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Comptroller General
of the United States

Accessible Version

June 10, 2025

The Honorable Michael Kratsios
Director
Office of Science and Technology Policy
1650 Pennsylvania Avenue
Washington, D.C. 20504

Priority Open Recommendations: Office of Science and Technology Policy

Dear Director Kratsios:

Congratulations on your appointment. The purpose of this letter is to call your personal attention to four areas based on GAO's past work and six open priority recommendations, which are enclosed.¹ Additionally, there are three other GAO open recommendations that we will continue to work with your staff to address.

We are highlighting the following areas that warrant your timely and focused attention. Specifically:

Strengthening advanced manufacturing. Strengthening U.S. manufacturing competitiveness has been a priority across administrations. The Office of Science and Technology Policy (OSTP) led the development of a national strategic plan for advanced manufacturing to help organize agencies' efforts, and the plan was most recently updated in October 2022.² However, the plan does not include specific metrics or information to be collected to help determine whether the plan's goals are being achieved. Implementing our priority recommendation to ensure that the strategic plan identifies specific, measurable information that OSTP will collect from agencies would help the office assess progress toward the plan's goals and objectives.

Ensuring access to critical materials, including minerals. Access to critical materials is essential for advanced technologies across many sectors. Historically, the U.S. Geological Survey has provided fairly robust data on the availability of key minerals in the supply chain. However, in September 2016, we found that there may be data limitations for potentially critical materials beyond minerals, such as neon gas. OSTP has provided examples of activities related

¹GAO considers a recommendation to be a priority if when implemented, it may significantly improve government operations, for example, by realizing large dollar savings; eliminating mismanagement, fraud, and abuse; or making progress toward addressing a high-risk or duplication issue.

²The national strategic plan for advanced manufacturing is to be updated every 4 years as required by the America COMPETES Reauthorization Act of 2010, as amended. 42 U.S.C. § 6622(c)(4).

to data collection and assessments of critical minerals or materials but as of May 2025 has not provided information on a plan or strategy to address data limitations.

In addition, we found in June 2022 that OSTP has yet to update a 2019 critical minerals strategy to address new statutory requirements and guide interagency efforts on recovery and substitution of critical minerals. Implementing our priority recommendations to (1) develop a plan to address data limitations and (2) update the 2019 strategy to address statutory requirements, among other things, would help the U.S. better anticipate and mitigate critical material supply disruptions.

Addressing research security risks. Addressing risks to the security of U.S. research posed by foreign entities of concern has increasingly become a priority for federal agencies. In January 2022, OSTP issued guidance for addressing foreign risks to research security. However, in January 2024, we found that the guidance did not address the issue of foreign ownership, control, or influence. Agency officials reported challenges in handling this issue, including a lack of information sharing across agencies. Because OSTP leads federal interagency coordination on science and technology policies, implementing our priority recommendation to facilitate information sharing across agencies would help address this challenge.

Fostering infrastructure resilience. Extreme weather events can pose significant risks to physical infrastructure. Enhancing resilience to such risks entails better planning to reduce losses, rather than waiting for an event to occur and paying for recovery afterward. However, in April 2013, we found that decision-makers had not systematically incorporated potential climate impacts in infrastructure planning because of multiple impediments. For example, decision-makers faced challenges identifying and obtaining available climate information best suited for their projects and uncertainty in how to access local assistance.

Since February 2013, we have included the [Limiting the Federal Government's Fiscal Exposure by Better Managing Climate Change Risks](#) area on our High-Risk List.³ Additionally, disaster resilience can reduce the need for more costly future recovery assistance. Given the rise in the number and cost of disasters and to facilitate more significant reduction to the nation's overall disaster risk, we added [Improving the Delivery of Federal Disaster Assistance](#) to our High-Risk List in February 2025.⁴

More recently, in March 2025, Executive Order 14,239 emphasized the importance of sound local decisions and investments to address wildfires, hurricanes, and other risks.⁵ Identifying the best available climate-related information and clarifying sources of local assistance for incorporating such information and analysis, as we recommended, could help improve the climate resilience of the nation's infrastructure.

