Bipartisan Policy Center

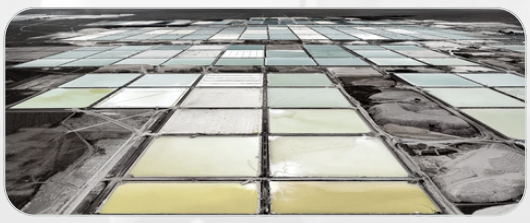
MINING IN THE FUTURE

Shifting toward clean energy technologies will require a drastic increase in our supply of critical minerals. Of the 50 minerals identified by the U.S. Geological Survey as critical for our energy technologies, the United States is 100% import-reliant on at least 10 of them and more than 50% import-reliant on another 31. This level of foreign mineral sourcing, specifically from China and Russia, is a national security risk, making the U.S. vulnerable to geopolitical tension that could hamstring our energy security and climate ambitions. America needs to create new, durable clean energy and mineral supply chains with increased domestic mining and processing and cooperation with free trade partners.

But Mining in the Future will look different than Mining in the Past.
Here are five innovations that show why:

1. Reduced impacts on the Earth's surface
Past mining excavation often had a vast footprint impacting landscapes and habitats. Targeted engineering approaches have the potential to dramatically lessen these impacts.


2. Processing and refining without the pollution
Past processing of minerals often involved large pools of waste with potential for pollution. Innovative approaches for processing minerals use technology to reduce pollution risk.




3. Make more with less
Past mining and processing was inefficient, producing waste that still had useful minerals to provide. Innovation is unlocking new, more efficient techniques for processing and even recovering valuable minerals from non-traditional resources.


4. Launch other climate-aligned industries
There are synergies between mining processes and waste streams that have the potential to unlock other climate-essential industries like hydrogen production & carbon dioxide removal.


5. Working closely with communities
New mining operations are demonstrating how communities can be directly engaged and included in key decision-making points in mine development. Mining in the future can produce jobs and economic benefits to local communities.