

BTM Datacenters Go Global, Datacenters Take More Gas Than LNG, More Hyperscalers Securing Turbines: Gastech 2026

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The annual Gastech conference has been one of the key events in the global gas and LNG market calendar for over 50 years. This market has faced the headwinds of the pandemic, wars and extreme weather, but now the growing demand for gas and power from hyperscalers and datacenter developers is bringing in new end users of supply and competitors for power equipment.

SemiAnalysis took to the Gastech Expo floor last week in Bangkok to find out how these legacy players are supplying the AI infrastructure buildout. We also spent a day outside Bangkok at Gulf Development's operating and planned datacenter and gas-power sites, built to serve Southeast Asia's AI-driven power demand.

Executive summary:

- We believe AWS, SpaceX, and Fluidstack have ordered turbines, taking around 1-2 GWs each for BTM facilities across Texas and Louisiana.
- Fluor is doing power plant work for a TeraWulf datacenter; has a limited notice to proceed on a Kentucky brownfield campus with up to 480 MW grid power, in a deal worth around \$3bn.
- BTM goes global: we believe DayOne is looking at onsite generation in Malaysia because of the congested grid, while we heard INNIO has interest for a 200 MW BTM datacenter project in Thailand.
- GE Vernova has firmly contracted through the end of 2028 with non-refundable deposits. Rolls-Royce has sold out through 2027 and nearly through 2028; 2029 open at ~30% prepayment, subject to project quality.
- INNIO has booked through 2029, with 20% deposit; up to 70% of price to cancel. Baker Hughes has no near-term capacity, while Solar Turbines still has some 2028 availability. Solar's products above 30 MW are mostly sold out, but Titan 130 units (~16.5 MW) could be available early 2028 for a project with permits, phasing, and a schedule sorted.
- Datacenters are becoming a bigger buyer of US gas than LNG export terminals. At EQT, datacenter deals are already a larger share of the book than LNG. EQT is supplying gas to the Shippingport Power Station development in western Pennsylvania, which uses Bloom Energy fuel cells as part of its gas supply agreements with BE.
- Southeast Asia is building its own AI capacity at roughly half of what it costs in North America, with Thai developers building at ~\$7-10M/MW vs \$12-15M/MW in North America, and delivering in 15 months.
- For developing datacenters in the region, Chinese customers push hardest on price. While US customers pay more, they demand higher standards and prefer Japanese or Thai EPCs over Chinese contractors.

Gas and LNG players and Market Overview

EQT

- The Pennsylvania-based upstream producer says datacenter/BTM deals represent ~10% of their book vs ~8% for LNG with the datacenter share expected to grow considerably.

- Supplying ~800 MMcf/d of Marcellus/Utica gas to Shippingport Power Station (Frontier Group, western Pennsylvania), which will use Bloom Energy, enough for 3-5 GW. They plan on 2+ GW to the co-located datacenter and 1+ GW to PJM market. Gas is set to start flowing before the end of 2026.
- From their experience with Bloom, fuel cells take gas at ~100 psi, below turbine/recip requirements, which opens up access to older pipelines with less compression.
- Datacenter gas contract pricing set by location and deliverability, not solely the benchmarks, meaning remote or hard-to-build sites can pay a premium.

