



POWER GENERATION REPORT:

The Gas and Nuclear Power Projects Serving Data Centers in the U.S.

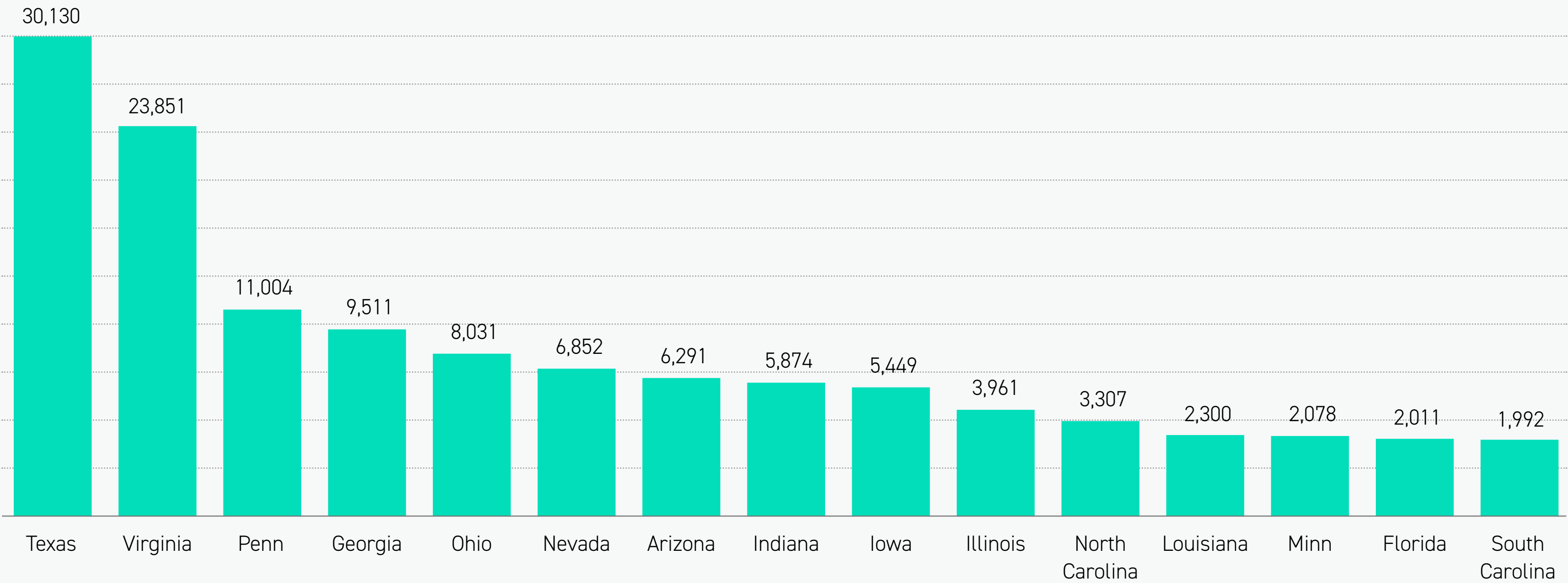
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Engineering, procurement and construction (EPC) firms face a growing opportunity from a rush to build new data center capacity for U.S. artificial intelligence (AI) applications. As of June 2025, the analyst firm Wood Mackenzie was tracking 134 gigawatts (GW) of proposed data center power demand across the nation, up from 50 GW a year previous.

This massive buildout is creating a surge in demand for gas and even nuclear projects. Here are 22 of the most notable announcements to date.

Surging U.S. data center power demand



Megawatts of announced data centers since January 1, 2023, in top 15 U.S. states. Source: [Wood Mackenzie](#).

Gas-fired projects

Comanche Circle

One of the largest gas-fired data center projects in the U.S., Comanche Circle could see real estate firm Sailfish Investors commissioning up to 5 GW of new gas generation and grid power in Tolar, Texas, according to [a report](#) in Data Center Dynamics.

