



Nuclear AI Advisory, Research, and Managed Services



RTS | Nuclear Energy + AI Newsletter

The pace of AI integration into nuclear energy continues to accelerate, but the story this week is not just technical progress. It is convergence.

Operational deployments, federal policy signals, capital investment, and scientific breakthroughs are all moving at once. The result is a shift from isolated innovation to system-level transformation across energy infrastructure.

RTS Research continues to focus on how these signals translate into execution inside nuclear environments, where safety, governance, and workforce realities remain non-negotiable.

This issue highlights where AI is already delivering measurable value, where policy is attempting to keep pace, and where foundational science is being redefined.

— RTS Global Research

Ready to talk, let's meet.

Coming Next Week: RIC Update

RTS will release a RIC Update next week, providing a detailed breakdown of the three-day Regulatory Information Conference. The report will translate key discussions, signals, and regulatory direction into practical insights, along with our perspective on what to organizations should expect moving forward.

Momentum in the Field: Industry Signals and the RTS Perspective

Operational Impact: Centrus and Palantir Deliver Immediate Value

Centrus Energy has partnered with Palantir Technologies to deploy AI across project management, supply chain oversight, and regulatory compliance at its uranium enrichment facility in Ohio.

The Raisun Take:

This is one of the clearest examples to date of AI delivering measurable financial impact inside a regulated nuclear environment. The takeaway is not the toolset. It is the integration of data, workflows, and decision-making within operational constraints.

Using Palantir's Foundry and AI Platform, the system integrates classified and unclassified data environments.

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In less than two months, the deployment has identified **nearly \$300 million in potential cost savings and efficiencies.**

Policy Signal: Tech Giants Agree to AI Power Framework

Major technology companies including Google, Meta, and OpenAI have signed a White House-backed pledge to secure dedicated electricity supplies for AI data centers and fund related infrastructure upgrades.

The Raisun Take:

This is a meaningful signal that AI-driven energy demand has reached the policy level. The open question is execution. While contracts with nuclear reactor developers may meet this new demand, it will require AI integration to come online fast enough.

The agreement includes commitments to:

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- Pay for reserved electricity capacity
- Support grid stability during outages
- Develop dedicated power generation sources

However, the voluntary nature of the pledge and lack of enforcement mechanisms raise questions about long-term impact.

Scientific Breakthrough: THOR Redefines Materials Modeling

Researchers from University of New Mexico and Los Alamos National Laboratory have introduced THOR, an AI framework capable of solving a century-old physics problem in seconds.

The Raisun Take:

This is not incremental improvement. It is a compression of scientific timelines. For nuclear, this has direct implications for materials science, fuel development, and advanced reactor design cycles.

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The system uses tensor network algorithms and machine learning to rapidly calculate thermodynamic properties of materials, replacing simulations that previously required weeks of supercomputer time.

Nuclear for AI: Infrastructure, Capital, and Alignment

- **Grid Expansion at Scale:** US utilities are planning tens of billions in transmission and grid upgrades to meet AI-driven demand, raising unresolved questions around cost allocation between hyperscalers and consumers.
- **Environmental Shift:** The Natural Resources Defense Council is signaling cautious support for nuclear power, reflecting the urgency of AI-related electricity demand.
- **Capital Flowing In:** Nuclear fission startups secured **\$3.6 billion across 44 venture deals in 2025**, as investors respond to AI-driven energy demand and long-term infrastructure needs.

What This Signals

This week's signals converge on a single point. AI is no longer just influencing nuclear energy. It is restructuring the environment nuclear operates within.

- Operational AI is delivering measurable ROI
- Policy is reacting to power demand
- Science is accelerating foundational timelines
- Capital and public sentiment are shifting

The opportunity is significant, but so is the complexity. Execution will depend on how well organizations integrate AI into nuclear standards, workforce models, and infrastructure planning.

RTS continues to support that integration with research, advisory, and managed services grounded in nuclear reality.

— RTS Global Research

Schedule a meeting, today!

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