Venture Global

- VG has around 50-52 MTPA of LNG contracted long term, planning growth to ~85 MTPA then to 100. They're set to have ~50 MTPA of the eventual portfolio on 20-year terms. They also signed 4-5 MTPA of five-year contracts this year, a shift into mid-term deals, with more to come. These used to be called short-term deals in the LNG market, but given customer demand for contract flex, they're now viewed as mid-term! We plan to go further into the LNG market and its impact on US upstream and midstream gas, as datacenter operators look at the same molecules.
- Rapidly improving operations: Plaquemines is ~40% over its 20 MTPA rating. There is further upside at CP2, and another ~2 MTPA available if more gas is made available to the site. Deployment of sensor and vibration analytics has been used since they started up, enabling a lot of efficiency improvements.
- Growing SE Asian demand has meant they shipped six cargoes into Thailand and struck new deals in Korea and Japan in the past half year.
- Owned ships carry ~10% of volumes – growing with output – letting VG move commissioning cargoes without waiting or having a trader rip them out of a hedge. This preserves tactical leverage and hedging ability when European and Asian spot markets make marketing outside long-term contracts attractive. However, it is not a major commercial driver in the eyes of management.
- The midstream sector and its ability to ship sufficient gas is the constraint to VG exports rather than liquefaction ability, with more pipeline gas meaning more LNG from the same equipment.
- Owns 3.3 GW of onsite generation portfolio-wide, built to maximize LNG output and reliability, but not yet to sell power. They have in-house EPC muscle and workforce for their own onsite generation plans, and see moving to the BTM sector as attractive pending slower US LNG buildout.
- LNG glut? The oversupply window keeps migrating—winter 2025, then 2026-28, now 2029-31—and the forecasts assume every project lands on time at full output. They prefer low US gas prices: feedgas is the biggest variable cost, and high prices invite competing liquefaction. Demand growth ~5-6%/yr over 25 years, leaning 6%.

China National Petroleum Corporation

- Chinese gas demand is industrial and baseload, with datacenters “unlikely to move the needle for a while.”
- Russian pipeline gas valued for terms and overland delivery; the Russia relationship is ring-fenced internally to compartmentalize sanctions risk. China also imports LNG from Russia, with substantial year-on-year import growth so far this year.

The OEM Lowdown

All the major power generation equipment manufacturers were present at the conference. Demand for power from the datacenter market represents an increasing share of these companies' businesses, building on legacy markets in LNG, upstream, midstream and utility power generation.

Sold-out or not rhetoric and higher prices are still the major themes as we note below. Although the conference was also a chance to gather more color on other components of the deposits, cancellation conditions and equipment lifespans. Here's the breakdown by company:

GE Vernova

The company is firmly contracted through to the end of 2028. Their slot deposits for equipment are non-refundable, but when shifts need to occur, established utilities and long-term partners have more flexibility to reschedule rather than getting struck off. For developers with little or no commercial history with the company, they tend to lose their slots outright if there are changes or a need to cancel.

Expanding manufacturing capacity is capped by rare-earth and specialty-metal supply (high-nickel rotor alloys), and any expansion is happening through re-opening pre-2016 shuttered plants or previously underutilized sites.

Rolls-Royce / MTU

Similarly sold out as above, but with possibly some availability for end of 2028 delivery. There is a typical prepayment of ~30% for an order, which can move depending on customer and project 'quality'.

RR only supplies the equipment, and does not offer PPAs, although it has partnership and deployment channels via Energy as a Service providers (EaaS) including Liberty, VoltaGrid and Williams for projects sized upwards from ~150 MW.

- On deals, RR/MTU's framework agreements are with Amazon and Google, while we hear they also have a 1,000-unit hyperscale order through 2029 for gas primary power.
- On the supply side, RR produces around 2,000 units a year out of Germany. The cap on the output is unlikely to move quickly, with a new factory taking two to three years to come online, given the dedicated machinery, foundry capacity and specialized steel involved.

On the product side:



2.8 MW mtu Series 4000 L64 Source: RR Marketing

- The 2.8 MW mtu Series 4000 L64 reaches full output in 45 seconds and runs without a gearbox. The company is gearing it towards to US market with a 60 Hz line from 2026. Engine life runs to ~84,000 hours, or roughly 12 years at up to 7,000 hours a year, with two weeks of maintenance every two years and a larger two-to-three-week service in year five. For deployments, RR prefers pairing gensets with both batteries and flywheels.

In Asia, ~120 MW of MTU gas engines are already running primary power in Thailand, and APAC datacenter conversations are ongoing, though these would be grid-connected rather than behind-the-meter, and no contract has been signed yet.

INNIO / Jenbacher

For most of the products, earliest availability is also 2029. The company has lower deposit requirements for slots than others at 20% of the price, while cancelling an order incurs up to around 70% of the price.

Innio has a 50 MW containerized J624 order booked this quarter by a US energy company for US datacenter behind-the-meter prime power, with delivery by 2028. They are also close to signing a 200 MW BTM datacenter deal in Thailand, possibly linked to an importing LNG company.