³GAO, *High-Risk Series: An Update*, [GAO-13-283](#) (Washington, D.C.: Feb. 14, 2013).

⁴GAO, *High-Risk Series: Heightened Attention Could Save Billions More and Improve Government Efficiency and Effectiveness*, [GAO-25-107743](#) (Washington, D.C.: Feb. 25, 2025).

⁵Exec. Order No. 14,239, *Achieving Efficiency Through State and Local Preparedness*, 90 Fed. Reg. 13,267 (Mar. 21, 2025).

Please see Enclosure 1 for additional details about the status and actions needed to fully implement all six open priority recommendations out of the nine total recommendations that remain open.

We also provide in Enclosure 2 additional information on OSTP's recommendation implementation rate and changes in priority recommendations since our August 2024 letter to Director Prabhakar, and relevant management challenges from our high-risk list that apply to OSTP. In response to a law enacted in December 2022, this enclosure also includes information on any additional congressional oversight actions that can help agencies implement priority recommendations and address any underlying issues relating to such implementation.⁶

Copies of this letter are being sent to the appropriate congressional committees. The letter will also be available on the GAO website at [Priority Recommendations | U.S. GAO](#).

If you have any questions or would like to discuss any of the issues outlined in this letter, please do not hesitate to contact me or John Neumann, Managing Director, Science, Technology Assessment, and Analytics at neumannj@gao.gov. Contact points for our offices of Congressional Relations and Public Affairs may be found on the last page of this letter. Our teams will continue to coordinate with your staff to address these priority recommendations and the other three open recommendations. I appreciate OSTP's continued commitment and thank you for your personal attention to these important issues.

Sincerely,

//SIGNED//

Gene L. Dodaro
Comptroller General
of the United States

Enclosures – 2

⁶James M. Inhofe National Defense Authorization Act for Fiscal Year 2023, Pub. L. No. 117-263, § 7211(a)(2), 136 Stat. 2395, 3668 (2022).

Enclosure 1

Priority Open Recommendations to the Office of Science and Technology Policy

Strengthening Advanced Manufacturing

U.S. Manufacturing: Federal Programs Reported Providing Support and Addressing Trends. [GAO-17-240](#). Washington, D.C.: March 28, 2017

Year Recommendation Made: 2017

Recommendation: To enhance the ability of the Executive Office of the President to implement the Revitalize American Manufacturing and Innovation Act of 2014 requirements related to reporting on advanced manufacturing,⁷ the Director of OSTP, working through the National Science and Technology Council and agency leadership, as appropriate, should identify the information they will collect from federal agencies to determine the extent to which the objectives outlined in the National Strategic Plan for Advanced Manufacturing are being achieved.

Actions Needed: OSTP neither agreed nor disagreed with this recommendation. OSTP stated that a mechanism existed to collect information from federal agencies to determine the extent to which the objectives in the National Strategic Plan for Advanced Manufacturing are being achieved. We revised the recommendation to focus on the need for OSTP to identify the information to be collected to measure progress toward the national plan's objectives.

In October 2022, the Subcommittee on Advanced Manufacturing published an updated National Strategy for Advanced Manufacturing.⁸ While the strategy does establish a clear linkage between the goals, objectives, and recommendations, it does not include specific metrics or information to be collected to measure achievement of such goals. In March 2024, OSTP stated that the Subcommittee continues to meet regularly to identify and collect information from agencies toward implementation of the National Strategy.

To fully address our recommendation, OSTP should also ensure that the plan identifies specific and measurable information it will collect from agencies to assess progress toward the plan's goals and objectives. Identifying such information will help ensure collection of consistent, comprehensive information with which to measure progress and will enhance reporting on the progress of advanced manufacturing efforts.

Director: Thomas Costa, Education, Workforce, and Income Security

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Ensuring Access to Critical Materials, Including Minerals

⁷42 U.S.C. § 6622(c).

