

The WHITE HOUSE

PRESIDENTIAL ACTIONS

LAUNCHING THE GENESIS MISSION

Executive Orders

November 24, 2025

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered:

Section 1. Purpose. From the founding of our Republic, scientific discovery and technological innovation have driven American progress and prosperity. Today, America is in a race for global technology dominance in the development of artificial intelligence (AI), an important frontier of scientific discovery and economic growth. To that end, my Administration has taken a number of actions to win that race, including issuing multiple Executive Orders and implementing America’s AI Action Plan, which recognizes the need to invest in AI-enabled science to accelerate scientific advancement. In this pivotal moment, the challenges we face require a historic national effort, comparable in urgency and ambition to the Manhattan Project that was instrumental to our victory in World War II and was a critical basis for the foundation of the Department of Energy (DOE) and its national laboratories. This order launches the “Genesis Mission” as a dedicated, coordinated national effort to unleash a new age of AI-accelerated innovation and discovery that can solve the most challenging problems of this century. The Genesis Mission will build an integrated AI platform to harness Federal scientific datasets — the world’s largest collection of such datasets, developed over decades of Federal investments — to train scientific foundation models and create AI agents to test new hypotheses, automate research workflows, and accelerate scientific breakthroughs. The Genesis Mission will bring together our Nation’s research and development resources — combining the efforts of brilliant American scientists, including those at our national laboratories,

with pioneering American businesses; world-renowned universities; and existing research infrastructure, data repositories, production plants, and national security sites — to achieve dramatic acceleration in AI development and utilization. We will harness for the benefit of our Nation the revolution underway in computing, and build on decades of innovation in semiconductors and high-performance computing. The Genesis Mission will dramatically accelerate scientific discovery, strengthen national security, secure energy dominance, enhance workforce productivity, and multiply the return on taxpayer investment into research and development, thereby furthering America's technological dominance and global strategic leadership.

Sec. 2. Establishment of the Genesis Mission. (a) There is hereby established the Genesis Mission (Mission), a national effort to accelerate the application of AI for transformative scientific discovery focused on pressing national challenges.

(b) The Secretary of Energy (Secretary) shall be responsible for implementing the Mission within DOE, consistent with the provisions of this order, including, as appropriate and authorized by law, setting priorities and ensuring that all DOE resources used for elements of the Mission are integrated into a secure, unified platform. The Secretary may designate a senior political appointee to oversee day-to-day operations of the Mission.

(c) The Assistant to the President for Science and Technology (APST) shall provide general leadership of the Mission, including coordination of participating executive departments and agencies (agencies) through the National Science and Technology Council (NSTC) and the issuance of guidance to ensure that the Mission is aligned with national objectives.

Sec. 3. Operation of the American Science and Security Platform. (a) The Secretary shall establish and operate the American Science and Security Platform (Platform) to serve as the infrastructure for the Mission with the purpose of providing, in an integrated manner and to the maximum extent practicable and consistent with law:

- (i) high-performance computing resources, including DOE national laboratory supercomputers and secure cloud-based AI computing environments, capable of supporting large-scale model training, simulation, and inference;
- (ii) AI modeling and analysis frameworks, including AI agents to explore design spaces, evaluate experimental outcomes, and automate workflows;
- (iii) computational tools, including AI-enabled predictive models, simulation models, and design optimization tools;
- (iv) domain-specific foundation models across the range of scientific domains covered;

(v) secure access to appropriate datasets, including proprietary, federally curated, and open scientific datasets, in addition to synthetic data generated through DOE computing resources, consistent with applicable law; applicable classification, privacy, and intellectual property protections; and Federal data-access and data-management standards; and

(vi) experimental and production tools to enable autonomous and AI-augmented experimentation and manufacturing in high-impact domains.

(b) The Secretary shall take necessary steps to ensure that the Platform is operated in a manner that meets security requirements consistent with its national security and competitiveness mission, including applicable classification, supply chain security, and Federal cybersecurity standards and best practices.

(c) Within 90 days of the date of this order, the Secretary shall identify Federal computing, storage, and networking resources available to support the Mission, including both DOE on-premises and cloud-based high-performance computing systems, and resources available through industry partners. The Secretary shall also identify any additional partnerships or infrastructure enhancements that could support the computational foundation for the Platform.

(d) Within 120 days of the date of this order, the Secretary shall:

(i) identify a set of initial data and model assets for use in the Mission, including digitization, standardization, metadata, and provenance tracking; and

(ii) develop a plan, with appropriate risk-based cybersecurity measures, for incorporating datasets from federally funded research, other agencies, academic institutions, and approved private-sector partners, as appropriate.

(e) Within 240 days of the date of this order, the Secretary shall review capabilities across the DOE national laboratories and other participating Federal research facilities for robotic laboratories and production facilities with the ability to engage in AI-directed experimentation and manufacturing, including automated and AI-augmented workflows and the related technical and operational standards needed.

(f) Within 270 days of the date of this order, the Secretary shall, consistent with applicable law and subject to available appropriations, seek to demonstrate an initial operating capability of the Platform for at least one of the national science and technology challenges identified pursuant to section 4 of this order.