On their maintenance cycles, the products generally require ~1 day maintenance every 2,000–3,000 hours; 2–3 days every 5,000–10,000 hours and around a week maintenance at 20,000 hours.

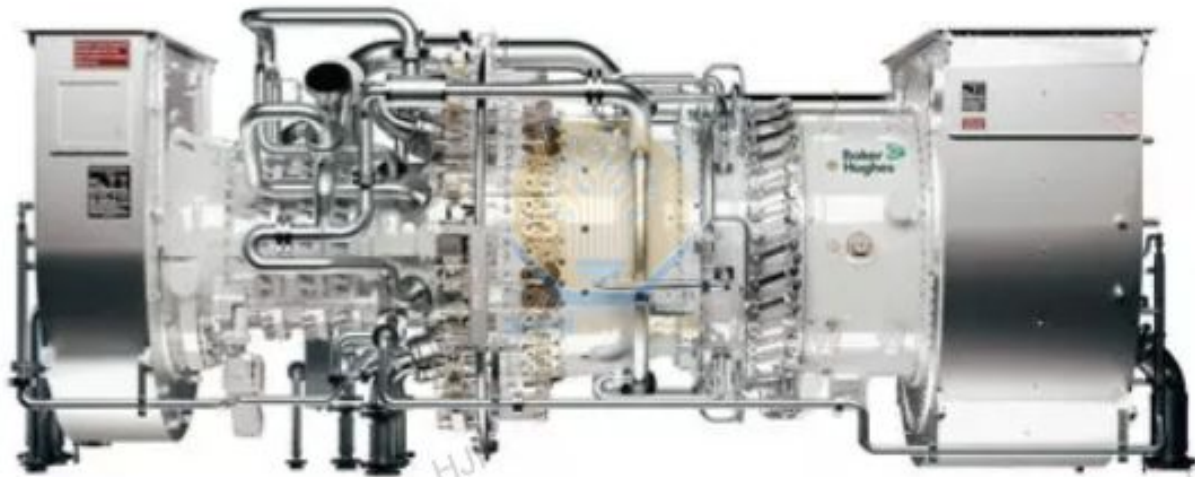
Baker Hughes

Datacenters have shifted Baker Hughes' strategy immensely, moving away from custom turbine builds toward standardized products, underpinned by the Dynamis fleet.

But Baker Hughes has no meaningful near-term capacity because of this wild rush, caveating that slots and availability still all depend on size and customer profile. They were marketing two product lines at the show:

the GE Aviation-derived LMs including the LM2500, sold under an agreement with GE covering the oil and gas market, plus its own NovaLT range.

The unit on display was a NovaLT16, in the 16–17.5 MW band, with the product generally cheaper than comparable GE Vernova equipment.



NovaLT16, in the 16–17.5 MW band Source: BH Marketing

- Deal-wise, Baker Hughes closed a US fleet order a few weeks ago: approximately 76 NovaLT16s with gearboxes and BRUSH generators, around 1.3 GW in total, for Dynamis Power Solutions. However, we heard it was approximately 90 units on the ground.
- Delivery, assembly and commissioning on site take just 30–40 days if civil works are completed by the customer properly. But typically, the full project takes around two to three years. On maintenance, Baker Hughes signs long-term agreements and runs its own field-service staff for installation and servicing, with over 150 people in ASEAN alone.
- The first full maintenance comes at 35,000 hours and the second at 70,000 hours. Half-maintenance is normally at 18,000 hours, but this is lengthened to 24,000 hours on the new type of turbine. Standardization also makes aftermarket service easier, which is useful given the constraints in the labor market, which Baker Hughes views as a big pain point.

Solar Turbines / Caterpillar

A rare find on the expo floor: Solar Turbines still has some 2028 availability. Their products above 30 MW are mostly sold out, but Titan 130 units (~16.5 MW) could be available early 2028 for a project with permits, phasing and a schedule all sorted, and Solar will reserve capacity against a permitted, phased project.

- Solar has been matching GE Vernova's increase in price, saying their selling point is delivery certainty. Once delivered, commissioning takes around two weeks if the site is ready and can operate the equipment itself or through partners, and packages turbines and reciprocating engines (from Caterpillar) together.