Phase one of the project will involve five data center campuses with a combined 3.2 GW of power demand by 2028, Sailfish managing partner Ryan Hughes [said on LinkedIn](#). EPC partnerships have yet to be announced.

Lancium Clean Campus and power foundries projects

AI infrastructure developer Crusoe is building a data center called the [Lancium Clean Campus](#) in Abilene, Texas, after partnering with investor Engine No. 1 for up to 4.5 GW of new generation. Crusoe has booked [almost 1 GW](#) of GE Vernova aeroderivative turbine capacity.

It is unclear if the partnership might also benefit from Engine No. 1's ['power foundries'](#) initiative with Chevron and GE Vernova, which is due to use up to 4 GW of the latter's 7HA turbines potentially coupled with renewables and carbon capture and storage (CCS).

Homer City Energy Campus

Pennsylvania development body Homer City Redevelopment is working with EPC firm Kiewit Power Constructors and GE Vernova on the reconditioning of an old coal-fired power station to deliver cleaner energy for the AI world.

The [4.5 GW project](#) aims to use seven high-efficiency 7HA.02 hydrogen-enabled gas-fired turbines. "The Homer City Energy Campus is currently under construction and slated to begin producing power in 2027," said a Homer City Redevelopment spokesperson.

Caldwell County data center technology park

Data center developer Tract, which has more than 25 GW of planned capacity in the U.S., [is reportedly](#) looking to procure up to 2 GW of power for a campus in San Marcos, Texas.

May 2025 saw Tract [announcing](#) a facility design agreement with Bluebonnet Electric Cooperative for the energization of an initial 360 megawatts (MW) of power in 2028. It is not yet clear to what extent new gas generation assets will be involved.

San Marcos next-gen data center campus

In February 2025, gas provider [Energy Transfer announced](#) a long-term supply agreement with Denver-based CloudBurst Data Centers for the supply of fuel to a 1.2 GW AI-focused data center campus outside of San Marcos, Texas.

[CloudBurst says](#) the campus will be powered by on-site gas, although no EPC or turbine partners have been announced, which could affect timings. "We are sold out through 2028 in heavy duty gas turbines," says Chris White, GE Vernova's gas power communications leader.

HyperGrid campus

Grid developer Fermi America is throwing everything imaginable at a gigawatt-scale AI data center power concept. The company aims to create the world's largest [behind-the-meter energy complex](#) using sources from grid power and nuclear to solar and batteries.

Its project with the Texas Tech University System in Amarillo, Texas, could add up to 1 GW by the end of 2026 and 11 GW in the coming decade, but is kicking off with [600 MW](#) of Siemens Frame combined-cycle gas capacity in 2025.

Project Lincoln

Louisville Gas and Electric (LG&E) and Kentucky Utilities are looking to [boost generation capacity](#) for data center projects, with 645 MW of new gas power slated for commissioning in Mercer County by 2032.

The scheme was in doubt as of July 2025 owing to [a temporary moratorium](#) on data centers in Oldham County, where developer Western Hospitality Partners was planning to build a new center.

PowerHouse Louisville

According to [local reports](#), LG&E and Kentucky Utilities are also planning to install a further 645 MW of new gas capacity in Louisville, partly in response to plans for a 400 MW data center from developer PowerHouse and real estate firm Poe Companies.

Trade publication Data Center Dynamics [said](#) the PowerHouse project was due to start in 2025, with an initial 130 MW of demand to start operating in the fall of 2026. No EPC or technology partners have been named in relation to the gas project.

Gas-fired projects

Stargate 1/Project Ludicrous

One of the standout initiatives among the many AI schemes taking place across the U.S. is Stargate, a joint venture between OpenAI, Oracle, SoftBank and investment firm MGX. The venture is looking to invest up to \$500 billion in AI data centers over four years.