Sec. 4. Identification of National Science and Technology Challenges. (a) Within 60 days of the date of this order, the Secretary shall identify and submit to the APST a detailed list of at least 20 science and technology challenges of national importance that the Secretary assesses to have potential to be addressed through the Mission

and that span priority domains consistent with National Science and Technology Memorandum 2 of September 23, 2025, including:

- (i) advanced manufacturing;
 - (ii) biotechnology;
 - (iii) critical materials;
 - (iv) nuclear fission and fusion energy;
 - (v) quantum information science; and
 - (vi) semiconductors and microelectronics.
- (b) Within 30 days of submission of the list described in subsection (a) of this section, the APST shall review the proposed list and, working with participating agency members of the NSTC, coordinate the development of an expanded list that can serve as the initial set of national science and technology challenges to be addressed by the Mission, including additional challenges proposed by participating agencies through the NSTC, subject to available appropriations.
- (c) Following development of the expanded list described in subsection (b) of this section, agencies participating in the Mission shall use the Platform to advance research and development aligned with the national science and technology challenges identified in the expanded list, consistent with applicable law and their respective missions, and subject to available appropriations.
- (d) On an annual basis thereafter, the Secretary shall review and update the list of challenges in consultation with the APST and the NSTC to reflect progress achieved, emerging national needs, and alignment with my Administration's research and development priorities.

Sec. 5. Interagency Coordination and External Engagement. (a) The APST, through the NSTC, and with support from the Federal Chief Data Officer Council and the Chief AI Officer Council, shall convene relevant and interested agencies to:

- (i) assist participating agencies in aligning, to the extent permitted by law, their AI-related programs, datasets, and research and development activities with the objectives of the Mission in their respective areas of expertise, while avoiding duplication of effort across the Federal Government and promoting interoperability;
- (ii) identify data sources that may support the Mission's aim;
- (iii) develop a process and resourcing plan in coordination with participating agencies for integrating appropriate and available agency data and infrastructure into the Mission, to the extent permitted by law and subject to available appropriations, including methods under which all agencies contributing to the Mission are

encouraged to implement appropriate risk-based security measures that reflect cybersecurity best practices;

(iv) launch coordinated funding opportunities or prize competitions across participating agencies, to the extent permitted by law and subject to available appropriations, to incentivize private-sector participation in AI-driven scientific research aligned with Mission objectives; and

(v) establish mechanisms to coordinate research and development funding opportunities and experimental resources across participating agencies, ensuring agencies can participate effectively in the Mission.

(b) The APST shall coordinate with relevant agencies in establishing, consistent with existing authorizing statutes and subject to available appropriations, competitive programs for research fellowships, internships, and apprenticeships focused on the application of AI to scientific domains identified as national challenges for the Mission, to include placement of program participants at DOE national laboratories and other participating Federal research facilities, with the purpose of providing access to the Platform and training in AI-enabled scientific discovery.

(c) The Secretary, in coordination with the APST and the Special Advisor for AI and Crypto, shall establish mechanisms for agency collaboration with external partners possessing advanced AI, data, or computing capabilities or scientific domain expertise, including through cooperative research and development agreements, user facility partnerships, or other appropriate arrangements with external entities to support and enhance the activities of the Mission, and shall ensure that such partnerships are structured to preserve the security of Federal research assets and maximize public benefit. To facilitate these collaborations, the Secretary shall:

(i) develop standardized partnership frameworks, including cooperative research and development or other appropriate agreements, and data-use and model-sharing agreements;

(ii) establish clear policies for ownership, licensing, trade-secret protections, and commercialization of intellectual property developed under the Mission, including innovations arising from AI-directed experiments;

(iii) implement uniform and stringent data access and management processes and cybersecurity standards for non-Federal collaborators accessing datasets, models, and computing environments, including measures requiring compliance with classification, privacy, and export-control requirements, as well as other applicable laws; and

(iv) establish procedures to ensure the highest standards of vetting and authorization of users and collaborators seeking access to the resources of the Mission and associated research activities, including the Platform and associated Federal research resources.

(d) The APST, through the NSTC, shall, to the extent appropriate, identify opportunities for international scientific collaboration to support activities under the Mission.

Sec. 6. Evaluation and Reporting. (a) Within 1 year of the date of this order, and on an annual basis thereafter, the Secretary shall submit a report to the President, through the APST and the Director of the Office of Management and Budget, describing:

(i) the Platform's operational status and capabilities;

(ii) progress toward integration across DOE national laboratories and other participating Federal research partners, including shared access to computing resources, data infrastructure, and research facilities;

(iii) the status of user engagement, including participation of student researchers and any related training;

(iv) updates on research efforts and outcomes achieved, including measurable scientific advances, publications, and prototype technologies;

(v) the scope and outcomes of public-private partnerships, including collaborative research projects and any technology transitions or commercialization activities; and

(vi) any identified needs or recommendations for authorities or interagency support to achieve the Mission's objectives.

Sec. 7. General Provisions. (a) Nothing in this order shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

(d) The costs for publication of this order shall be borne by the Department of Energy.

DONALD J. TRUMP

THE WHITE HOUSE,
November 24, 2025.



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