- On products, the larger Titan 250 is 50% more powerful than the 130 in the same footprint, around 40% efficiency, emissions down to 30%, and is pulling interest from utilities that want power sooner.
- On deals, ten Titan 130s are running at an Irish colocation site with a single hyperscaler tenant, and behind-the-meter gas interest is coming from the UK.

Solar has always sold standardized products with service attached, already running the business model Baker Hughes is building toward.

Siemens Energy

Most of the customer base right now are IPPs and utilities building gas peaker plants, because of the datacenter load, not datacenters buying directly for BTM power.

- The SGT-750 (~40 MW) and SGT-800 (up to 62 MW), both Swedish-built, available from 2029. Larger frames are made in Germany, the market for which is expanding faster as demand shifts to larger frames.
- Siemens on maintenance and upgrades: Routine maintenance takes turbines offline 1–2 days a year, with a major overhaul every four years (no duration given). NOx runs at 10 ppm. Customers can start simple-cycle and later bolt on a steam cycle for CCGT efficiency gains — though Siemens wouldn't be drawn on how long that conversion keeps units down.

Dongfang

Dongfang, one of China's big three power-equipment makers, confirmed to us it has sold 20 of its G50 turbines—50 MW machines, about a gigawatt in total — to a datacenter customer in Canada in the past month. They say they can deliver more in a 10-month lead time.

The G50 itself is an F-class machine built on Chinese intellectual property rather than licensed Western designs. Below it, Dongfang sells small reciprocating engines of 2–3 MW, small turbines of 2–7 MW, an aeroderivative in the same size class as Siemens' SGT-800, and transformers.

On China more generally:

- From one EPC we heard that Shanghai Electric was rated the strongest Chinese manufacturer at the ~180 MW frame (holds a 40% stake in Ansaldo Energia).
- Hangzhou Steam Turbine, meanwhile, builds the HGT-800 — a licensed version of Siemens' own SGT-800, now more than half localized to Chinese production, with units already shipped to customers.

Developers, EPCs and the supporting cast... Floating Datacenters?

Karpowership

- The company has bought up around 21 GW of Siemens Energy turbines (SGT-800/600s) plus Everllence medium-speed engines. And we heard they are planning to go big on BTM datacenters, with multiple GWs to be deployed in the next two years.
- Plans to go fully integrated and vertical, using their experience in the energy, LNG and shipping sectors. They plan to build, co-develop, own and operate, selling power on PPAs.

Worley

- Datacenters now account for ~10% of business vs near zero eight months ago.
- Owner's engineer for Gulf, not full EPC — scope includes a regasification plant plus a datacenter for Gulf's spare capacity.

- Worley is new to recipis at scale, while some Korean EPCs prefer them for some large Asian power projects.

Hunter Modular

- Close partner with Siemens, placing OEM equipment into enclosures and modules, so is akin to a Regal Rexnord.
- Capacity (volumes) drives growth; ASP across portfolio seen flat.
- E-houses and power modules for substations were their entry into datacenters.

Aragon

- Norwegian CCUS-plus-EPC since 2018, capture through liquefaction and injection, scaling <100 kg/h to MTPA. They are pitching carbon capture on gas generation serving datacenters, driven by permitting and emissions limits.
- Claims two Norwegian datacenter deals and a US project underway; strong inbound from the datacenter market.

Aspen Aerogels

- Cryogel insulation in ~50 major LNG projects but has a datacenter thermal application in the works.

