Stargate: A major AI Data Center Initiative

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1. Introduction

For the energy industry, artificial intelligence (AI) data centers are a huge opportunity AND a huge problem. The problem has been center-stage for several months, as it has been driving demand for new electric-generation in much of the US. However, this post will focus on the opportunity, and specifically the title initiative.

Stargate is being led by the biggest corporations in computing infrastructure and software, but these are notoriously fast horses. Can the energy industry keep up? I believe it can, but this is its largest challenge since World War II, so our industry will really need to bring its A-Game.

2. Project

Oracle will build new data centers in the US to provide 4.5 gigawatts of computing power to the Stargate initiative. OpenAI has already agreed to rent the infrastructure, according to a report by Bloomberg.[1]

Announced by President Donald Trump in January 2025, Stargate is a $500 billion generative-AI infrastructure venture in the US, led by OpenAI, Oracle, Japanese telecoms giant SoftBank, and MGX, an investment firm based in the United Arab Emirates.

- *OpenAI intends to operate the data centers.*
- *Oracle will provide server infrastructure and leasing.*
- *SoftBank handles capital investment.*
- *Nvidia will supply many of the chips.*

Despite lofty plans, Oracle has so far opened just one facility in Abilene, Texas, where Denver-based startup Crusoe Energy handled the physical buildout. Its current capacity is approximately 1.2 gigawatts, but plans are in place to expand it to around 2 gigawatts, according to Bloomberg. To meet this energy demand, Crusoe and its partners are building an on-site natural gas power plant.

Author's comment on above highlighted text: Functionally, the above highlighted text makes sense. A natural-gas-fueled combustion turbine is the most flexible choice, and (at least currently) has the lowest capital cost and reasonable recurring costs. However, I expect that most of the large users of this facility would prefer to use renewables.

Thus, I expect that the gas-fueled power plant will be strongly supplemented by renewable capacity (including storage) that will be locked-in via long-term contracts, and backed up by the gas-plant. The gas plant will probably also supply peaking-service.

[1] Fiona Jackson, TechRepublic, "Oracle Will Build US Data Centres Supplying 4.5GW Compute for OpenAI's Stargate Project," July 3, 2025, https://www.techrepublic.com/article/news-oracle-data-centres-stargate/

Other sites contributing to the 4.5 gigawatts OpenAI requires for the Stargate project may be developed in states such as Texas, Michigan, Wisconsin, Wyoming, New Mexico, Georgia, Ohio, or Pennsylvania.

However, many aspects of the project remain uncertain, according to anonymous sources. They also confirmed that the Stargate agreement comprises at least part of the $30 billion cloud services deal Oracle signed with a mystery customer last month.

OpenAI and Crusoe declined to comment on the plans, while Oracle didn't return a request for comment, according to Bloomberg.

One gigawatt of energy can provide electricity to roughly 750,000 homes, meaning Stargate's total demand could power several million. But data centers have also been known to cause power outages, put pressure on water supplies, and increase air pollution, resulting in pushback from those living in their vicinity.

Nevertheless, Stargate's backers argue it will ultimately serve US interests by delivering socially beneficial technologies to Americans and securing the nation's leadership in the global AI race, surpassing China.

"This infrastructure will secure American leadership in AI, create hundreds of thousands of American jobs, and generate massive economic benefit for the entire world," OpenAI wrote on X when Stargate was announced. "This project will not only support the re-industrialization of the United States but also provide a strategic capability to protect the national security of America and its allies."

Crusoe has committed to creating 357 full-time roles after the construction of the Abilene facility, while the city has committed to supporting the project's water needs.

While the message from Stargate is grow, grow, grow, investors have been more cautious.

As of May, SoftBank had yet to finalize a financing blueprint or begin detailed talks with banks and institutional investors. This delay was reportedly tied to Trump's tariffs, which could drive up the cost of server racks, chips, and cooling systems.

There have also been wobbles when it comes to overbuilding, with signs in April that Amazon and Microsoft were scaling back their data center commitments. Tariffs sparked fears that rising consumer tech prices could dampen demand for AI, while new low-cost models, such as those from Chinese startup DeepSeek, threatened to squeeze profit margins.

More recently, on Wednesday, S&P Global Ratings warned that Oracle's heavy spending on AI and data centers had pushed its cash flow negative for fiscal 2025.

None of these roadblocks appears to have made any practical dent in the Stargate project, which doesn't stop with the US. In May, plans were announced to build a massive AI data center in Abu Dhabi, with the United Arab Emirates aiming to become a serious contender in the AI leadership race, as well as expand in other global nations.

