



BEHIND THE METER:

AI DATA CENTERS' POWER DEMANDS ARE SHIFTING BOUNDARIES



The immense power demands of AI data centers are pulling Oil & Gas companies into the Power Utilities business, and reshaping who runs things

Executive takeaways

- AI data centers' immense power demands are creating a shock that is redrawing the boundary between the Oil & Gas and the Power Utilities industries.
- Three converging forces are leading to this change:
 - Technology hyperscalers are backing new power generation through multiple commercial models.
 - Energy technology and oilfield services companies are moving into power and data center infrastructure.
 - IT, OT, and energy operations are becoming increasingly interdependent.
- Hyperscalers Microsoft, Amazon, Meta, and Google are associated with six major U.S. projects representing 19.0 GW of natural gas generation.
- Oilfield services players Baker Hughes, Halliburton, and SLB are moving into the data center opportunity, following distinct strategies.
- U.S. data center power demand has been projected to double between 2025 and 2027. Yet there are many constraints delaying data centers reaching commercial operation.
- The advantage will go to those companies that can integrate fuel supply, generation, controls, digital operations, cooling, and computing, while making regulatory, environmental, and commercial accountability equally clear.

BOUNDARIES SHIFTING AS THREE FORCES CONVERGE

AI data centers' immense power demands are creating a shock that is redrawing the boundary between the Oil & Gas and the Power Utilities industries.

Three converging forces are leading to this change: First, technology hyperscalers are backing new power generation through multiple commercial models. Second, energy technology and oilfield services companies are moving into power and data center infrastructure. And third, IT, OT, and energy operations are becoming increasingly interdependent.

The scale is already material. Hyperscalers Microsoft, Amazon, Meta, and Google are associated with six major U.S. projects representing approximately 19.0 gigawatts (GW) of natural gas generation — announced, contracted, permitted, or developing. (Note: The projects are not directly comparable, as they vary in ownership, commercial structures, grid connections, and maturity. Therefore, the 19.0 GW should be viewed as an indicative portfolio, not as firm operating capacity.)

The oilfield services players, for their part, are also not following a single playbook as they move into the data center opportunity.

Baker Hughes is combining gas-turbine equipment with Chart Industries' thermal-management capabilities. Halliburton and VoltaGrid are advancing modular distributed generation. SLB is expanding from prefabricated modular infrastructure into cooling and heat exchange through its announced Kelvion acquisition. The strategies are clearly distinct (and therefore, should not be rolled into one power-capacity number).

Goldman Sachs has projected U.S. data center power demand to increase, from 31 GW in 2025 to 66 GW in 2027.

Yet, as of 2025, the median power project could wait as long as 61 months in an interconnection queue before reaching commercial operation. Behind-the-meter generation can shorten parts of the path, but it does not eliminate permitting, financing, construction, or execution constraints.

The convergence of forces is structural, not cyclical. This paper examines the converging forces and the industry boundary changes, explores the specific strategies emerging, and considers the operational and market implications of these significant shifts.



HYPERSCALERS BUYING GAS DIRECTLY

Of the three forces converging, the first is this: Hyperscalers are backing new power generation through multiple commercial models.