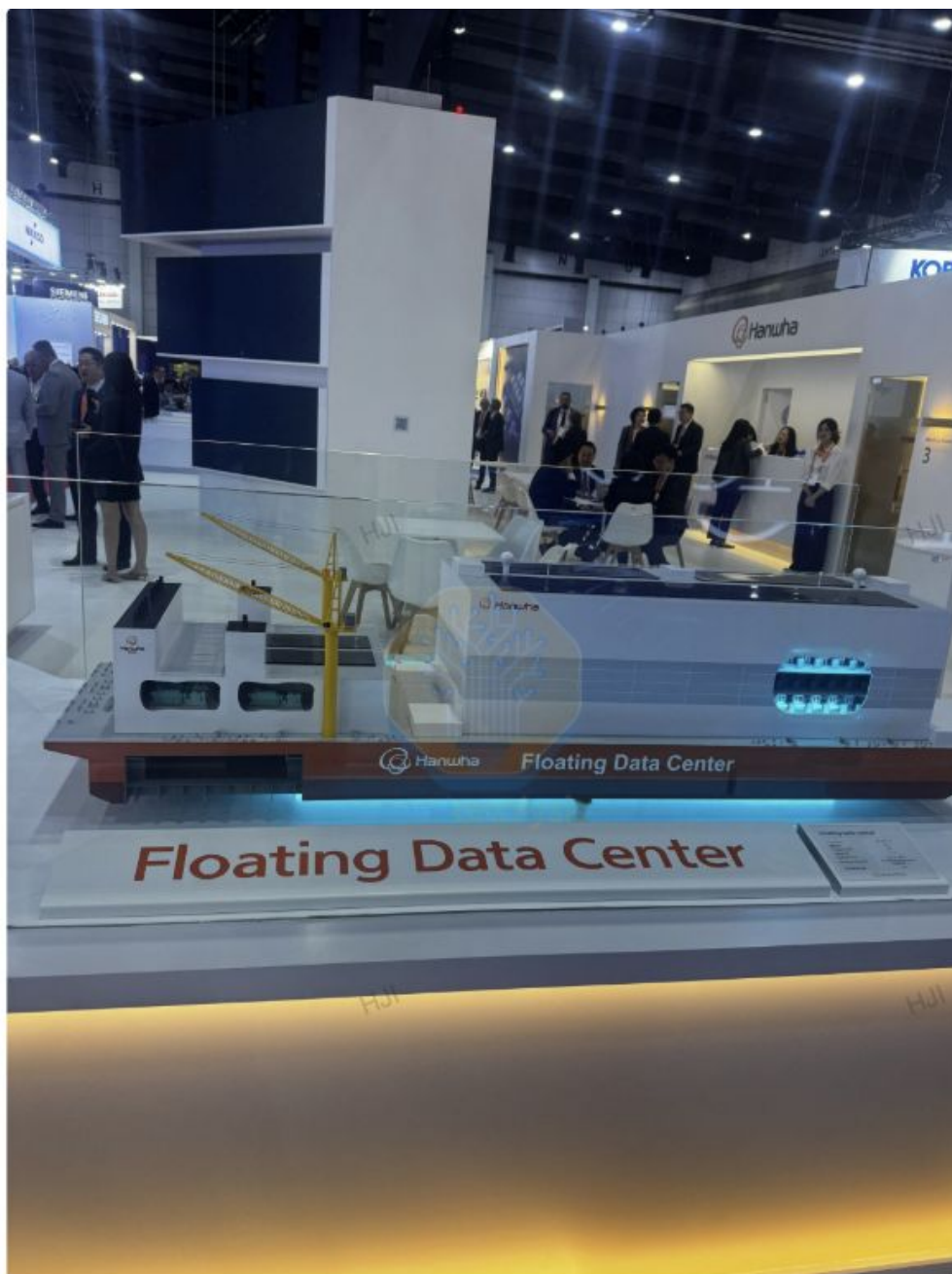
ProEnergy

- New LM-series lead times are 3–5 years, and ProEnergy's refurbished proposition discussed around 120-day overhauls with its own spares — service availability matters as much as turbine availability.

Floating Datacenters Are Bubbling Up

As powered land availability becomes the constraint for the datacenter buildout, the shipping industry is stepping up to meet the demand with a wave of players repurposing ships and engineering to offer potentially nifty floatin' datacenters.

- Hanwha Ocean was showing a self-developed 60 MW floating datacenter on September 14 with Approval in Principle from ABS. Onboard generation, seawater cooling, modular.
- Recips-plus-battery power, Hanwha-built engines under an Everllence-related license; first project 2–3 years out, Asia first, aimed at weak-grid and hard-permitting markets; Korean-yard build.



