

Testimony of Dr. K. Michael Goff
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U.S. Department of Energy
Before the
Committee on Energy and Commerce
Energy, Climate, & Grid Security Subcommittee
U.S. House of Representatives

July 18, 2023

Introduction

Thank you Chairman Duncan, Ranking Member DeGette, Chair McMorris Rodgers, Ranking Member Pallone, and distinguished Members of the Committee. I am honored to appear before you today representing the Department of Energy (DOE), and I look forward to discussing the nuclear energy issues and legislation under consideration by this Committee. The Department does not have an official position on the bills you are considering today but appreciates the Committee's longstanding bipartisan support for the Department's civilian nuclear activities and the broader civilian nuclear industry.

To swiftly reduce our carbon emissions and rebuild U.S. leadership globally, the Biden-Harris Administration is prioritizing activities that keep the existing fleet of nuclear power plants in operation, deploy advanced reactor technologies, secure and sustain the nuclear fuel cycle, strengthen nuclear safety, security, and safeguards, and expand international nuclear energy cooperation and nonproliferation. Nuclear energy provides emissions-free, firm power necessary to fundamentally underpin the transition to a carbon-free energy electric grid by 2035. New nuclear reactor deployments also have the potential to decarbonize industrial applications in support of the Net Zero by 2050 goals set by the United States and our partners around the globe. Ensuring this future for our nation and our allies must include a secure and reliable source of fuel for today's nuclear power plants and those of tomorrow. As prioritized by President Biden in his recently released National Security Memorandum on Countering Weapons of Mass Destruction Terrorism and Advancing Nuclear and Radioactive Material Security, the United States is committed to lead the way in the responsible development and deployment of advanced nuclear reactors by championing the development and export of technology that incorporates the highest standards of safety, safeguards, and security by design while minimizing the use and accumulation of weapons-usable nuclear materials.¹ I greatly appreciate the Committee's attention today on the programs and policies that shape our nation's nuclear energy objectives.

¹ [FACT SHEET: President Biden Signs National Security Memorandum to Counter Weapons of Mass Destruction Terrorism and Advance Nuclear and Radioactive Material Security | The White House](#)

Civilian Nuclear Supply Chains

The Department appreciates the Committee's continued attention to supply chain concerns that affect the civilian nuclear industry.

In particular, the Russian Federation's brutal invasion of Ukraine has demonstrated the grave threat to global energy security posed by dependence on Russian-supplied fuels. Russia, the largest global enricher of uranium, currently supplies a significant portion of the nuclear fuel supply chain to the United States and our international allies and partners. In particular, conversion and enrichment services from trusted sources are insufficient to replace current U.S. imports from Russia. Without expansion of domestic and international allies' and partners' fuel cycle capacity, the United States cannot reliably make sufficient low enriched uranium (LEU) or high-assay LEU (HALEU) available to support the needs of today's power reactor fleet, advanced reactors, research reactors, and medical isotope production facilities. This strategic vulnerability is unsustainable.

In addition, Russia's military attacks at, and subsequent seizure of, Ukraine's Zaporizhzhya Nuclear Power Plant (ZNPP) and the associated heightened risks of a nuclear incident underscore the nuclear safety, security, and nonproliferation concerns of doing business with Russia in the nuclear energy area.

The Department is working to address these energy security challenges in the face of ongoing global events. As noted, the United States currently purchases a significant amount of enriched uranium from Russia. In 2022, 24% came from Russia. We cannot continue to infuse the Russian state with this source of income and must begin to reduce and ultimately eliminate U.S. reliance on Russia in the nuclear energy area, especially as Russia irresponsibly engages in strikes that disregard nuclear safety and security and a nuclear incident in Ukraine.

As you know, there is no quick, easy path to reduce our dependence on Russian-supplied fuels. Expanding our domestic fuel capacity will require strategic investments coupled with import restrictions that protect those investments well into the future. We must act swiftly to support domestic enrichment capabilities and prepare our industry for this transition. The Department welcomes the opportunity to work with Congress to address this national security vulnerability.

Working with Allies

The United States and our allies share common visions of democracy as well as safe and secure global economic and energy systems. In the June 2022 Group of Seven Leaders' Communique, the United States and our G7 partners made clear our collective intent to reduce reliance on civil nuclear and related goods from Russia, including working to assist countries seeking to diversify their nuclear fuel supply chains.

To this end, the United States, Canada, France, Japan, and the United Kingdom have identified potential areas of collaboration on nuclear fuels to support the stable supply of fuels for the operating reactor fleets of today, enable the development and deployment of fuels for the advanced reactors of tomorrow, and achieve reduced dependence on Russian supply chains. This multilateral effort, as outlined in the Statement on Civil Nuclear Fuel Cooperation on April 17,

2023, would aim to recognize and leverage the unique resources and capabilities possessed by each country's civil nuclear sectors to establish a global commercial nuclear fuel market. Collaborating on strategic opportunities in uranium extraction, conversion, enrichment, and fabrication supports our collective climate, energy security, and economic resilience objectives. This multilateral cooperation would enable us to strengthen our domestic sectors and establish a level playing field to compete more effectively against predatory suppliers.

