tons already permitted for mining.
- Metallurgical coal, which was added to the U.S. Geological Survey's Critical Minerals List last fall, is essential for producing the steel used in America's infrastructure, manufacturing, and national defense.
- Now, Greenbrier Smokeless has an opportunity to create even greater value by recovering rare earth elements from historic coal tailings, transforming legacy mining waste into the critical materials needed for defense technologies, advanced manufacturing, and clean energy while creating new family supporting jobs and helping clean up historical mine waste.

Partnership between Flash Metals USA, AmForge Corporation, and Greenbrier Smokeless Coal Company

Using patented technology from Flash Metals USA, coal tailings are heated to approximately 1,800 degrees before being rapidly cooled, allowing rare earth elements to be separated and recovered from material that was once considered waste.

The Rupert facility will also serve as the centerpiece of a hub and spoke processing network capable of handling rare earths sourced from domestic projects and trusted allies, including Greenland, Canada, and Cameroon. Once operational, the project is expected to create nearly 250 jobs.

Rare earth elements are a group of 17 minerals that are essential to products ranging from smartphones and wind turbines to fighter jets, missiles, and advanced electronics. Today, China controls roughly 60 percent of global rare earth production and about 90 percent of refining capacity.

- **GreenMet's Proposed Rare Earth Processing Hub**
  - Rupert, West Virginia
    Turning legacy coal waste into a domestic critical minerals resource
  - Proposed $150 million processing hub
  - Nearly 250 jobs expected when fully operational
  - Central facility in a broader critical minerals processing network

Project Overview

- GreenMet announced plans for a critical minerals processing hub in Rupert, Greenbrier County.
- The project aims to recover rare earth elements from historic coal tailings.
- The proposed facility would also process materials sourced from other domestic projects and international suppliers.
- The venture brings together Rupert-based Greenbrier Smokeless Coal Co., Houston-based Flash Metals USA Inc. and Washington, D.C.-based AmForge Corp. to extract rare earth minerals from coal tailings and coal slurry using a patented processing method.

Project Leadership and Partners

- GreenMet: Washington, DC-based firm connecting private capital, government, and the critical minerals industry
- Drew Horn and the GreenMet team: Project leadership identified in the supplied post
- Flash Metals USA: Houston-based partner providing patented processing technology
- AmForge Corporation: Washington, DC-based project partner
- Greenbrier Smokeless Coal Company: West Virginia-based resource partner
- West Virginia Secretary of State Kris Warner and Drew Horn was instrumental in collaborating these parties for this project



West Virginia Secretary of State Kris Warner visits Greenbrier Smokeless Coal Co. in June 2025.

About the Partners

AMFLASH

A joint venture between AmForge Corporation and Flash Metals USA, combining Flash Joule Heating technology with AmForge's government execution platform for commercial-scale critical mineral recovery from coal tailings, acid mine drainage, strategic primary feedstocks, and end-of-life materials.

AMFORGE CORPORATION

A government execution platform focused on critical minerals supply chain security, nuclear fuels and advanced energy, AI data center infrastructure, and energy resilience, specializing in translating breakthrough technology into federal programs and domestic supply chain solutions.

GREENBRIER SMOKELESS COAL MINING

A currently producing metallurgical coal operation rooted in Rupert, WV, providing feedstock, property, and location for deployment of the anchor hub — led by CEO and President Amanda Hale.

FLASH METALS USA & METALLIUM INC.

Flash Metals USA is the U.S. subsidiary of Metallium Inc. and license holder of Flash Joule Heating technology for domestic deployment, maintaining a CRADA with Savannah River National Laboratory covering fuel recycling and critical mineral extraction. Metallium Inc. (ASX: MTM; OTCQX: MTMCF) develops proprietary extraction and processing technologies for primary minerals and end-of-life material recovery, operating globally across North America, Europe, and Asia-Pacific.

Mineral Supply Agreements

According to the pertinent sources, the project has secured mineral offtake agreements involving:

- **Greenland**
- **Woodstock Project · New Brunswick, Canada.** Based on the Plymouth Manganese Deposit, providing a potential source of battery-grade manganese from one of the world's largest carbonate-hosted manganese resources.
- **General Magnesium Corp · Timmins, Ontario.** A North American magnesium pathway relevant to advanced manufacturing, defense, and light-metal applications.
- **American Renaissance · Cameroon.** A cobalt-nickel opportunity that adds a potential cobalt and nickel-bearing supply stream for critical mineral recovery and downstream processing.

