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Having Bipartisan Support, U.S. Energy & Environmental Security Depends On Mining



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WASHINGTON, DC - FEBRUARY 16: U.S. President Donald Trump acknowledges the coal miners in ... [+] GETTY IMAGES

“It’s a very significant strategic issue for the U.S. and the West. I almost liken it to Huawei. We wake up and they’re in control of the world,” Admiral Mike Mullen, 17th Chairman of the Joint Chiefs of Staff, [September 2020](#)

The day after President Trump’s new [executive order](#) for mining, RealClearPolitics on October 1, 2020 hosted a bipartisan [event](#) sponsored by the National Mining Association: *Reinventing Our Domestic Minerals Supply Chain in a Post-Pandemic World*. Co-Chairs of the House Critical Materials Caucus Rep. Eric Swalwell (D-CA-15)

and Rep. Guy Reschenthaler (R-PA-14) started the discussion that then went to a three-expert panel of [Morgan Bazillian](#), [Joe Bryan](#), and [Jane Nakano](#).

The timing for this talk is indeed perfect: finally, something both parties can agree on. For context, the House Republicans' new China task force [places](#) mineral supply chains front and center. And a recent [report](#) from Securing America's Future Energy makes minerals, and boosting domestic mineral output, a key piece of the effort to win the future of mobility. More critical mining production has become an noncontroversial, bipartisan initiative, uniting various interests from coal executives to climate hawks.

Government Panel: Reps Swalwell and Reschenthaler

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Reps Swalwell and Reschenthaler kicked things off with a reality check: the energy transition to cleaner renewable technologies and electric cars will require a [massive amount](#) of scarce natural resources, namely “[rare earth](#)” elements, minerals, and metals (hereafter “critical materials”).

The primary problem is that we are losing the race to China, and we have become increasingly important dependent. In fact, 80% of our rare earths now come from China. And beyond just production, China is controlling entire [global supply chains](#). Not just the trade war, the COVID-19 pandemic is showing the devastation that this can bring: “[China Covered Up Coronavirus To Hoard Medical Supplies, DHS Report Finds.](#)” For 31 of the 35 critical minerals in the executive order, the U.S. imports more than half of its annual consumption, with many at 100%.

Hunting [global reach](#), China's [Belt and Road Initiative](#) wants investment in smaller but heavily resourced nations so the Party can grab a stake in their critical materials. China

has declared a cold war on the U.S., strategically guided to be the world's superpower – economically, militarily, and resource wise (short oil and gas, China is also working closely with Russia for supply). Indeed, not just inherent to the energy transition, many of these resources are key to always advancing information technologies and America's military, making China's dominance of them a threat to our national security. Further, the global competition for critical materials is becoming increasingly fierce. The World Bank reports a **500% boom** in demand over the next 30 years. And the list of such essentials only grows as the technologies they comprise continue to evolve.

In turn, demonstrated by this very Caucus, a coordinated U.S. mining transformation is gaining bipartisan support. There is also broad acknowledgment that we must strike a balance of new supply avenues and maintaining environmental safeguards. In many ways, production here is of environmental benefit because we have strong protocols in place. Not to mention that some such as cobalt giant Congo **immorally** deploy child labor and other human right abuses to exploit their mining sector. The U.S. should be reaching out to partners around the world who also want enhanced access to critical materials. In particular, the next administration should work with other nations that have a solid domestic resource base and already been victimized by China. India, for instance, is fast becoming a major energy partner with the U.S.

With the best expertise in the world, the U.S. Department of Energy's **17 National Laboratories** should guide our domestic efforts, especially Lawrence Livermore and Sandia. The fossil fuel industry itself will be of tremendous benefit because players have many decades of experience in unifying diverse and expansive supply chains while also installing infrastructure at large-scale. For example, as U.S. coal needs continue to fade, we can repurpose the industry's expertise and technological prowess while providing new jobs for coal miners to support the energy transition.

The slow U.S. regulatory process might be our biggest obstacle. It typically takes seven to 10 years to acquire the necessary mine permits to start operations. By comparison, in Canada and Australia, two enticing markets that have equally stringent environmental protections, it takes just two to three years. These long permitting times make the U.S. less attractive because producers demand a quick Return on Investment. In short, the

money will go elsewhere if we do not streamline and codify the process as soon as possible.

Expert Panel: Bazilian, Bryan, and Nakano

President Trump's executive order illustrates that we have a major strategic vulnerability in the critical materials space. The expert panel too is concerned about soaring global demand for essentials that we need to import – supply chains controlled by China. Even the huge projections of growth by 2050 – e.g., lithium +900%, cobalt +500%, graphite +400% – are likely understated. The panel agreed that our long permitting process for mining remains a major impediment for investment and domestic supply. We have needlessly created an unpredictably that discourages outside support.

