Full Committee Hearing On The Scope And Scale Of Critical Mineral Demand And Recycling

Thursday, April 7, 2022

Chairman Manchin's Opening Statement

- The committee will come to order.

- We're here today for part two of an important discussion on how to reverse our increasing vulnerability associated with the critical mineral supply chain.

- Last week's hearing highlighted the challenges we face in supplying our own critical minerals with domestic mining, processing, and refining.

- Today we shift our discussion to what is driving the need for these minerals in the first place and what kind of demand we expect in the future.

- This discussion wouldn't be complete without hearing how we can leverage the recycling of these products and technologies at the end of their useful life to increase our domestic supply and offset some of this increasing demand.

- From the technologies needed to support military readiness and combat climate change to the cell phones in our pockets or the cars in our driveways, critical minerals are essential to life we lead and the technologies we have come to depend on.

- Accelerating their production and establishing secure and dependable supply chains is vital to our energy and national security.

- That is why I was pleased to see President Biden take action last week to strengthen our critical minerals supply chain by invoking the Defense Production Act to address the minerals needed for advanced batteries.

- I am also proud of the work we did in this committee to include provisions in the Bipartisan Infrastructure Law to build up our domestic manufacturing and recycling capabilities.

- While these actions are a crucial step forward, more action is going to be necessary to get supply chains – including mining, processing, manufacturing, and more – where they need to be domestically to keep up with the growing demand for these critical minerals instead of increasing our reliance on China.

- Government support and intervention are necessary. But industry truly needs to be the leader in securing reliable and ethically-sourced supplies for the materials that make up their products.

- Every company involved in the downstream manufacturing of products that contain critical minerals has a responsibility to know where their parts and materials are coming from.

- Companies must commit to building partnerships with domestic producers and material processers, and when they source overseas, transparency is a prerequisite.

- Manufacturing should be done with recycling in mind, and if there are barriers to that, I want to hear about them so we can get this right sooner than later.

- I am pleased that we are joined today by several witnesses who will be able to shed some light on how the private sector is approaching all of these challenges.

- According to the International Energy Agency, stationary and electric vehicle batteries will account for about half of the mineral demand growth from clean energy technologies over the next twenty years.

- As the sector responsible for the largest portion of total U.S. greenhouse gas emissions, there is no question that we need to be doing all that we can to reduce emissions in the transportation sector.

- EVs certainly have a role to play in addressing those emissions.

- However, with China's dominance over the critical minerals required for EVs, I have grave concerns about moving too quickly toward an EV-only future.

- When it comes to the EV battery supply chain, China is responsible for 80% of the world's battery material processing, 60% of the world's cathode production, 80% of the world's anode production, and 73% of the world's lithium ion battery cell production. They've cornered the market.

- With numbers like these, it is frustrating to hear calls for a swifter transition to electrified transportation to reduce our dependence on foreign oil.

- We cannot replace one unreliable foreign supply chain with another and think it will solve our problems.

- That is why I also continue to advocate for parallel investment in hydrogen as a clean transportation fuel.

- Now, I believe that domestic mining has to play a role in reducing our reliance on foreign supplies of raw materials but it is not the only tool we have in our toolbox.

- Recycling provides a tremendous opportunity to avoid outsourcing the raw supply of critical minerals we need while creating new economic opportunities right here at home.

- This chart shows that recycling is a more efficient way to recover these materials in some cases.

- According to the Department of Energy, we can recover, 1 ton of battery grade lithium from only 28 tons of spent lithium-ion batteries compared to 750 tons of brine or 250 tons of ore.

- And for cobalt, one ton of battery grade cobalt only needs 5 to 15 tons of spent batteries compared to 300 tons of ore; and all of this material can feed right back into the processing capacity we are developing here.

- I'm pleased that we are joined by Mr. JB Straubel of Redwood Materials who can talk about the opportunities to grow this promising new industry.

- In the 1940s, in the wake of World War 2 and as the Cold War started, Kryptonite made its first appearance in a Superman comic.

- A rare mineral found only on the fictional planet of Krypton, Kryptonite is the only thing that can render the seemingly invulnerable "Man of Steel" powerless.

- As tensions grew during the Cold War, our demand for critical minerals was nowhere close to where it is today but it turns out DC Comics was onto something. The more we dive into this topic of critical minerals, the more I'm convinced that Superman isn't the only one who can be brought to his knees by rare minerals.

- If we don't address our dependence problem and look for innovative ways to onshore the supply chain, it will compromise our energy security and handicap us in the global marketplace.

- We cannot let that happen.

- I look forward to hearing from our witnesses today to understand how we can find a realistic path forward to continue utilizing the technologies we need without sacrificing our energy and national security.

- And with that I'll turn it over to Ranking Member Barrasso for his opening remarks.