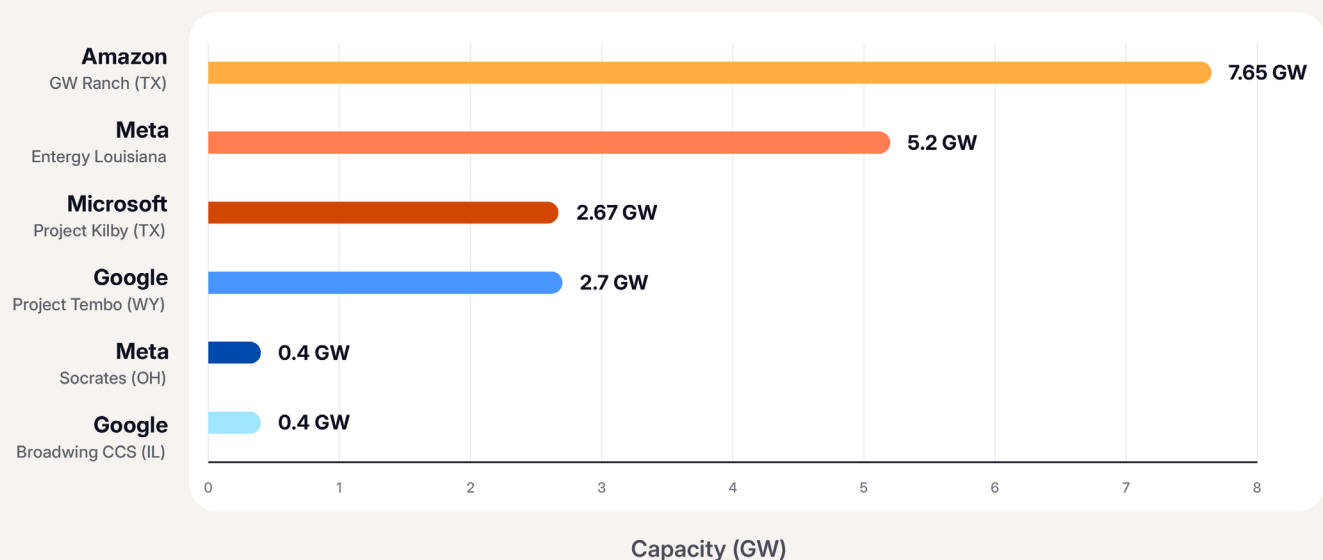
It is not simply that hyperscalers need more power. It is that they are using direct contracts, regulated utilities, behind-the-meter projects, off-grid developments, and corporate offtake agreements to secure that power.

As mentioned, across six major U.S. projects, hyperscalers Microsoft, Amazon, Meta, and Google are associated with approximately 19.0 GW of natural gas generation — announced, contracted, permitted, or developing. (It's important to note, however, that this is not 19.0 GW of operating capacity. These projects sit at different stages and use different commercial models.)

Figure 1. Six hyperscaler projects are associated with approximately 19.0 GW of gas generation — announced, contracted, permitted, or in development.

Hyperscaler-associated gas generation projects

~19.0 GW announced, contracted, permitted, or in development





The pattern is clear. Hyperscalers are not waiting for one standard utility solution. They are using multiple commercial models, and are drawing Oil & Gas producers, midstream operators, utilities, independent developers, and energy technology companies into the same infrastructure race.

Microsoft and Chevron: Project Kilby (Texas)

In June 2026, Chevron subsidiary Energy Forge One signed a 20-year power purchase agreement with Microsoft for Project Kilby, a proposed colocated power facility in West Texas. The project is expected to deliver approximately 2.67 GW through a phased modular design using GE Vernova turbines and Solar Turbines equipment, with first power anticipated in 2028. (At announcement, the project remained subject to a final investment decision and other conditions.)

This agreement matters for both companies. Chevron is targeting mid-teen returns and cash flow designed to be independent of Oil & Gas price cycles. Microsoft will gain a dedicated route to large-scale power that is intended to move faster than relying on regional grid expansion alone.

Amazon's GW Ranch (Texas)

Amazon/AWS is pursuing a different model. It acquired an 8,000-acre site in Pecos County, Texas, and plans to buy power from a proposed behind-the-meter campus supplied by up to 7.65 GW of onsite natural gas generation from 35 turbines. The Texas air permit authorizes a ceiling of up to 33 million tons of carbon dioxide (CO₂) emissions per year. (That is a permitted maximum, not a forecast of actual annual emissions.) Amazon's GW Ranch data center campus is designed to operate independently of the Texas power grid.

Amazon also plans 750 megawatts (MW) of onsite solar and 1.8 GW of battery storage, creating a large hybrid energy system rather than a gas-only configuration.

Meta and Entergy Louisiana

Meta is working through a regulated utility model. Entergy Louisiana plans seven new Meta-funded, combined-cycle gas plants totaling more than 5,200 MW, with the announced structure designed for Meta to pay its full cost of service. Entergy projects approximately \$2.65 billion in total customer benefits over 20 years, when this agreement is combined with a previously announced arrangement. The seven plants are additional to three plants already approved for the broader campus.

