



COMMITTEE ON
SCIENCE, SPACE, AND TECHNOLOGY
REPUBLICANS Frank Lucas, Ranking Member

Opening Statement of Energy Subcommittee Ranking Member Randy Weber

Energy Subcommittee Hearing

Research and Innovation to Address the Critical Materials Challenge

December 10, 2019

Thank you Chairman Lamb for holding today's subcommittee hearing. I'm looking forward to hearing from our witnesses about the energy technologies and applications being developed through critical materials research.

Critical materials play an important role in supporting the technologies that will change the United States' energy consumption.

Whether it's lithium used in advanced batteries or helium – yes, it's for more than just party balloons – in rocket propulsions systems, our resources are limited in quantity and can be challenging to develop.

And while demand is only increasing for these critical materials, supply can also be restricted by geopolitical and market forces. As it currently stands, Australia, Chile, China, and Argentina produce 97% of the world's lithium supply, a mineral that is essential for battery technology, and will be key for the expansion of electric vehicles.

Imagine if our adversaries controlled a critical material used in building the next advanced military weapon. If they were to slow down supply or cut it off altogether, we would be at a dangerous disadvantage. Energy is just as important, and we can't allow the advancement of technology to be limited by political or geographic forces.

In order to understand our economic risk, it's vital that we assess our resources here in the U.S., and better understand what elements and materials are vulnerable to global supply disruptions.

That is one of the reasons President Trump issued Executive Order 3817, and the Department of Interior took the first step by leading an interagency coordination to publish a list of 35 critical minerals to the American economy.

But understanding our natural resources is only part of the story. Because many critical materials are difficult to produce, it is essential that we maximize our ability to use and reuse these materials.

By extending the commercial lifecycle of these materials, and investing in research to improve the efficiency of recycling and reuse, we can maximize our resources. Research can also allow us to explore opportunities to extract critical materials from new sources that were once considered only waste products.

That is why DOE's National Energy Technology Laboratory, in coordination with the Critical Materials Institute or C-M-I, is currently conducting research on extracting materials from coal and coal byproducts. This research can help improve the economics of energy supply and production, and reduce environmental impacts.

And at Ames Lab, which hosts CMI, researchers are working to improve reuse and recycling, and to expand our supply by synthesizing new materials or developing substitutes. By coordinating basic research in materials science and chemistry with early-stage, applied research in manufacturing, the CMI structure helps us get the best bang for our buck, and take a holistic approach to this challenge.

Our national security and economic growth cannot be left at the mercy of a global supply chain.

And I believe the Department of Energy has the capability to conduct the research and development needed to get the United States back on track as a global leader in critical materials.

I look forward to hearing from our witnesses on how their research is contributing to this goal, and what steps Congress will need to take to support their efforts.

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