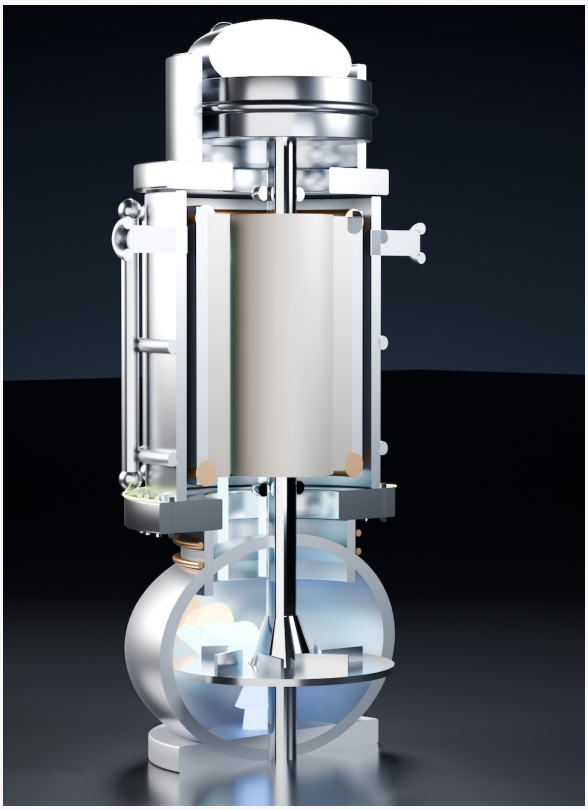
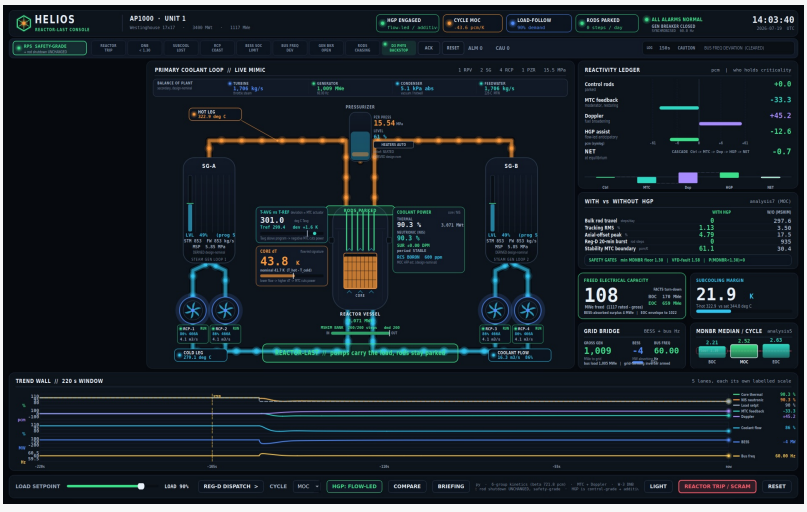
HGP Intelligent Energy Joins DOE's $230 Million Nuclear AI Moonshot, Targeting Reactors That Follow Data Center Load

HGP's digital twin and variable-speed reactor coolant pumps target reactors that follow AI data center load without taxing the public grid

DALLAS, TX, UNITED STATES, July 22, 2026 /EINPresswire.com/ -- HGP Intelligent Energy Named a Commercial Partner in Prometheus, the Department of Energy's AI Moonshot for Nuclear Power
Dallas company joins Microsoft, Amazon Web Services, NVIDIA and Westinghouse among the commercial partners in the largest project selected under the Genesis Mission



HGP load following system



AI for Nuclear

HGP Intelligent Energy LLC (HGP) today announced that it has been named a contributing commercial partner in Prometheus, the Idaho National Laboratory-led program selected by the U.S. Department of Energy under its Genesis Mission to make nuclear energy faster, safer and cheaper. Prometheus, which its winning application calls “America's artificial intelligence moonshot” for nuclear power, unites four DOE national laboratories, Idaho, Oak Ridge, Argonne and Sandia, four research universities, and twenty-five commercial partners including Microsoft, Amazon Web Services, NVIDIA, Westinghouse, GE Vernova, TerraPower, Oklo, X-energy, Aalo Atomics and HGP behind

> President Trump called on American industry to win the AI race. That race runs on electricity. We are working with the national labs and industry leaders to bring nuclear into the AI-driven future."
>
> *Gregory A. Forero*

one objective: using artificial intelligence to cut nuclear deployment timelines in half and reduce operating costs by 50 percent. The award directs $60 million in federal funding over three years to the participating national laboratories and universities, matched by more than $250 million committed by the commercial partners.