Meta and Williams (Ohio)

In Ohio, Williams is developing the Socrates North and Socrates South facilities through its Will-Power OH subsidiary. These two behind-the-meter sites would provide a combined 400 MW near Meta's New Albany campus. Blackstone and partners committed \$5.34 billion for a 49% noncontrolling interest across five Williams Power Innovation projects. In July 2026, Meta and the Climate Group ended Meta's RE100 membership after the organization said Meta could no longer meet its technical criteria because of the new gas investments.

Google and Project Tembo (Wyoming), Google and Broadwing Energy Center – CCS (Illinois)

Google is pursuing two distinct gas-to-power strategies. In Wyoming, planning documents and reporting describe Google's Project Tembo as a 2.7 GW data center campus near Cheyenne, with completion planned for 2031. In Illinois, Google has agreed to buy most of the output from Broadwing Energy Center's planned 400 MW gas cogeneration plant in Decatur. The facility is designed to capture and permanently store approximately 90% of its CO₂ emissions (carbon capture and storage, or CCS), connect to the regional grid, and supply steam to an adjacent industrial site

The pattern is clear. Hyperscalers are not waiting for one standard utility solution. They are using multiple commercial models, and are drawing Oil & Gas producers, midstream operators, utilities, independent developers, and energy technology companies into the same infrastructure race.



OILFIELD SERVICES: FOLLOWING THE GIGAWATTS

The second converging force is this: Energy technology and oilfield services companies are moving into power and data center infrastructure.

Specifically, Baker Hughes, Halliburton, and SLB are all moving into the data center opportunity, in different ways.

(Note: That distinction is important. The companies' announced metrics describe different products, services, and commercial models, and therefore, should not be combined into one gigawatt total.)

Baker Hughes: the power and thermal solutions provider

Baker Hughes is supplying NovaLT gas turbines and related equipment for rapid-deployment power. In the second quarter of 2026, its Industrial & Energy Technology segment reported \$7.1 billion of orders and a \$37.1 billion remaining performance obligation. (Those are segment-wide figures, not a data-center-only backlog.)

The data center momentum is still tangible. A Dynamis Power Solutions order covers 76 NovaLT16 turbines representing approximately 1.3 GW for mobile data center and Oil & Gas applications. Baker Hughes also announced an initial 1 GW agreement with Kodiak Gas Services, with a pathway to 1.8 GW by 2030, plus a separate 270 MW Frontier Infrastructure project.

Baker Hughes is also broadening its portfolio, with its July 2026 acquisition of Chart Industries adding air and gas handling, thermal management, life cycle services, and data center cooling. The strategic direction is clear: move from equipment supply toward more integrated power and thermal-management solutions.

Halliburton and VoltaGrid: distributed-power collaboration

Halliburton and VoltaGrid are pursuing a distributed-power model. Their collaboration combines Halliburton's global operating footprint, infrastructure, and regional regulatory experience with VoltaGrid's engineering, procurement, technology, and QPAC platform. The initial focus is the Middle East and other emerging markets.

VoltaGrid separately announced a 2.3 GW modular gas-generation deployment for Oracle Cloud Infrastructure, using INNIO Jenbacher engines, automation by ABB, and firm natural gas supplied through Energy Transfer's network. The available announcements identify VoltaGrid, not Halliburton, as Oracle's deployment counterparty.

Halliburton and VoltaGrid have made a separate, firm commitment by securing manufacturing for 400 MW of modular natural-gas power systems for delivery in 2028 across the Eastern Hemisphere. That commitment demonstrates progress in their collaboration; it should not be conflated with Oracle's 2.3 GW deployment.

SLB: modular design partner

SLB has moved quickly from energy services into modular data center infrastructure. As NVIDIA's modular design partner for DSX AI factories since April 2024, SLB has shipped more than 1.3 GW of prefabricated infrastructure. SLB expects cumulative deliveries to exceed 2 GW globally by the end of 2026.

In Shreveport, Louisiana, SLB reports 3.1 million sq. ft. of operations and almost 1,800 employees. Meta has selected SLB to support a major data center development in Canada. (Note: For SLB, the gigawatt measure refers to infrastructure supported, not to electric power generated by SLB.)