The first of these is thought to be [Project Ludicrous](#), a Texas facility being developed by Crusoe along with plans for a 361 MW gas plant using turbines from GE Vernova and Caterpillar's Solar Turbines.

Unnamed project, Ohio

America's vast data center buildout has even benefited Helsinki-based original equipment maker Wärtsilä, which in July 2025 announced a deal to supply fifteen 18V50SG gas-powered engines, totaling 282 MW, for an unnamed project in Ohio.

The equipment will be delivered from late 2026 into 2027, [the company said](#). "Our focus is on deploying engine power plants rather than turbines," added Katri Pehkonen, communications manager for Wärtsilä Energy.

Ector County AI/high-performance computing data center

June 2025 saw Texas Critical Data Centers—a joint venture between high-performance computing specialist Sharon AI and oil exploration and production company New Era Helium—[inking a deal](#) to create a 250 MW gas plant equipped with CCS for data center power.

Site due diligence was said to be underway in Ector County, Texas, with an intent to secure a first 100 MW of generation capacity, delivered by PowerForward Energy Solutions, within 12 months of project funding being secured.

Duos Technologies hyperscaler deal

Growing lead times for gas-powered plant equipment are leading data center developers to seek alternatives, with New APR Energy [reporting in February](#) 2025 that it had been approached by a major U.S.-based hyperscaler for mobile gas turbines.

The four turbines, with a combined output of more than 100 MW, were due to be installed within

10 days of the joint announcement by New APR Energy and Duos Technologies Group, a data center infrastructure developer supporting the project.

Pennsylvania gas generation

PPL Corporation and Blackstone Infrastructure joined forces in July 2025 to build, own and operate new gas-fired combined-cycle generation stations to power Pennsylvanian data centers under long-term energy services agreements, according to [a press release](#).

"We could start moving dirt right away, but need to reserve turbines and balance of plant, contract with an EPC, secure permits, etcetera," said Ryan Hill, vice president of corporate communications at PPL. "Given that, we expect plants to come online in the 2031 timeframe."

NextEra framework agreement

Anticipating the current rush for new data center-linked power infrastructure, in January 2025 Florida-based NextEra Energy announced [a framework agreement](#) with GE Vernova to develop natural gas plants paired with renewables and energy storage.

The agreement is at an early stage, [Reuters reported](#). For data center power, "a wide range of turbines are in demand," said White at GE Vernova, "from our aeroderivative units, which we sold 27 last quarter, to heavy-duty gas turbines like our HA class machines."

"NextEra Energy announced a framework agreement with GE Vernova to develop natural gas plants paired with renewables... 'A wide range of turbines are in demand.'"



Nuclear projects

Susquehanna power purchase agreement

While most gas and almost all nuclear data center power deals are statements of intent, with a corresponding level of uncertainty, a 1.9 GW deal between Amazon Web Services (AWS) and Talen Energy was a slam dunk because it involved existing generation.

AWS simply signed a power purchase agreement (PPA) for nuclear energy from Talen's Susquehanna plant through 2042, but the deal is of interest to EPCs because the companies have said they will explore building small modular reactors (SMRs) within Talen's footprint.

Standard Power's deal with NuScale

Data center power infrastructure provider Standard Power has committed to taking two dozen 77 MW NuScale Power Corporation SMRs for carbon-free processing energy in Ohio and Pennsylvania.

The deal, supported by energy development and production company ENTRAI Energy, was announced in 2023 with plans for operating power plants by 2029. Although NuScale is the only SMR maker with U.S. regulatory approval, no further details have been released.

Surrey Green Energy Center

Another 2023 announcement awaiting further updates is that of Green Energy Partners, a Virginia-based property and project developer, which was looking to establish a low-carbon energy hub supplying up to a gigawatt of data center power in Surry County.

As well as deploying four to six 250 MW SMRs, with NuScale's VOYGR reactors named in a press release, the project was due to feature a green hydrogen hub, with nuclear-powered electrolysis, and potentially energy storage assets.

