Perpetua Resources

Powering the Green Future with American Antimony

The Stibnite Gold Project and the Ambri Storage Battery

A Clean Energy Future Starts at Stibnite.

Perpetua Resources is proud to provide antimony from the Stibnite Gold Project to Ambri, an American battery technology company, to help produce the clean energy storage batteries needed for a low carbon future.

The current amount of committed antimony from the Stibnite Gold Project would power over 13 gigawatt hours of clean energy storage. For perspective, that is equivalent to over eight times the total additions to the entire U.S. energy storage market in 2020.

The partnership underscores the role modern mining can play in solving the world's climate change challenges and directly links the restoration and responsible redevelopment of the Stibnite Gold Project to achieving our nation's energy goals.

www.PerpetuaResources.com

Responsible American Sourcing

Perpetua Resources' proposed Stibnite Gold Project is in an abandoned mining district in Idaho. The project was designed to address the environmental legacies left behind, responsibly produce the critical minerals and metals our nation needs, and bring partnership, infrastructure, and family-wage jobs to rural Idaho.

Abandoned Mine Restoration

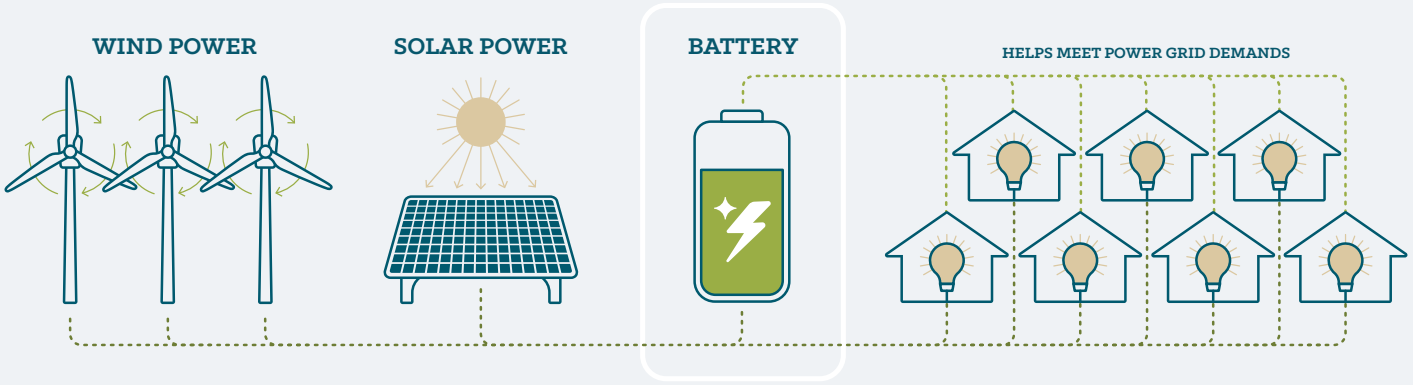
The Stibnite Gold Project will use the resources brought by modern mining to repair environmental legacies of the past, including reconnecting fish to miles of critical habitat during operations and, as part of our closure plan, comprehensive restoration of the river, and removing, reprocessing, and safely storing legacy tailings to improve water quality.

Critical Mineral Production

The Stibnite Gold Project would provide the only domestically mined supply of antimony, a listed critical mineral that is essential to Ambri's liquid metal battery technology.

Responsible Approach

Responsible mining requires a modern approach. We're building transparency and accountability between our team and local communities, investing in environmental restoration, and doing business the right way.



Breakthrough Technology

The world has been waiting for a breakthrough long-duration grid storage battery. As the energy sector moves away from fossil fuels and looks to grow renewable energy production, large capacity green energy storage is critical to meet demand when the wind isn't blowing, and the sun isn't shining.

In order to commercialize and implement energy battery storage, the technology needs to be large-scale, efficient, reliable, and affordable.

The Ambri liquid metal battery meets these requirements and is regarded as the breakthrough that could revolutionize the energy grid and change the world's reliance on fossil fuels.

The Ambri battery makes a transition to a 100% renewable energy grid possible. Compared to other large-scale storage batteries, Ambri's antimony battery can be quickly and widely adopted, is nearly half the cost, has twice the useful life, is safer, and stores energy longer and more efficiently.

Critical Mineral: Antimony

Antimony is a listed critical mineral and is key to helping achieve a more sustainable and efficient future.

Antimony is essential to our national security and economic vitality and plays a daily role in our energy and tech industries, and is considered an emerging battery metal.

Today, the U.S. does not have a domestically mined source of the critical mineral antimony. Perpetua's Stibnite Gold Project would be the only domestically mined source of the critical mineral antimony, and could supply 35% of the U.S. demand in the first six years of operation.

Ambri's liquid metal battery is comprised of a calcium alloy anode, molten salt electrolyte and a cathode of solid antimony.

CAPACITY:	400-1000 kWh, up to 250 kW
DC EFFICIENCY:	Exceeds 80% under a wide range of use cases
RESPONSE TIME:	< 500 milliseconds
VOLTAGE:	500 –1500 V
FOOTPRINT:	10-foot shipping container

LARGE-CAPACITY:
The battery is scalable and modular to meet gigawatt deployments.

LONG-TERM USE:
Battery has 20+ years of useful life and tens of thousands of cycles without degradation or fade.

SAFE AND RELIABLE:
System self-heats and self-regulates temperature, has no thermal runaway, can operate in any climate, and has no risk of combustion or fire as compared to other batteries.

AFFORDABLE:
The system has the lowest capital and operating cost, with a projected cost of 30-50% below equivalent lithium-ion systems from 2022-2030.

Learn more about the project at *www.PerpetuaResources.com*