SLB's planned alliance with Liberty Energy adds another dimension. SLB would bring modular infrastructure, project execution, and global reach; Liberty would bring modular generation, behind-the-meter controls, and operating expertise. Liberty has separately stated a target of approximately 3 GW of distributed-power projects by 2029.

SLB’s announced Kelvion acquisition pushes SLB further into the physical infrastructure stack. Kelvion will add thermal management and heat exchange to SLB’s capabilities, two capabilities that become more critical as AI density increases. SLB says the combination would more than double its revenue opportunity per gigawatt of delivered capacity. Kelvion expects \$1.2 billion to \$1.3 billion of data center revenue in 2026, while SLB expects more than \$2 billion of pro forma 2026 revenue for the combined data center business. The transaction is expected to close in the first half of 2027, subject to regulatory approvals and customary conditions.

Table 1. Oilfield services — commercial models and verified metrics

Oilfield services — commercial models and verified metrics

	Baker Hughes	Halliburton and VoltaGrid	SLB
Role	Integrated power and thermal-management supplier	Distributed power collaboration	Modular infrastructure and thermal-management partner
Commercial model	Equipment, Chart Industries integration, and life cycle services	Joint development and operations model	Design and execution; planned Liberty Energy alliance; announced Kelvion acquisition
Verified metrics	Chart Industries acquisition completed; 1.3 GW Dynamis order	400 MW manufacturing commitment; Oracle 2.3 GW is separate	>1.3 GW shipped; Kelvion agreement signed

INDUSTRY BOUNDARIES SHIFTING: THE STRUCTURAL DRIVERS

The third force at play is this: IT, OT, and energy operations are becoming increasingly interdependent.

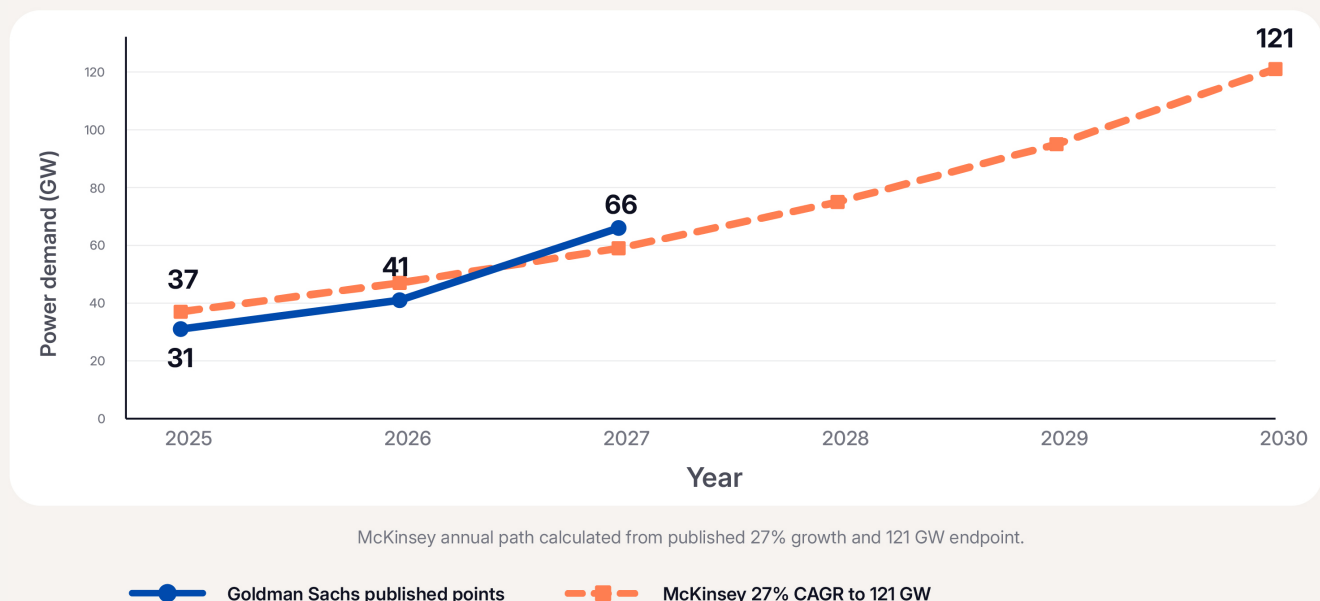
What makes the boundary shifting of the Oil & Gas and the Power Utilities industries structural is not one project or one forecast: It is the combination of accelerating demand, constrained grids, new infrastructure models, and a growing need to operate energy and compute as one connected environment.

