



Genesis Mission National Science and Technology Challenges Team

The National Science and Technology Challenges (National Challenges) team is focused on how artificial intelligence (AI), high performance computing, and data are being applied to address the U.S. government's cross-cutting priorities to restore American energy dominance, accelerate discovery science, and ensure national security. These priorities function as stress tests for the Genesis Mission's American Science and Security Platform, bringing together the Department of Energy's and the National Nuclear Security Administration's (DOE and NNSA) data, models, agents, experiments, and production to operate in closed loops that compress time to solution from years to months.

What the Team Delivers

Energy Dominance

National Challenges related to the Genesis Mission's energy pillar accelerate advanced nuclear, fusion, and grid modernization using AI to deliver affordable, reliable, and secure energy while restoring America's energy dominance.

Discovery Science

National Challenges related to the Genesis Mission's discovery science pillar unite the world's most powerful supercomputers, AI systems, and advanced scientific instruments into an integrated discovery platform that doubles the productivity of American research and engineering within a decade.

National Security

National Challenges related to the Genesis Mission's national security pillar create advanced AI technologies for national security missions, ensuring the safety and reliability of the U.S. nuclear stockpile while accelerating development of defense-ready materials.

Execution Across DOE and NNSA

The Genesis Mission executes National Challenges through federated, co-designed teams across DOE offices and NNSA with shared governance, common standards, and a national milestone cadence that achieves rapid mission impact.



The Genesis Mission a national initiative to build the world's most powerful scientific platform to accelerate discovery science, strengthen national security, and drive energy innovation.

For more information:

<https://energy.gov/genesis>



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