

Genesis Mission Overview

- **Genesis Mission Goal:**

Use advances in AI, computing, and data to achieve **transformational improvements** across DOE's mission areas:

- Energy (e.g., advanced nuclear, grid, manufacturing)
- Discovery science (materials, chemistry, physics, biotech, quantum)
- National and economic security (outside this RFA for NNSA topics)

- **Big-picture ambition:**

Enable breakthroughs that could **double the productivity and impact of U.S. science and engineering within a decade**, aligning with a Presidential Executive Order issued in November.

- **Approach:**

- Build a shared science and security platform connecting AI, HPC, experimental systems, and data.
 - Fund teams tackling concrete national science and technology challenges where AI provides measurable advantage.
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Scope and Topics

- **Topics 1–17:** National Science & Technology Challenges
 - **Topics 18–21:** Cross-cutting platform and infrastructure challenges
 - Proposals must clearly select and align with **one primary focus area** (Phase 1) and may span multiple focus areas (Phase 2).
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Teaming Requirements

Strong emphasis on collaboration.

- **Phase 1 (required: 2 of 3 categories):**

- DOE or NNSA National Laboratory / User Facility
- Industry (for-profit) partner
- University, nonprofit, or other research organization

- **Phase 2 (expected):**

- DOE/NNSA National Lab **and** Industry partner required
 - University/nonprofit **strongly encouraged**
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Phase Structure

Phase 1

- Purpose: Design and demonstrate a clear AI-enabled research workflow, with defined metrics for AI advantage.
- Duration: 9 months
- **Go / No-Go: At ~6 months** (up to 9 months for certain experimental cases)
- Funding: \$500K–\$750K total
- Proposal length: ~5 pages
- Expected outcome: Evidence you are ready for Phase 2

Phase 2

- Purpose: Execute a proven approach at larger scale
- Duration: Up to 3 years
- Funding: \$2M–\$5M per year (\approx \$6M–\$15M total)
- May follow Phase 1 or be submitted directly if prior AI advantage is already demonstrated
- Data Management & Sharing Plan required at submission

Funding & Mechanism

- **Total FY26 funding:** ~\$293.7M
- **Primary mechanism:** Other Transaction Authority (OTA)
 - Milestone-based, flexible, faster agreements
- National Labs will be funded via **Field Work Proposals**
- **Industry funding cap:** ~20% of total project budget (guideline, applied per project)

Cost Sharing (Industry)

- **For-profit partners must provide cost share:**
 - ≥20% for R&D activities
 - ≥50% for demonstration or commercial tasks
- Some focus areas may have additional requirements (check RFA + FAQs)

Compute & Data Resources

- RFA **does NOT allocate computing resources directly**
- Applicants should:
 - Describe resources they plan to use or need
 - Bring existing compute/data partnerships where possible
- DOE resources are expected to be **oversubscribed**
- Allocation (if any) will occur after selection via a separate process

Review Process

- Merit review criteria include:
 - Scientific/technical innovation
 - Potential for AI advantage
 - Relevance to the specific DOE office mission
 - Team strength and execution plan
- Reviews will involve:
 - Domain experts (e.g., chemists, materials scientists)
 - AI experts
 - Federal and external reviewers-could only include DOE reviewers
- All awards undergo **Research, Technology, and Economic Security (RATES) review**

Additional Support

- Genesis Mission Consortium
 - Optional partner-matching service (launching soon)
 - Helps teams find collaborators, including industry
- Additional topic-specific webinars will be announced
- Questions: **GenesisMissionNOFO@science.doe.gov**
- Webinar recording and slides will be posted online