- HD Hyundai showed competing floating-DC technology at the same show; Karpowership's Kinetics/MOL platform (73 MW by 2027) is the nearest commercial analog.
- Vinssen (Korean marine-electric propulsion): interest arriving from end customers via shipyards; container-ship platforms; GS and SK named as interested. Didn't lead with an AI story unprompted.
- Alas, the seafaring floating compute farms have yet to secure a named customer, signed order or reach FID.

Asia: Gulf Development and the Thailand site visit

Gulf Development is an unusual animal (but no elephant in the room!) in the datacenter world. The Thai conglomerate combines gas, LNG, power generation, infrastructure and telecoms in one company, which means it can supply a datacenter's land, electricity and connectivity itself rather than assembling them from third parties. It is taken seriously by the equipment majors: GE Vernova and Mitsubishi Heavy Industries both told us they regard Gulf, and Thailand more generally, as an important market.

- The Thai system Gulf operates in has around 50 GW of installed capacity, of which roughly 15 GW is gas-fired, against a peak load of about 36 GW and a reserve margin of around 15%. The government has

set aside 6 GW of power for datacenters in the Eastern Economic Corridor, the industrial zone southeast of Bangkok, and refunds import taxes on eligible equipment.

- Thailand is also playing catch-up regionally, Johor captured the first wave of Singapore's datacenter spillover, partly through simple proximity.
- Policy is in flux. New approvals have been paused while the government formalizes rules for the sector, but the stance is pro-datacenter for Tier 1 tenants, not speculative projects. Dedicated standards are expected next year, but as of now datacenters are treated in parts of the legal framework as industrial warehouses. There is a mooted regulation that 60% of a datacenter's power draw needs to come from renewables.

GSA platform

- Gulf's datacenter vehicle is GSA, a joint venture formed in 2022 in which Gulf holds the largest stake at 40%, alongside Singtel's datacenter arm Nxera at roughly 35% and the Thai mobile operator AIS at roughly 25%.
- Gulf brings land and power, Nxera runs the datacenters, AIS brings connectivity and domestic customers. Gulf is planning around 2,000 MW of service-capacity within three to five years.

GSA01, Samut Prakan (operating)

- A small 25 MW site, in operation since Q2 2025, and near full, LEED Gold. It is the first datacenter in Thailand fully equipped with liquid cooling, with Nvidia Blackwell (GB200-class) hardware installed and running.
- From the visit: ~13 MW liquid-cooled on the top two floors, racks up to ~130 kW, six floors of which four are rack floors (two liquid, two air), floor loading ~1.5 t/m². Four customers, mostly Chinese. The site uses Cummins backup gensets.
- Truwater cooling towers, a Trane chiller (~THB 24m), around 48 hours of reserve water and approximately 33 hours of fuel. ~30 Schneider modular switchboards at THB 10–15m each installed, running EcoStruxure — an electrical package of ~\$550k/MW against the ~\$650k per IT MW we carry for comparable scope.

Expansion

- Rayong site: we heard 80 MW, single tenant, ready for service 2027. Public reporting says 100 MW opening late 2027, plus a \$1.2bn BOI-approved AI-ready expansion across Rayong and Samut Prakan.
- Chonburi: a separate, smaller datacenter development. Plus, two further ~30 MW multi-tenant sites discussed for 2027–28.



2GW Power Plant Visit, Source: SemiAnalysis

The 2 GW integrated campus



Land for Gulf's planned datacenter site. Source: SemiAnalysis

- Gulf plans a 2 GW grid connected site, starting at around ~250 acres expanding beyond 700. There is a 500 kV substation starting by year-end, and expect power supply ready by end-2027. ~1.3 GW of IT load across five to seven buildings.
- First building is a shell built on spec, we believe most likely targeting a US customer.
- Plan on using captive power: ~2.1 GW planned as three ~700 MW Mitsubishi units, targeting ~2031. What takes time is ~two years of environmental approval for the plant, although the datacenter and substation don't need such approvals. Until then the site uses EGAT-owned transmission with import and export, stepping 500 kV to 115 kV to 22 kV across the campus, and a PTT gas pipeline through the same corridor. Gulf also operates (but doesn't own) a nearby IPP linked to an Echo/J-Power JV.

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