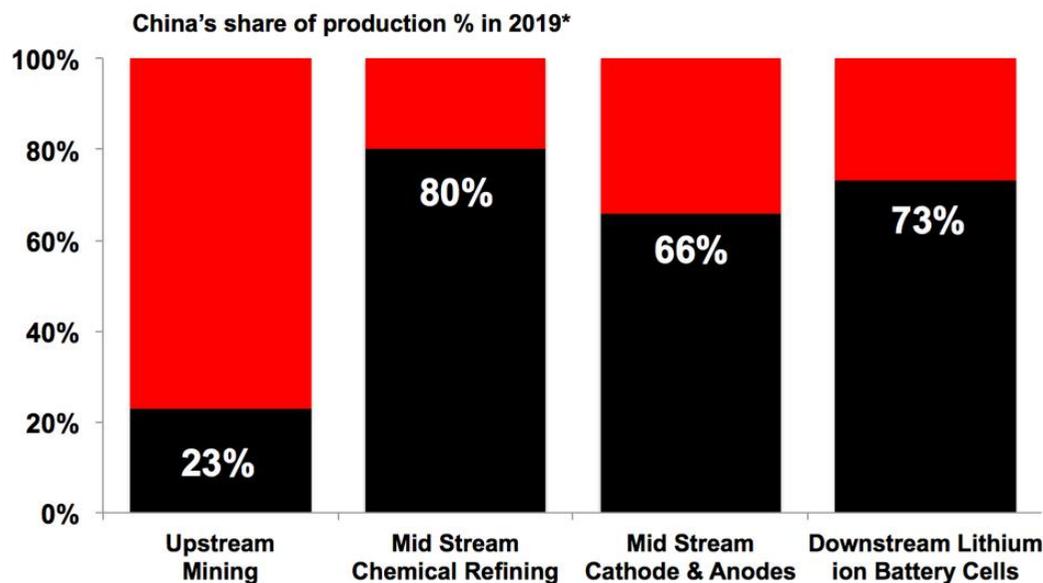
Beyond just upstream, we must bolster the entire value chain for critical materials. This centers on a holistic approach of exploration, extraction, processing, and recycling. If not, for instance, we will just be producing critical materials and then be forced to send them to China for processing. Domestic training, tariff evaluation, and trade deals all need re-evaluated to expand our access to supply. We need the Department of the Interior and its bureau of the U.S. Geological Survey to [continuously report](#) on our situation. The European Commission, for instance, updates its list of critical materials and import dependence every three years.

As the enabling technology for electric cars and intermittent wind and solar power, we must view the battery race as a new kind of arms race – and one that [China is clearly winning](#) (Figure). The numbers are overwhelming. There is now over \$300 billion in commitments from automakers aiming to significantly extend their electric portfolios. Compared to seven just a few years ago, today there are more than 160 battery-manufacturing facilities globally, with the U.S. having less than 10 of them.

Confirming Reps Swalwell and Reschenthaler, critical materials are a national security issue: the U.S. Navy has 2,000 systems that rely on these batteries. Yet, the commercial sector should be at the forefront due to its immense size. Tesla [TSLA +2.7%](#) is setting the

example by having off-take agreements for critical materials in Nevada and North Carolina, illustrating that the U.S. does indeed have large assets (\$6.2 trillion worth, per some estimates).

China's Dominance of the Lithium Ion Battery to Electric Car Supply Chain



Lithium, Cobalt, Nickel, Graphite, Manganese, Cathode, Anode, Cells accounted for in calculations
Source: Benchmark Mineral Intelligence

All Americans should know: China is dominating the global supply chain for batteries used in ... [+] DATA CREDIT:
BENCHMARK MINERAL INTELLIGENCE

Developing the U.S. mining and supply chain of critical materials also brings together a variety of interests and groups, an increasingly unique advantage in the bitter politics of the day. For example, the National Mining Association, United Auto Workers, wind and solar developers, national security apparatus, and utilities at-large stand united on this issue.

Federal policies must guide us to modernize. Thankfully, U.S. Senators Lisa Murkowski (R-AK) and Joe Manchin (D-WV) have been leading with their [American Mineral Security Act](#). The next administration must view our opportunity not as a way for the

U.S. to dominate mining per se but as a chance to coordinate an alliance among partners with the same problems. We surely have our work cut out for us because China has taken a long game approach, out front to dominate critical materials markets since the 1980s.

Five Further Questions To Explore

- What will electric cars do to U.S. electricity demand, which has been flat for 12 years?
- What can we do to encourage more electric car sales, given that they are more expensive and less convenient?
- Which countries could we partner with for critical materials that have a large domestic resource base?
- What are your thoughts on the importance of how we can manufacture more clean energy technologies here at home while also exporting them for others to reduce their own CO2 emissions?
- What can we do to encourage U.S. manufacturers to use U.S.-produced materials without weakening their competitiveness in a cutthroat global market?



Gallery: John HancockVoice: How Mining, Oil And Gas Workers Are Retraining For The Solar Economy

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