Demand is rising rapidly. Goldman Sachs has projected U.S. data center power demand to increase from 31 GW in 2025 to 41 GW in 2026 and to 66 GW in 2027. McKinsey's July 2026 model points to approximately 27% CAGR through 2030, reaching 121 GW of U.S. data center IT demand. The forecasts use different horizons and potentially different definitions, so they should be read as separate outlooks, not blended into one curve.

Figure 2. U.S. data center power demand outlook. Per Goldman Sachs: 31 GW (2025), 41 GW (2026), and 66 GW (2027). McKinsey estimates approximately 27% CAGR through 2030, reaching 121 GW of data center IT demand. McKinsey's intermediate annual values are calculated from published growth rate and endpoint.

U.S. data center power demand outlook

Published demand points and projected growth path · 2025–2030

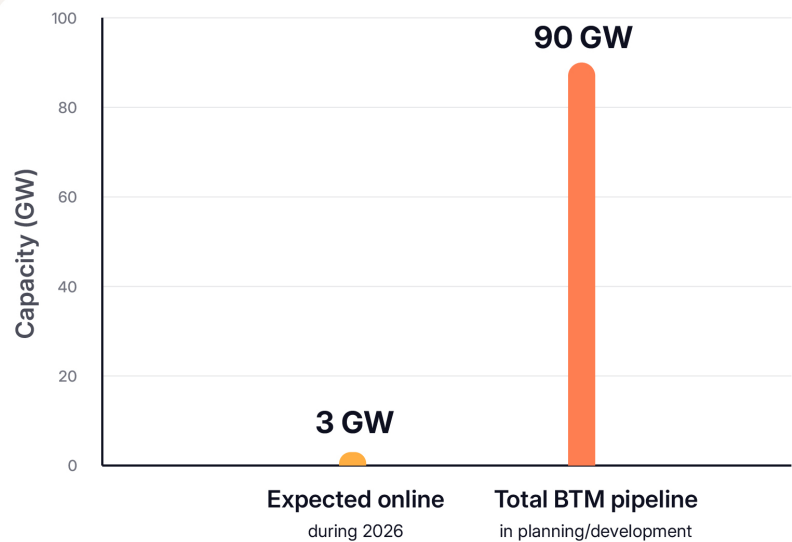


The grid cannot keep up with every request. The median project reaching commercial operation in 2025 spent 61 months in the interconnection queue, compared to just 22 months in 2008. Only about 13% of capacity entering U.S. queues between 2000 and 2020 had reached commercial operation by year's end in 2025. Behind-the-meter projects can avoid some transmission-interconnection steps, but they still face technology, permitting, financing, construction, and execution constraints.

Figure 3. Behind-the-meter (BTM) gas pipeline: 90 GW in planning/development, including 3 GW expected online during 2026 (reported by Forbes, citing Cleanview)

Behind-the-meter gas generation

3 GW expected online in 2026 · 90 GW in planning/development



The behind-the-meter pipeline is large, but it is not firm supply.

A July 2026 Cleanview analysis cited by Forbes identified approximately 90 GW of gas generation for data centers in planning and development, including 3 GW expected online during 2026.

The operating model is changing with the infrastructure.

Chevron/Microsoft's Project Kilby and distributed-power platforms connect gas supply, generation, turbine or engine controls, electrical distribution, cooling, and compute. The technical stack is converging even when commercial accountability remains distributed across multiple parties.

Regulatory and community scrutiny will rise with project scale.

Amazon's permit allows up to 33 million tons of CO2 emissions per year, and moratorium or restriction counts vary depending on what a particular tracker includes. Therefore, with scrutiny rising along with scale, any public claim should state both the definition and the date.

