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ADVANCING TRANSFORMATIVE TRANSPORTATION
TECHNOLOGIES TO ENSURE OUR ENERGY SECURITY

July 12, 2021

The Honorable Joe Manchin
Chair, Senate Energy and Natural
Resources Committee
304 Dirksen Senate Office Building
Washington, DC 20510

Dear Chairman Manchin:

SAFE is writing to express its strong support for the critical mineral supply chain and electric grid provisions in the latest version of the “Energy Infrastructure Act” and expresses sincere appreciation for the policies reflected in this Chairman’s Mark.

SAFE is a nonpartisan, nonprofit organization founded in 2004 to enhance the nation’s energy security and support its economic resurgence and resiliency by advancing transformative transportation and mobility technologies and ensuring that the United States secures key aspects of the technology supply chain to achieve and maintain our strategic advantage. SAFE develops and advocates for policies that promote the efficient use of domestic resources and supply chains and the diversification of fuels within the transportation sector, including electric vehicles, which require a secure supply of critical minerals to produce and a reliable, resilient, and secure grid to power them.

The world is transitioning to an increasingly electric, connected future fueled by batteries and critical minerals. Today, Beijing and the Chinese Communist Party dominate the battery arms race, while the United States and its allies are struggling to find a way to compete. China directly or indirectly controls 70 percent of the world’s lithium supply. More than 60 percent of the world’s cathodes and 80 percent of the world’s anodes used in batteries are produced in China, and of the hundreds of battery mega-factories existing or in production around the world, only 11 are planned for North America.

To help address these challenges and to ensure the United States and our allies can win this race for the future, SAFE commends the Committee for the Title that seeks to enhance supply chain security for clean energy technology. In particular:

- SAFE appreciates the robust, comprehensive approach to mapping and using our critical mineral resources, including leveraging the **Earth MRI program** and establishing an **Energy and Minerals Research Facility**. Minerals are the fuel of the future, and it is time that we treat them that way.
- The importance of not simply being the assemblers of the future cannot be overstated: SAFE commends the establishment of the **Battery Material Processing Grant** within DOE's Office of Fossil Energy and the **Battery Manufacturing and Recycling Grant** within DOE's Office of Energy Efficiency and Renewable Energy.
- SAFE especially praises the Committee for the provision pertaining to the use of **existing mine waste on abandoned mine lands** and for establishing a **clean energy demonstration program** for current and former mine lands.
- While SAFE applauds the Committee's attention to the critically-important issue of mineral processing, SAFE encourages the Committee to focus on establishing a **rare earth element processing cooperative**, rather than a demonstration facility, as an economic response to an exercise of Government-backed monopoly power by the Chinese Communist Party.

Furthermore, we also need to continue to work to enhance the reliability, resilience, and security of our energy infrastructure, on which every aspect of society depends, as you are well aware.

Thus, SAFE particularly underscores its strong support for the Title that seeks to enhance electric grid reliability and resilience, particularly the grants and the **framework to assess the resilience of energy infrastructure and the items highlighted below**. This Title represents substantial progress from the status quo. SAFE encourages the Committee to continue to enhance the language as this legislation proceeds to ensure that infrastructure risk assessments and other measures designed to enhance infrastructure resilience use *future-looking weather and extreme event forecasts and scenarios*, rather than solely relying on historic or current forecasts, as well as relevant modeling and scenario development and analysis throughout this bill.

SAFE also commends the Committee for having included the following key items:

- **Sections 1005 and 1006, consisting of siting of interstate electric transmission facilities and an inter-regional transmission planning rulemaking**, respectively. Expanding transmission and facilitating its development is vital to further enhancing grid reliability and resilience and long overdue. SAFE encourages the Committee to consider designating the national interest corridors as such and eliminating the requirement in Section 1005 for a study or other information collection, as this provision continues to move through the legislative process. SAFE also encourages the Committee to ensure

the transmission provisions herein reflect the importance of market competition, particularly within regional power markets.

- **Section 1007: The capacity contract, or “anchor tenant,” provision** that would authorize the U.S. Department of Energy (DOE) to enter into capacity contracts with transmission developers. This provision would further facilitate transmission development across the U.S.

The aforementioned Sections will help the electric system avoid, for example, the type of widespread outages that Texas faced during its severe cold spell in February.

Section 1008: Deployment of technologies to enhance grid flexibility. SAFE appreciates the expansion of the **smart grid technologies**. As you are aware, deploying these technologies facilitates situational awareness of the electric system and of overall system reliability, resilience, and security.

- **Section 1010: The State Energy Programs** need robust funding to accomplish the States’ important energy missions, many of which also focus on energy resilience. The new **State Energy Security plans (Section 1009)** seem worthwhile. Here, too, SAFE encourages the Committee to ensure these plans incorporate *future-looking weather and extreme event forecasts and scenarios*, to the greatest extent practicable.
- **Section 1013: Demonstration of electric vehicle battery second-life applications for grid services.** This is an important addition to the bill from the prior Discussion Draft, because EV batteries often have valuable secondary grid-related applications.
- **Subtitle B:** The importance and timeliness of the **cybersecurity** provisions herein cannot be overstated, given recent events and ongoing threats. SAFE especially wishes to express support for **Sections 1101 and 1102, i.e., the public-private partnership and Cyber Sense provisions**, respectively.

Lastly, SAFE encourages you and your colleagues to consider adding language to facilitate the deployment of **“vehicle-to-grid” (V2G)**, or bi-directional charging, capability **beyond** the data collection provision currently in **Section 4104** of the bill. Having vehicles essentially act as “mobile batteries” will help manage electric loads and will enhance the resilience of buildings and of the electric system, more broadly, as you are well aware. More specifically, SAFE requests that you consider adding language to facilitate and incent **federal and state fleets** as well as the associated **charging infrastructure** to have V2G, or bi-directional, charging capability. In addition, SAFE strongly encourages you to consider adding **V2G federal technical assistance** to the Chairman’s Mark, so that DOE provides technical assistance to state, local, and Tribal governments to help the latter entities better understand V2G capabilities, and their value and importance, and to help them implement these V2G capabilities.

Thank you for your continued efforts to ensure this range of critical supply chain and critical energy infrastructure, particularly the electric system, are addressed herein and recognizing that these elements must be part of physical infrastructure legislation going forward. SAFE stands ready to continue to be a resource to the Committee.

Sincerely,

A handwritten signature in black ink that reads "Robbie Diamond". The signature is written in a cursive, slightly slanted style.

Robbie Diamond
CEO and Founder
SAFE