

June 12, 2024

The Honorable Jennifer Granholm
Secretary
U.S. Department of Energy
1000 Independence Ave., S.W.
Washington, D.C. 20585

Dear Secretary Granholm,

Section 40211 of the Infrastructure Investment and Jobs Act (IIJA) required the U.S. Department of Energy (DOE) to establish the 21st Century Energy Workforce Advisory Board (the Board) to provide recommendations to the Secretary of Energy on DOE's strategy in support of current and future energy sector workforce needs.¹ Among other provisions, section 40211(c)(1)(D) requires the Board to "identify the energy sectors in greatest need of workforce training and in consultation with the Secretary of Labor develop a workforce trained to work in those energy sectors."² Nearly all energy sectors are facing workforce shortages. The Board must consider and include the workforce needs of traditional energy sectors, including coal, oil, and gas, as well as the domestic mining industry, to comprehensively evaluate our current domestic energy workforce needs.

Section 40211(a)(2) of the IIJA requires the Board to "develop a strategy for the Department that, with respect to the role of the Department in the support and development of a skilled energy workforce...provides opportunities for students to become qualified for placement in *traditional energy sector* [emphasis added] and emerging energy sector jobs."³ The oil and gas industry supports close to 11 million jobs in the United States.⁴ Coal, oil, gas, and nuclear energy production face severe workforce challenges, despite accounting for 80 percent of domestic energy production.⁵ With traditional energy sectors providing such a substantial percentage of the total domestic energy, it is imperative that the Board consider these critical factors while supporting domestic energy workforce needs.

Furthermore, mined materials are necessary for nearly all renewable and future energy technologies, including wind, solar, energy storage, and electric vehicles.⁶ For example: over four and a half tons of copper are required for a single wind turbine;⁷ a typical electric car

¹ Pub. L. No. 117-58

² *Id.*

³ *Id.*

⁴ API, Behind the 10.8 Million Stat: The People of American Oil and Natural Gas, available at, <https://www.api.org/news-policy-and-issues/blog/2023/05/17/behind-the-108-million-stat-the-people-of-american-oil-and-natural-gas>

⁵ EIA, What is U.S. Electricity Generation by Energy Source?, available at, <https://www.eia.gov/tools/faqs/faq.php?id=427&t=3#:~:text=About%2060%25%20of%20this%20electricity,was%20from%20renewable%20energy%20sources.>

⁶ CSIS, Critical Minerals and the Role of U.S. Mining in a Low-Carbon Future, available at, <https://www.csis.org/analysis/critical-minerals-and-role-us-mining-low-carbon-future>.

⁷ Copper Development Association Inc., Renewables, available at, <https://www.copper.org/environment/sustainable-energy/renewables/>.

requires six times the mineral inputs of a conventional car;⁸ and according to the Center for Strategic and International Studies, there will be a 1,000 percent increase in demand for minerals needed for future energy technologies.⁹ Yet, at the same time, McKinsey & Company reported that 71 percent of mining leaders stated that talent shortages are holding them back from meeting production targets and strategic objectives.¹⁰ In fact, the Society of Mining, Metallurgy & Exploration forecasts that half of the domestic mining workforce will retire by 2029.¹¹ In 2020, U.S. mining and mineral engineering schools awarded 327 degrees, representing a 39 percent net drop in the number of graduates since 2016.¹² By contrast, China currently oversees 44 mining schools graduating more than 5,000 students annually.¹³ To protect our competitive advantage against China, is essential that we evaluate and address the workforce needs of the domestic mining industry.

To ensure that all domestic energy sectors and sectors critical to future domestic energy development are adequately considered and represented by the work of DOE's 21st Century Energy Workforce Advisory Board, we request that you provide detailed responses to the below questions by July 12, 2024:

1. Will you commit that the Board will evaluate the workforce needs of the oil and gas industry, the coal industry, the nuclear industry, and the domestic mining industry, as it completes its statutory obligations under the IJIA?
 - a. What has the Board done to evaluate the workforce needs of the domestic mining industry?
 - b. If the Board has conducted evaluations of the domestic mining workforce, please include all findings and reports.
2. What steps have you taken to ensure that the Board's findings will represent all traditional energy sectors, including coal, oil, and gas?
3. Are any of the Board's members currently employed in a traditional energy sector?
4. Which individuals, companies, organizations, or trade associations representing traditional energy industries have the Board consulted with to reach its conclusions and recommendations?
5. Is the Board considering that the domestic mining industry is essential to supplying minerals needed for new and renewable energy technologies when determining the workforce needs of the domestic energy industry? Similarly, is the Board considering

⁸ IEA, How critical minerals can unlock a cleaner energy future, *available at*, <https://www.iea.org/topics/critical-minerals>.

⁹ *Id.*

¹⁰ McKinsey & Company, Has mining lost its luster? Why talent is moving elsewhere and how to bring them back, *available at*, <https://www.mckinsey.com/industries/metals-and-mining/our-insights/has-mining-lost-its-luster-why-talent-is-moving-elsewhere-and-how-to-bring-them-back>.

¹¹ Society for Mining, Metallurgy & Exploration, Workforce Trends in the U.S. Mining Industry, *available at*, <https://www.smenet.org/What-We-Do/Technical-Briefings/Workforce-Trends-in-the-US-Mining-Industry>.

¹² RealClear Energy, To Meet Soaring Demand for Rare Minerals, America Needs to School More Mining Engineers, *available at*, https://www.realclearenergy.org/articles/2023/12/06/to_meet_soaring_demand_for_rare_minerals_america_needs_to_school_more_mining_engineers_997319.html

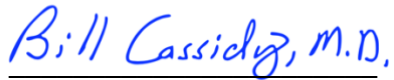
¹³ Foreign Policy, Uncle Sam Wants You to Join the Mining Industry, *available at*, <https://foreignpolicy.com/2024/05/09/united-states-critical-minerals-mining-workforce-china/>.

how petrochemicals and other products made possible by oil and gas production are essential for new and renewable energy technologies?

6. How will the Board's recommendations and strategy for DOE provide opportunities for students to become qualified for placement in traditional energy sector jobs, including in the coal, oil, and gas industries? Please provide specific examples.

We appreciate your prompt response to this inquiry.

Sincerely,



Bill Cassidy, M.D.
United States Senator



Michael S. Lee
United States Senator