Part 810

In accordance with § 57 (b).(2) of the Atomic Energy Act of 1954 (AEA), persons may engage, directly or indirectly, in the production or development of special nuclear material outside the United States upon authorization by the Secretary of Energy, with the concurrence of the Department of State (DOS) and after consulting with the Departments of Defense (DoD) and Commerce (DOC), and the Nuclear Regulatory Commission (NRC). Part 810 of Title 10, Code of Federal Regulations (Part 810) implements AEA § 57(b)(2), pursuant to which the Secretary has granted a “general authorization” for certain categories of activities which the Secretary has found to be non-inimical to the interest of the United States – including assistance or transfers of technology to the “generally authorized destinations” listed in Appendix A to Part 810. Other activities within the scope of Part 810 -- including transfers of technology or provision of assistance to destinations not listed in Appendix A (“specifically authorized” destinations) – require a “specific authorization” from the Secretary. A specific authorization also is required for any assistance involving sensitive nuclear technologies (including enrichment, reprocessing, plutonium fuel, and heavy water production, regardless of the destination's status under the regulation).

Most major international nuclear import/export markets are “generally authorized” under Part 810. As such, U.S. industry can quickly and efficiently engage in most civil nuclear-related business with foreign clients that require access to Part 810-controlled technology. Earlier this year, Mexico was generally authorized, bringing the total number of generally authorized destinations to 48. DOE continues to evaluate and improve the Part 810 process with the goal of reducing the average processing time for approval of specific authorization requests. However, thorough consultations and concurrences, both intra-departmental and interagency, remain imperative to maintaining strong nonproliferation controls. There are several key challenges to achieving further reductions in processing times, including the time it takes for the proposed recipient country to provide assurances and unforeseen or ongoing foreign policy considerations, both of which can result in delays and take significant amounts of time to resolve. **Price-Anderson Report**

As noted in the Department's 2023 Price-Anderson Report, we recommend that the broad and mandatory coverage of the DOE indemnification remains unchanged and undiminished with respect to contractual activity within the United States and be expanded to include additional contractual activity by DOE contractors on behalf of DOE outside the United States to reflect changed circumstances.² The Price-Anderson Act (PAA) has been a cornerstone of nuclear

² https://www.energy.gov/sites/default/files/2023-02/PAA%20Report%20January%202023_0.pdf

activities in the United States since the 1950s. In particular, the DOE indemnification of its contractors pursuant to the PAA has been a longstanding and critical component of DOE's ability to achieve its statutory missions. The PAA provides a comprehensive and equitable system of financial protection to address the concerns of both participants in nuclear activities and persons who may be injured by a nuclear incident. The PAA expires on December 31, 2025. In its recent Report to Congress on the need for continuation or modification of the PAA, the Department recommended that:

- (1) the PAA should continue;
- (2) the DOE indemnification should continue and expand upon its broad and mandatory coverage; and
- (3) the PAA should continue in effect in a manner compliant with the Convention on Supplementary Compensation for Nuclear Damage.

The Report found that renewal of the PAA would be in the best interests of DOE, its contractors, its subcontractors and suppliers, and the public. I would be happy to work with you as you consider renewal of this important Act.

Additional Policy Considerations – Fuel Supply Chains

We have developed an acquisition strategy for HALEU pursuant to Section 2001 of the Energy Act of 2020 within the context of a broader uranium strategy for the Department. The investments provided in the *Inflation Reduction Act* for HALEU are allowing the Department to begin helping the private sector establish a commercial U.S. HALEU production and supply chain capability for the long term, and thus begin mitigating U.S. reliance on Russia for various uranium products, including both low enriched uranium (LEU) and potentially HALEU needed to support the current fleet and future advanced reactors. The nuclear industry's response to the Department's proposed acquisition strategy and financial assistance opportunities under development has helped inform the Department's uranium acquisition strategy. We are now considering feedback received from industry as we prepare the final funding announcement. In addition, we have initiated the National Environmental Policy Act (NEPA) review process for the program to support the domestic commercialization of HALEU production and to acquire HALEU for ultimate commercial use or demonstration projects. The Department supports the continued safe operation of our existing reactors, and we support a very robust and aggressive uranium strategy for LEU and HALEU. We appreciate the Committee's leadership on this issue.

Conclusion

Thank you for the opportunity to appear before the Committee today. I look forward to continuing to work with you toward a more sustainable, equitable, reliable, affordable, safe, and secure energy system for our nation. I look forward to your questions.