3. Principals

The project's initial equity funders include SoftBank, OpenAI, Oracle, and MGX, with SoftBank and OpenAI as the lead partners. SoftBank will handle financial management, while OpenAI will be responsible for operations. SoftBank Group Chairman Masayoshi Son will serve as the project chairman.

Arm, Microsoft, NVIDIA, Oracle, and OpenAI are key technology partners. Construction has begun in Texas, and additional potential campus sites are being evaluated nationwide.

We are committed to advancing AI technology, particularly Artificial General Intelligence (AGI), for the benefit of all humanity. We believe this new initiative is a crucial step toward that goal, enabling innovators to explore how AI can elevate human civilization.

3.1. Policy Support and Leadership

White House Press Conference Announcement:[2]

On January 21, 2025, President Trump officially announced the launch of the Stargate AI project at a White House press conference. This milestone joint venture received high praise from the President, who emphasized that the project would inject strong momentum into America's AI development.

President Trump stated that this $500 billion investment project demonstrates investors' strong confidence in America's technological innovation capabilities and will bring numerous high-quality talents and job opportunities to the United States.

3.1.1. Policy Support and Development Direction

From the beginning of his term, President Trump has shown a positive attitude towards AI development. By revoking the previous administration's AI executive orders, he paved the way for new supportive policies, demonstrating the government's emphasis on the AI industry.

The new administration promises to implement a series of policy support measures, including tax incentives and R&D subsidies, to encourage more enterprises to participate in AI infrastructure construction and maintain America's leading position in global AI competition.

"I think we're going to do things that people will be shocked at. We're starting off with tremendous investment coming into our country at levels that nobody's really ever seen before."

- President Trump at White House Press Conference

[2] StargateAI News, What is the Stargate Project and who is involved? https://www.stargateai.news/news/stargate-tech-giants-ai-plan-500bn/what-is-the-stargate-project-and-who-is-involved

3.1.2. Core Partners

Primary Investors:

SoftBank Group

Lead Investor & Financial Management

Led by Chairman Masayoshi Son, SoftBank Group serves as the primary investor and financial manager of the Stargate Project, bringing extensive experience in technology investments and global market operations.

OpenAI

Lead Technical Partner & Operations

Under CEO Sam Altman's leadership, OpenAI leads the technical operations and development, bringing cutting-edge AI expertise and research capabilities to the project.

Oracle

Infrastructure Provider & Investor

Founded by Larry Ellison, Oracle provides critical data center infrastructure and cloud computing capabilities, while also participating as a key investor.

MGX

Strategic Investor

A joint venture between Mubadala and G42, MGX focuses on AI infrastructure, semiconductor technology, and core AI applications, with assets exceeding $100B.

3.1.3. Technology Partners

Microsoft

Cloud Infrastructure Partner

Provides essential cloud computing resources and technical support through Azure platform, enabling large-scale AI operations.

NVIDIA

AI Computing Hardware Provider

Supplies state-of-the-art AI GPUs and computing infrastructure, crucial for training and deploying large-scale AI models.

Arm

Chip Architecture Provider

Contributes essential chip design and architecture expertise, supporting the development of specialized AI processing units.

3.1.4. Funding and Timeline

$100 billion of funding has been made available immediately, with the remaining funds to be allocated over the next four years.

The project began before Trump took office, but he emphasized the need for government intervention to support the AI industry, declaring it an "emergency."

3.1.5. Goals and Significance

The project aims to address the exploding demand for data centers required to support AI technologies, which rely heavily on computing power and infrastructure.

OpenAI CEO Sam Altman called it "the most important project of this era," highlighting its potential to shape the future of AI development.

The initiative also seeks to ensure that the US maintains its leadership in AI investment, as it currently outspends other countries significantly.

Final author's comment: The best thing about this project is not that it will build a bunch of whopping-big data centers, but that it may:

- Evolve some design-standards for these facilities
- Create methods to sustainably-source external resources, especially electric power and any other energy, but also water, waste-disposal, area road-traffic & parking, impact on existing area businesses and population-centers.
- Build external networks.

Ultimately resolving these issues for the Stargate Project could result in a "cookbook" for future projects of this size, and this plan could evolve to facilitate even larger projects.

Future economic development will lean heavily on AI, and the above suggested resources will continue the US leadership in AI and its supporting infrastructure.