Columbia Generating Station SMR project

Energy Northwest is looking to develop SMRs in Washington state under plans unveiled in 2024 alongside Amazon and Amazon-backed reactor maker X-energy. AWS CEO Matt Garman said nuclear was "one of the fastest ways to address climate change."

Amazon was due to fund a feasibility study for an SMR located near Energy Northwest's Columbia Generating Station nuclear power plant in Richland, a press release said. The tech giant is slated to take an initial 320 MW of power from four 80 MW Xe-100 SMRs.

Crane Clean Energy Center

With SMRs yet to be commissioned anywhere outside of China and Russia, prudent AI leaders are also looking to procure nuclear power from mature assets. Take Microsoft, which has signed a PPA spurring Constellation Energy to restart a Three Mile Island reactor.

The 835 MW Three Mile Island Unit 1 operated safely for decades before closing for economic reasons in 2019 and will be rebadged as the Crane Clean Energy Center when it returns to duty in 2028

Google and Kairos master agreement

The SMR maker Kairos Power last year announced a master plant development agreement with tech behemoth Google, underpinning moves to deploy a 500 MW fleet by 2035.

The agreement would see Kairos developing, building and operating SMRs "in relevant service territories" and providing power under PPAs, with initial deployments supposedly beginning in 2030.

Amazon and Dominion SMR memorandum

Alongside other nuclear power projects, Amazon has entered into a memorandum of understanding with Dominion Energy over the development of SMRs in Virginia. The move follows a request for proposals from SMR makers issued by Dominion in July 2024.

Announced in October 2024, the memorandum could see at least 300 MW of SMR-based power being added to a site near Dominion's North Anna nuclear power station, Amazon said. No further details have been released.

Natrium strategic collaboration agreement

In January 2025 reactor maker TerraPower, which broke ground on America's first advanced nuclear project last year, announced a strategic collaboration agreement to supply its Natrium plants to Washington-based Sabey Data Centers, with reactors potentially online by 2030.

The agreement mentions deployments in Texas and the Rocky Mountain region, with "multiple project execution structures." Each Natrium plant will have a 345 MW sodium-cooled fast reactor coupled with salt-based energy storage, for a total output of 500 MW.

"Microsoft's PPA spurred Constellation to restart Three Mile Island Unit 1 (835 MW)... rebadged as Crane Clean Energy Center for 2028 relaunch."

Outlook and Conclusions

This list is not intended to be exhaustive but serves to illustrate the massive and growing opportunity for EPC work in the data center power sector. As with any fast-evolving market, however, individual company announcements carry an element of doubt.

Hence an important challenge for contractors in this space will be to focus energy and resources on the opportunities that have the greatest chances of success.

For this, it is vital to share intelligence and gain access to the latest and most authoritative sources of market information. And no other forum offers greater access than the Energy Projects Conference & Expo. To find out more, visit www.epcshow.com.