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The direction is clear. Natural gas is likely to play an important role in the near term, while the timing and scale remain scenario dependent. Oil & Gas producers and midstream companies are already moving into the power arena.



CONCLUSIONS: THE FORECAST

2030 data center power landscape

Different definitions and maturity stages — not a single supply-demand balance

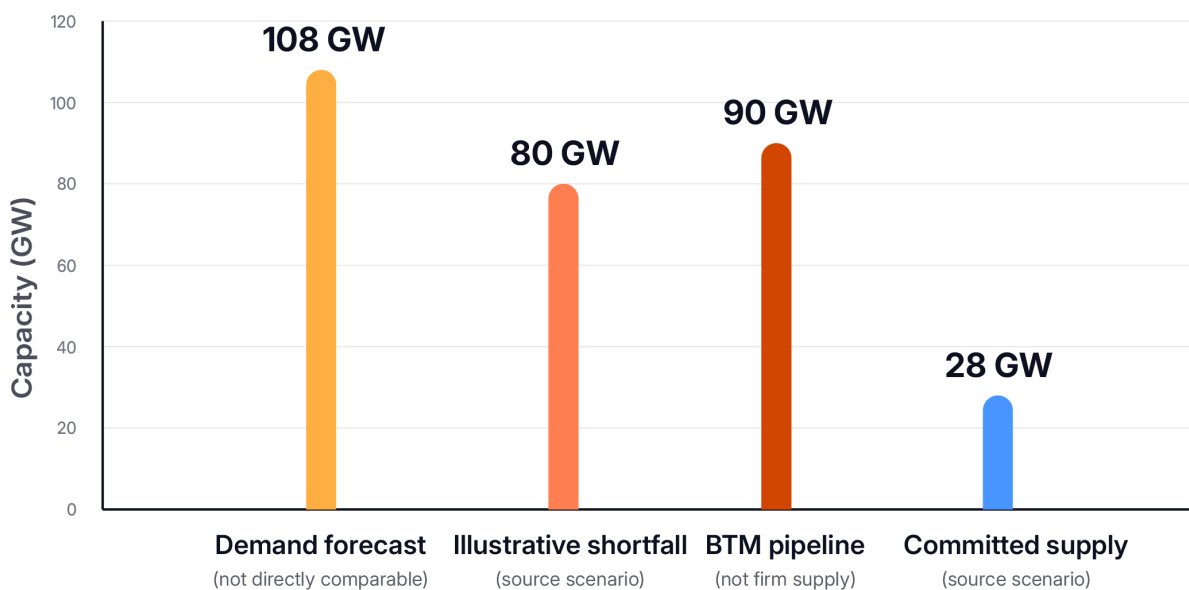


Figure 4. 2030 data center power landscape. Note: Forecasts and project pipelines use different definitions and maturity stages and should not be treated as a directly comparable supply and demand equation.

The forecasts and project pipelines do not form one clean supply-demand equation. The 90 GW behind-the-meter pipeline is not the same as deliverable supply, and longer-term demand forecasts use different methodologies.

The direction is clear, however: Natural gas is likely to play an important role in the near term, while the timing and scale remain scenario dependent.

Oil & Gas producers and midstream companies are already moving into the power arena. Chevron's Energy Forge One and Williams' Power Innovation projects are two examples of this. What remains uncertain is how many companies will create dedicated power businesses and how widely the long-term contract structures will be adopted.

The competitive boundary is also moving beyond power generation. Baker Hughes' completed acquisition of Chart Industries and SLB's announced Kelvion acquisition extend the contest into cooling, heat exchange, thermal management, and life cycle infrastructure. What will determine how quickly those portfolios translate into market position are: execution, financing, regulation, and transaction completion, where applicable.

Natural gas offers a near-term, firm-power option. Carbon capture, hydrogen-compatible equipment, nuclear, renewables, and storage may complement it on different timelines. Broadwing provides one planned carbon-capture pathway, while Baker Hughes markets NovaLT as a multifuel platform capable of using natural gas and hydrogen blends.

The bottom line is this: The advantage will go to those companies that can integrate fuel supply, generation, controls, digital operations, cooling, and computing, while making regulatory, environmental, and commercial accountability equally clear.

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