Announced by Secretary of Energy Chris Wright at the Genesis Mission Summit in Washington, Prometheus is the largest of the 278 projects the Department selected, and the only Phase II award. Idaho National Laboratory names HGP among the Prometheus partners.

HGP is participating in the AI for Nuclear Energy Consortium, the commercial coalition organized under the program, and is working directly alongside Argonne National Laboratory to validate and verify its technology. HGP contributes two commercialization technologies to the program. NTH-Sim, the company's AI-powered digital twin, delivers real-time core monitoring and predictive safety analytics, with solvers validated to date across pressurized water, sodium fast and microreactor classes. HGP's variable-frequency-drive reactor coolant pumps enable continuous variable-speed operation, allowing proven reactor designs to load-follow and track minute-to-minute demand without moving control rods. Together they address the program's stated gap that reactor operations remain labor-intensive and manually driven.

Taken together, these technologies are aimed at a commercialization problem that has become central to the AI buildout: how to power data centers without loading their demand onto the public grid. A digital twin that supports reduced operating staff, paired with coolant pumps that let a reactor follow a data center's load in real time, is intended to make dedicated on-site nuclear generation commercially practical. Under that architecture, a data center is served by its own generation under private contract rather than drawing on shared transmission and distribution infrastructure, so the cost of serving it is not socialized across utility ratepayers. HGP's technologies are designed to enable that model; the company is not today operating a facility under it.

"Prometheus is the first program to treat artificial intelligence as the critical path for nuclear rather than a science project bolted onto it," said Gregory A. Forero, CEO of HGP Intelligent Energy. "The targets the Department just set were unachievable five years ago: ten times faster design and licensing, three times faster manufacturing, half the operating staff. Our digital twin and our variable-speed pumps exist to close that gap. They are what make it realistic to put a reactor next to a data center and have it follow that load minute by minute, so the largest new electricity demand in a generation gets served by its own dedicated generation instead of being pushed onto the public grid and onto ratepayers. We have built and operated power generation assets in ERCOT since 2013 and managed multi-gigawatt fleets since 1998. That is the problem

this coalition was assembled to solve, and Texas manufacturing is where we intend to build the answer.”

The United States needs an estimated 300 gigawatts of new nuclear capacity by 2050. Over the last eight years the cost of building it has escalated from under $10,000 per kilowatt to over $21,000 per kilowatt, driven by late-stage licensing and constructability surprises that surface after the money is spent. Prometheus attacks that curve directly, targeting a tenfold reduction in design and licensing workflow time, a threefold reduction in manufacturing cycle time, and a 50 percent reduction in operational staffing, each benchmarked against documented non-AI baselines. The program also aims to demonstrate at least seven continuous days of autonomous operation of a commercial microreactor at half the required staff.

About HGP Intelligent Energy. HGP Intelligent Energy LLC, headquartered in Dallas, Texas, develops AI and advanced control technologies that make nuclear generation commercially deployable at the scale and speed the AI economy requires, including the NTH-Sim digital twin and variable-speed reactor coolant pumps. The company applies these technologies to proven naval-derived pressurized water reactor designs, with fabrication anchored by Texas manufacturing partners. HGP's team brings three decades of power sector experience, including a First of a Kind (FOAK) battery energy storage resource approved by ERCOT in 2019 and in operation since. HGP holds a portfolio of pending patent applications spanning variable-speed reactor coolant pumps, AI-powered digital twin systems, and extended fuel life technology.

More information is available at www.hgpenergy.com.

Note on participation. HGP is a contributor to Prometheus, not a recipient of federal funding under it. The award supports research at the participating national laboratories and universities, and no DOE funds flow to or through the AI for Nuclear Energy Consortium. The consortium's charter and membership agreements are program deliverables scheduled for completion in late 2026, and the terms of HGP's participation remain subject to definitive agreement. This release contains forward-looking statements; actual outcomes may differ materially.
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