Project Name	Type	Location	Capacity	Timelines	Status	Companies Involved
<u>Comanche Circle</u>	Gas	Tolar, Texas	Up to 5 GW (3.2 GW by 2028 for phase one)	Phase one by 2028	Planned/Commissioning	Sailfish Investors
<u>Lancium Clean Campus and power foundries</u>	Gas	Abilene, Texas	Up to 4.5 GW (almost 1 GW booked)	Unclear for “power foundries”	Under development/ Partnership	Lancium, Crusoe, GE Vernova
<u>Homer City Energy Campus</u>	Gas	Homer City, Pennsylvania	4.5 GW	Slated to begin producing power in 2027	Under construction	Homer City Energy, LLC
<u>Caldwell County data center technology park</u>	Gas	San Marcos, Texas	Up to 2 GW (initial 360 MW energization)	Initial 360 MW by 2028	Planned/Acquisition and design agreement	Tract, Bluebonnet Electric Cooperative
<u>San Marcos next-gen data center campus</u>	Gas	San Marcos, Texas	1.2 GW	Timings affected by unannounced partners	Planned/Supply agreement	CloudBurst Data Centers, Energy Transfer, LP
<u>HyperGrid campus</u>	Gas/Nuclear/ Solar/Batteries	Amarillo, Texas	Up to 11 GW (1 GW by end of 2026, kicking off with 600 MW)	600 MW in 2025	Under development	Fermi America, Texas Tech University System
<u>Project Lincoln</u>	Gas	Mercer County, Kentucky	645 MW	By 2032	Planned/In doubt	Lincoln Energy Partners
<u>PowerHouse Louisville</u>	Gas	Louisville, Kentucky	645 MW	Initial 130 MW in fall of 2026	Planned	Poe Companies, PowerHouse, LG&E
<u>Stargate 1/Project Ludicrous</u>	Gas	Texas	361 MW	Not specified	Planned	SoftBank, OpenAI, Oracle, MGX, CoreWeave
<u>Unnamed project</u>	Gas	Ohio	282 MW	Equipment delivered late 2026 into 2027	Announced	Wärtsilä
<u>Ector County AI/high-performance computing data center</u>	Gas (with CCS)	Ector County, Texas	250 MW (first 100 MW within 12 months of	First 100 MW within 12 months of funding	Planned/Site due diligence	New Era Helium, Sharon AI, PowerForward Energy Solutions

<u>Duos Technologies hyperscaler deal</u>	Gas	Not specified (U.S.-based)	More than 100 MW	Within 10 days of joint announcement (February 2025)	Deployed	Duos Technologies, APR Energy
<u>Pennsylvania gas generation</u>	Gas	Pennsylvania	Not specified	2031 timeframe	Planned/Joint venture	PPL Corporation, Blackstone Infrastructure
<u>NextEra framework agreement</u>	Gas (paired with renewables and energy storage)	Florida (potentially other locations)	Not specified	Early stage/Unclear	Planned	NextEra Energy
<u>Susquehanna power purchase agreement</u>	Nuclear	Not specified (Talen's Susquehanna plant)	1.9 GW	Through 2042	Operational (PPA signed)	Amazon, Talen Energy, Amazon Web Services (AWS)
<u>Standard Power's deal with NuScale</u>	Nuclear (SMR)	Ohio and Pennsylvania	Two dozen 77 MW SMRs	Operating plants by 2029	Planned	Standard Power, NuScale Power, ENTRA1 Energy
<u>Surrey Green Energy Center</u>	Nuclear (SMR) and Green Hydrogen	Surry County, Virginia	Up to 1 GW (four to six 250 MW SMRs)	Awaiting updates	Planned	Green Energy Partners
<u>Columbia Generating Station SMR project</u>	Nuclear (SMR)	Richland, Washington	Initial 320 MW from four 80 MW Xe-100 SMRs	Not specified	Feasibility study/Planned	Energy Northwest, AtkinsRéalis Group Inc, Amazon, X-energy
<u>Crane Clean Energy Center</u>	Nuclear	Not specified (Three Mile Island)	835 MW	Returns to duty in 2028	Restarting	Constellation Energy, Microsoft
<u>Google and Kairos master agreement</u>	Nuclear (SMR)	Relevant service territories	500 MW fleet	Initial deployments supposedly beginning in 2030	Planned	Google, Kairos Power
<u>Amazon and Dominion SMR memorandum</u>	Nuclear (SMR)	Near Dominion's North Anna nuclear power station, Virginia	At least 300 MW	Not specified	Planned/Memorandum of understanding	Amazon.com, Dominion Energy Virginia, X-energy
<u>Sodium strategic collaboration agreement</u>	Nuclear	Texas and Rocky Mountain region	500 MW (345 MW reactor coupled with storage)	Potentially online by 2030	Planned	TerraPower, Sabey Data Centers