Why Metallurgical Coal Matters

- Metallurgical coal supports steel production.
- Steel is essential to infrastructure, manufacturing, and national defense.
- The supplied post states that metallurgical coal was added to the U.S. Geological Survey's Critical Minerals List "last fall."
- The proposed project would expand the operation's value through recovery of minerals from legacy waste.



Why Rare Earth Elements Matter

Rare earth elements comprise a group of **17 elements**.

- Applications identified in the supplied material include:
  - Smartphones and advanced electronics
  - Wind turbines and energy infrastructure
  - Fighter jets, missiles, and defense systems
  - Advanced and next-generation manufacturing
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Other Investments and Development REE Projects

- GreenMet stated that funding would not rely on state government subsidies, taxpayer funding, or state incentives.
- West Virginia University: WVU developed technology to recover rare earth elements from acid mine drainage. Its Mount Storm A34 facility demonstrated an integrated pilot-scale recovery process.
- Department of Energy: In July 2026, DOE announced $75 million for five projects to recover rare earth elements and other valuable materials from coal and coal-based feedstocks.
- Fola Mine Complex – Nicholas and Clay counties - Fola property and Range Impact's involvement, -pay particular attention to whether rare earth recovery is included in any future development plans for the coal reserves, refuse, slurry, and associated mineral rights.
- These developments suggest that coal waste and previously mined materials could become commercially valuable.
- One important qualification: pilot facilities and announced investments do not necessarily mean commercial production or royalty payments have started.

Royalty Rates for REE Minerals Considerations

- There is no universally established West Virginia rare-earth royalty rate comparable to a conventional coal royalty.
- The appropriate compensation depends on whether the company is extracting material from your property, processing existing refuse, or treating mine water already.
- Below describes the complex as one of the nation's largest producers of high-value, mid-volatility metallurgical coal.

Type of agreement	Suggested opening position
REEs recovered from coal mined on your property	5–10% of gross REE product revenue
REEs recovered from gob or refuse piles	5–10% of gross product revenue
REEs recovered from slurry ponds	5–10% of gross product revenue
Separate mineral extraction operation	8–12% of gross product revenue
Surface or processing facility lease	Separate annual acreage/site payment

Do not accept a percentage of net profit as your only royalty. A company can deduct processing, transportation, refining, overhead, and other expenses before calculating profit. That can leave the mineral owner with very little.

Contract Provisions and Management

Before signing any agreement with a rare earth developer, I would require the following protections:

Contract provision	Why it matters
Independent sampling	Establishes the actual rare earth content of the material
Independent laboratory assays	Determines which elements are present and their concentrations
Gross revenue definition	Prevents excessive deductions before royalty calculation
Monthly or quarterly accounting	Allows you to track production and payments
Audit rights	Gives you access to sales records and production records
Minimum annual royalty	Protects you against inactivity or delayed development
No cross-property deductions	Prevents costs from other properties being charged against your royalty
Separate mineral rights	Protects existing coal and other mineral ownership
Assignment restrictions	Prevents transfer of the agreement without appropriate protections
Environmental liability	Establishes responsibility for spills, contamination, reclamation, and closure

I would also require reporting of the individual rare earth elements, not just total tonnage.

For example, neodymium, praseodymium, dysprosium, terbium, and other valuable elements can have substantially different market values. A payment based only on total rare earth tonnage could undervalue your resource.

West Virginia Legal Consideration

- **West Virginia has a specific provision, House Bill 4003, concerning the economic benefits of rare earth recovery from acid mine drainage.**
- **WVU's published FAQ explains that the entity responsible for treating the acid mine drainage receives the economic benefit from the recovered rare earth elements under the state framework.**
- **That means an owner of the underlying coal or mineral estate should not automatically assume ownership of the rare earth revenue from a mine-water treatment operation. The ownership, treatment obligations, applicable permits, and contracts need to be examined separately.**
- **This is another reason to have a West Virginia mineral-rights attorney review the arrangement before granting access or signing an agreement.**

Recommendations and Steps Forward with REE

In representing a West Virginia coal or mineral owner, I would take these steps before negotiating:

- Establish who owns the coal, surface, refuse piles, slurry, and any other mineral interests.
- Determine whether existing coal leases cover rare earth recovery.
- Have a qualified geologist sample and quantify the rare earth deposits.
- Obtain the proposed developer's processing agreement and royalty formula.
- Negotiate a separate rare earth royalty agreement that protects future production and additional mineral discoveries.

Steps Forward:

- A lot of unknowns to economic projects.
- Who own coal rights and want to receive royalties

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