



U.S. HOUSE OF REPRESENTATIVES COMMITTEE ON  
**SCIENCE, SPACE, & TECHNOLOGY**

Opening Statement

**Chairman Conor Lamb (D-PA)  
of the Subcommittee on Energy**

Subcommittee on Energy Hearing:  
*Research and Innovation to Address the Critical Materials Challenge*

Tuesday, December 10, 2019

Good morning and thank you to this distinguished panel of witnesses for joining us today. Today we'll be holding a hearing on the importance of rare or difficult-to-obtain materials, often called critical materials, for a wide range of energy, defense, and research applications. This hearing will also examine a draft bill introduced by my colleague, Mr. Swalwell, that would support critical materials research to improve their recycling and their ability to be replaced with more commonly available materials, as well as establish more sustainable sources of these materials.

Many of the energy technologies that enable our modern energy world, including clean energy technologies, are underpinned by a host of critical materials that are found in limited quantities and few countries. This includes important technologies like electric vehicles, solar panels, wind turbines, and other technologies utilized by our military and our broader national infrastructure. So if we are to continue the success of these and future technologies, we must ensure an affordable, reliable supply chain of critical materials. Unfortunately, due to the distribution of the supply chains for these materials, the U.S. relies on the importation of 100% of 14 materials, and the partial import of many more. While the supply chain and technology application for each material is different, it is not wise for us to rely on countries with adversarial, unstable, or unjust governments to provide materials critical to our economy, national security, and clean energy future.

To address this important issue, DOE and the Critical Materials Institute are working hard to develop new sources of these materials and improve their reuse and recycling. In fact, our experts at the National Energy Technology Laboratory, including their great team in Pittsburgh, are looking into ways to extract rare earth elements out of coal and coal by-products. Not only is this program exploring ways to secure much needed rare earth elements, it could provide a valuable new economic resource for the many people in western Pennsylvania.

Behind the scenes of energy research and the scientific community's work more broadly is the need for helium, which is sometimes considered a critical material in its own right. Due to its unique chemical properties, helium is essential for maintaining equipment at hundreds of labs

across the country, like those at Carnegie Mellon, and is an important input to industrial processes like rocket propulsion. Recent helium price increases have hampered our labs' work by postponing research, shifting research priorities, and at times harming equipment, all of which strain labs' budgets and slows innovation. We must ensure our researchers have access to the helium they need, and federal support can play an important role in that process. Like with other critical materials, R&D can play a significant role in improving our helium-use efficiency, finding new sources, and developing substitutes where possible. As we've heard many times on this Committee, U.S. economic competitiveness is driven by our support for innovation, so it should be a top priority for us to ensure reliable, affordable helium for our research community.

We aren't guaranteed the materials to continue to research, build, and deploy the next generation of clean energy and other technologies just because we have the knowledge to develop them. Accordingly, we need to bolster and ensure these supply chains to safeguard our energy future, our national security, and our economic growth. That is why I am excited to hear more about how we can harness U.S. ingenuity and federally supported research to better address these issues. I thank our panel of witnesses again for being here today and I look forward to their input and feedback on these important topics and the proposed legislation.