⁸National Science and Technology Council, *National Strategy for Advanced Manufacturing: A Report by the Subcommittee on Advanced Manufacturing, Committee on Technology* (Oct. 2022).

Advanced Technologies: Strengthened Federal Approach Needed to Help Identify and Mitigate Supply Risks for Critical Raw Materials. [GAO-16-699](#). Washington, D.C.: September 7, 2016

Year Recommendation Made: 2016

Recommendation: To enhance the ability of the Executive Office of the President to coordinate federal agencies to carry out the national materials policy outlined in the National Materials and Minerals Policy, Research and Development Act of 1980,⁹ and to broaden future applications of the early warning screening methodology, the Subcommittee on Critical and Strategic Mineral Supply Chains (now the Subcommittee on Critical Minerals) should take the steps necessary to include potentially critical materials beyond minerals, such as developing a plan or strategy for prioritizing additional materials for which actions are needed to address data limitations.

Actions Needed: OSTP neither agreed nor disagreed with our recommendation. OSTP stated that it saw the value in analyzing more minerals and nonminerals to help inform policy decisions but that fulfilling this need would require additional dedicated personnel and financial resources. In March 2024, OSTP provided several examples of agency activities related to data collection and assessments of critical minerals or materials. However, as of May 2025, OSTP had not provided information on the development of a plan or strategy to address data limitations for materials other than minerals, including assessing data limitations for materials that may not be covered by individual agencies' efforts.

To fully address our recommendation, OSTP should work with subcommittee member agencies and other relevant interagency working groups to develop a plan to coordinate federal efforts and resources to address data limitations. For example, OSTP could work with other agencies to collect data on the quantity of materials consumed to produce advanced technologies both in the United States and globally. Doing so would enhance agencies' ability to assess other potentially critical materials, in addition to minerals, and could help to more fully implement the requirements of the Energy Act of 2020.¹⁰

Director: Candice N. Wright, Science, Technology Assessment, and Analytics

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Critical Minerals: Building on Federal Efforts to Advance Recovery and Substitution Could Help Address Supply Risks. [GAO-22-104824](#). Washington, D.C.: June 16, 2022

Year Recommendation Made: 2022

Recommendation: The Secretary of Energy, the Secretary of the Interior, and the Director of the Office of Science and Technology Policy, in collaboration with the members of the Critical Minerals Subcommittee, should update the 2019 critical minerals national strategy as it relates to recovery and substitution. The update should address newly enacted statutory requirements and recent federal efforts and incorporate characteristics of effective national strategies,

⁹30 U.S.C. §§ 1602–1604.

¹⁰Energy Act of 2020, within Consolidated Appropriations Act, 2021, Pub. L. No. 116-260, div. Z, title VII, §§ 7001–7003, 134 Stat. 1182, 2561–2578 (2020) (codified at 42 U.S.C. § 13344, 30 U.S.C. § 1606, 50 U.S.C. § 3372).

including (1) goals, subordinate objectives, activities, and performance measures; (2) resources, investments, and risk management; and (3) integration and implementation.

Actions Needed: OSTP neither agreed nor disagreed with this recommendation. As of March 2024, OSTP officials said the existing national strategy provides a useful framework for interagency collaboration and the effort required to produce a new document would take time and attention away from executing the important work underway. However, our recommendation is to update the strategy, such as by establishing priorities, time frames, and performance measures. A decision has not been made about updating the strategy according to a May 2025 OSTP update.

To fully implement this recommendation, OSTP needs to update the current national strategy consistent with leading practices for effective national strategies. Updating the strategy could enhance efforts to address the cross-cutting challenges that currently constrain efforts to advance critical minerals recovery and substitution in the U.S. and improve the strategy's usefulness to congressional and agency decision-makers.

