Hudson Institute

Prof. Brigham McCown, J.D., M.B.A.
Senior Fellow
Director, Initiative on American Energy Security

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Mr. Calvin Huggins
Legislative Clerk
Committee on Energy and Commerce
2125 Rayburn House Office Building
Washington, DC 20515
Calvin.Huggins1@mail.house.gov

Dear Mr. Huggins:

Thank you for the opportunity to testify before the House Energy and Commerce Subcommittee on Energy during the February 5, 2025, hearing titled "***Powering America's Future: Unleashing American Energy.***" I am pleased to provide the following responses to the additional questions for the record submitted by Members of the Subcommittee.

The Honorable Robert E. Latta

1. How important is strong U.S. nuclear industry infrastructure, including for fuels, for our international relationships?

A strong U.S. nuclear industry, inclusive of a robust nuclear fuel supply chain, is foundational to maintaining and expanding our international relationships. As many allies seek to enhance their own energy security, U.S. leadership in nuclear technology and fuel cycle services offers a credible alternative to adversarial nations such as Russia and China. Strengthening our domestic capacity allows us to export not only fuel and technology but also regulatory frameworks and nonproliferation standards, reinforcing alliances and enabling geopolitical stability. Civil nuclear cooperation with friendly States also ensures a fifty-year horizon of cooperation given the length of time a nuclear facility can be run. Stated conversely, allowing Russia to China win commercial contracts also means a half-century of dependence on these regimes.

I would also like to note the closure of the Paducah, Kentucky and Piketon, Ohio gaseous diffusion plants marked a low tide for American self-reliance and domestic production capabilities. New centrifuge enrichment facilities are badly needed to address current deficiencies.

2. Your testimony underscores the importance of modernizing our infrastructure to ensure we reliably get energy to consumers. As the co-chair of the Grid Innovation Caucus, I am interested in grid enhancing technologies that improve the performance of the transmission system. An example is the use of advanced power conductors that can double capacity of the grid using the same right of way. Please comment on this approach and how it helps ensure we get the most out of the current grid by deploying modern technology?

Advanced power conductors, such as high-temperature, low-sag (HTLS) cables, offer a pragmatic and cost-effective solution to congestion and limited capacity on existing transmission

lines. These technologies can double or even triple the capacity of legacy infrastructure, enabling greater integration of both dispatchable and variable generation without the prolonged regulatory delays of building new lines. This is precisely the kind of low-hanging fruit policymakers should prioritize to modernize our grid swiftly and at lower cost.

We also need permitting reform to allow this critical infrastructure to be built within a reasonable timeframe given that it can take up to a decade, or longer, to complete projects. That is a sobering thought when one considers the power grid we have today is likely to be the same power grid we will still have in ten years unless Congress acts to further improve permitting laws.

3. As you note in your testimony, we expect a significant increase in the demand for electricity to address the surge in power needs from AI and data centers. This power needs to be reliable dispatchable generation. We also need as soon as possible more grid capacity to deliver this new generation to data centers and new manufacturing centers. We can't wait ten years to site new transmission. Are there short-term technologies that can be deployed to address this grid congestion problem?

Yes. Grid-enhancing technologies (GETs) such as dynamic line ratings, modular power flow controllers, and advanced conductors can be deployed relatively quickly to alleviate congestion. Additionally, distributed energy resources and microgrids may offer localized solutions to serve critical loads, especially in industrial and digital infrastructure hubs. These technologies should be part of an immediate strategy while longer-term transmission planning and permitting reforms are implemented. We should also be looking to create grid resiliency including redundancies and hardening against potential cyber threats, much of which is technology driven.

4. We can pursue the innovations that produce cleaner energy, yet should we also pursue policies that put national security and American economic security and competitiveness back at the center of our energy policy?

Absolutely. Innovation should complement, not replace, a national strategy centered on security and competitiveness. America's ability to produce abundant, reliable, and affordable energy domestically is a strategic asset. We must not cede this advantage by relying on foreign-controlled supply chains or intermittent technologies without adequate baseload support. Energy policy must be guided by principles that prioritize affordability, reliability, and sovereignty — which are essential to national and economic security.

5. How do LNG exports and nuclear technology exports serve a paradigm of national security and energy security?

Both LNG and nuclear exports strengthen U.S. alliances and provide vital alternatives to authoritarian energy suppliers. U.S. LNG has helped Europe pivot away from Russian gas, reducing geopolitical leverage from Moscow. I also note that Iran shares vast natural gas deposits and could leverage tht supply in the future. Similarly, exporting nuclear technology supports nonproliferation goals and prevents countries from turning to China or Russia for infrastructure and expertise. These exports are tools of diplomacy that advance both our economic interests and our national security objectives.

I am pleased to see this administration reverse the politically motivated 'LNG Pause' and move forward permitting and licenses. Our key allies in Europe and Asia want more LNG, much more than we are currently able to offer. We must ensure the administration remains focused on expediting these approvals which is the joint work of DOE, DOT (MARAD, PHMSA) and DHS (USCG).

The Honorable Gary Palmer

1. How do we utilize hydrocarbon energy as we advance our energy production through nuclear?

Hydrocarbons and nuclear energy are not mutually exclusive; they are complementary. Natural gas provides the dispatchable power and industrial feedstock necessary for our economy, while nuclear offers carbon-free baseload generation with unmatched reliability. As we transition toward cleaner energy, hydrocarbons will remain essential for decades to come — not only to bridge the gap but to support sectors nuclear cannot reach, such as aviation and petrochemicals. Strategic energy policy embraces both, ensuring resilience and diversity in supply.

While our energy mix will naturally change over time, the worst policy decision we could make at this time is to rush ahead prematurely with an energy policy that pushes intermittent and expensive solutions, or dependencies upon unfriendly nations for our raw materials and supply chain. We learned our lesson from the Arab Oil Embargo of 1973, and we should not forget that lesson as we understand that the PRC controls the renewable market when it comes to wind, solar, EVs, and batteries in general.

The Honorable Lizzie Fletcher

1. In your testimony, you point to U.S. LNG exports to Europe as a key energy lifeline following Russia's invasion of Ukraine. Just last month, an agreement allowing roughly half of Russian natural gas to flow through Ukrainian pipelines expired, leaving Europe with about a 5% gap in its supply of natural gas. In each of the past two Congresses, I've led the American Gas for Allies Act, a bill that would allow U.S. projects to receive expedited approval from the Department of Energy to export LNG to NATO member countries. Can you speak to the importance of providing a dependable supply of American energy resources to our European allies from an energy security perspective?

The American Gas for Allies Act represents a positive strategic policy initiative. By accelerating LNG exports to NATO countries, we not only provide our friends and allies with increased economic and energy security, but we are also reinforcing our defense commitments to the continent. Europe's reliance on stable, sources of energy from a fellow democratic country mitigates the risk of coercion from adversarial States while simultaneously depriving countries like Russia of the money needed to support aggression. U.S. LNG is cleaner than most, if not all, global alternatives, and supports global emissions reductions while ensuring our allies remain resilient. This legislation aligns with American interests both economically and geopolitically and is good for America.

Thank you once again for the opportunity to contribute to the Subcommittee's vital work. Please do not hesitate to reach out if I can provide further assistance.

Sincerely,

[redacted]

Senior Fellow
Director, Initiative on American Energy Security
Office (202) 974-2400