Director: J. Alfredo Gómez, Natural Resources and Environment

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Addressing Research Security Risks

Research Security: Strengthening Interagency Collaboration Could Help Agencies Safeguard Federal Funding from Foreign Threats. [GAO-24-106227](#). Washington, D.C.: January 11, 2024

Year Recommendation Made: 2024

Recommendation: As part of OSTP's ongoing efforts to address research security risks, the Director of OSTP, in coordination with federal research and development awarding agencies, should facilitate the sharing of information on identifying foreign ownership, control, or influence. This could occur, for example, in conjunction with OSTP's existing efforts to support the national security strategy or its existing role to enhance the federal research agencies' awareness of research security risks and policies under National Security Presidential Memorandum 33.¹¹

Actions Needed: OSTP agreed with our recommendation. To fully implement this recommendation, OSTP should proactively facilitate information sharing across agencies on identifying foreign ownership, control, or influence, as we found in our report. By bringing together federal awarding agencies to share information on identifying foreign ownership, OSTP could help facilitate a more consistent and effective approach to safeguarding U.S. research and development from foreign entities of concern.

Director: Candice N. Wright, Science, Technology Assessment, and Analytics

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¹¹National Security Personnel Memorandum 33, *Presidential Memorandum on United States Government-Supported Research and Development National Security Policy*, Jan. 2021.

Fostering Infrastructure Resilience

Climate Change: Future Federal Adaptation Efforts Could Better Support Local Infrastructure Decision Makers. [GAO-13-242](#). Washington, D.C.: April 12, 2013

Year Recommendations Made: 2013

Recommendations: To improve the resilience of the nation's infrastructure to climate change, the Executive Director of the United States Global Change Research Program or other federal entity designated by the Executive Office of the President should work with relevant agencies to (1) identify for decision-makers the “best available” climate-related information for infrastructure planning and update this information over time and (2) clarify sources of local assistance for incorporating climate-related information and analysis into infrastructure planning, and communicate how such assistance will be provided over time.

Actions Needed: OSTP neither agreed nor disagreed with these recommendations and took some initial steps to address them. As GAO reported in August 2024, Congressional action is needed to establish a national climate information system given the continuing challenges to helping decision-makers identify the best available climate-related information for infrastructure planning and other purposes.¹² Since then, Executive Order 14,148 rescinded previous Executive Orders underlying federal efforts related to these recommendations.¹³

Nonetheless, as called for by the “Information” principle in our October 2019 Disaster Resilience Framework, providing natural and climate disaster risk information that is accurate, comprehensive, and produced or endorsed by an authoritative source can help decision-makers better assess their risk.¹⁴ In May 2025, OSTP stated that The Climate Resilience Information System (CRIS)—which will allow for more efficient development of regionally and locally tailored resources—addresses these recommendations and is currently under technical and agency review prior to publication.

To fully address both recommendations, OSTP should provide information demonstrating a government-wide effort to develop and periodically update a set of climate-related observations and projections for use in federal decision-making. Federal, state, local, and private-sector decision-makers could also access this information and sources of local assistance for incorporating this information into infrastructure planning. These actions can serve to improve the resilience of the nation's infrastructure to climate-related events.

High-risk area: [Limiting the Federal Government's Fiscal Exposure by Better Managing Climate Change Risks](#) and [Improving the Delivery of Federal Disaster Assistance](#)

Director: J. Alfredo Gómez, Natural Resources and Environment

¹²GAO, *Climate Resilience: Congressional Action Needed to Enhance Climate Economics Information and to Limit Federal Fiscal Exposure*, [GAO-24-106937](#) (Washington, D.C.: Aug. 14, 2024).

¹³Exec. Order No. 14,148, Initial Rescissions of Harmful Executive Orders and Actions, 90 Fed. Reg. 8237 (Jan. 28, 2025).

¹⁴GAO, *Disaster Resilience Framework: Principles for Analyzing Federal Efforts to Facilitate and Promote Resilience to Natural Disasters*, [GAO-20-100SP](#) (Washington, D.C.: Oct. 23, 2019).

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Enclosure 2

Key Information About the Status of GAO Recommendations and Improving Agency Operations

OSTP's Recommendation Implementation Rate

In November 2024, we reported that, on a government-wide basis, 70 percent of our recommendations made 4 years ago were implemented.¹⁵ OSTP's recommendation implementation rate was 100 percent for recommendations made in fiscal year 2020. As of May 2025, OSTP had nine open recommendations.

Implemented, Closed, and New Priority Recommendations

Our August 2024 letter to Director Prabhakar identified eight priority recommendations.¹⁶ Since then, no recommendations were closed. Also, we have not added any new priority recommendations this year.

We removed the priority status of two recommendations that were identified in our August 2024 letter—one related to regulating artificial intelligence and one related to high-performance computing—based on our assessment of the current priority for implementing these recommendations. We continue to believe these recommendations should be implemented to improve federal efforts in these areas.

High-Risk List

In February 2025, we issued our biennial update to our [High-Risk List](#).¹⁷ This list identifies government operations with greater vulnerabilities to fraud, waste, abuse, and mismanagement. It also identifies the need for transformation to address economy, efficiency, or effectiveness challenges. One high-risk area—[Limiting the Federal Government's Fiscal Exposure by Better Managing Climate Change Risks](#)—is shared among multiple entities, including OSTP.

Several other government-wide high-risk areas also have direct implications for OSTP and its operations. These include [improving management of IT acquisitions and operations](#), improving [strategic human capital management](#) and the [personnel security clearance process](#), [managing federal real property](#), [ensuring the cybersecurity of the nation](#), and [improving the delivery of federal disaster assistance](#).

We urge your continued attention to the other government-wide, high-risk issues as they relate to OSTP. Progress on high-risk issues has been possible through the concerted actions and efforts of Congress, the Office of Management and Budget (OMB), and the leadership and staff in agencies and offices, including within OSTP. In March 2022, we issued a report on key

¹⁵GAO, [Performance and Accountability Report: Fiscal Year 2024](#), (Washington, D.C.: Nov. 15, 2024).

¹⁶GAO, [Priority Open Recommendations: Office of Science and Technology Policy](#), [GAO-24-107476](#) (Washington, D.C.: Aug. 15, 2024).

¹⁷GAO, [High-Risk Series: Heightened Attention Could Save Billions More and Improve Government Efficiency and Effectiveness](#), [GAO-25-107743](#) (Washington, D.C.: Feb. 25, 2025).

practices to successfully address high-risk areas, which can be a helpful resource as you continue to address high-risk issues.¹⁸

Congress's Role on GAO Recommendations

We also recognize the key role Congress plays in providing oversight and maintaining focus on our recommendations to ensure they are implemented and produce their desired results. A law enacted in December 2022 includes a provision for GAO to identify any additional congressional oversight actions that can help agencies implement priority recommendations and address any underlying issues relating to such implementation.¹⁹

Congress can use various strategies to address our recommendations, such as incorporating them into legislation. Congress can also use its budget, appropriations, and oversight processes to incentivize executive branch agencies to act on our recommendations and monitor their progress. For example, Congress can hold hearings focused on OSTP's progress in implementing GAO's priority recommendations, withhold funds when appropriate, or take other actions to provide incentives for agencies to act. Moreover, Congress can follow up during the appropriations process and request periodic updates.

Congress also plays a key role in addressing any underlying issues related to the implementation of these recommendations. For example, Congress can pass legislation providing an agency explicit authority to implement a recommendation or requiring an agency to take certain actions to implement a recommendation.

¹⁸GAO, *High-Risk Series: Key Practices to Successfully Address High-Risk Areas and Remove Them from the List*, [GAO-22-105184](#) (Washington, D.C.: Mar. 3, 2022).

¹⁹James M. Inhofe National Defense Authorization Act for Fiscal Year 2023, Pub. L. No. 117-263, § 7211(a)(2), 136 Stat. 2395, 3668 (2022); H.R. Rep. No. 117-389 (2022) (accompanying Legislative Branch Appropriations Act, H.R. 8237, 117th Cong. (2022)).