MITSUBISHI HEAVY INDUSTRIES GROUP | MHI REPORT 2025

Overview | Messages from Management | Special Feature | Business Strategies | Governance | Sustainability & HR Strategies | Performance Data | **20**

Special Feature 01

At the Forefront of Our Future Growth Areas

Roundtable Discussion on the Data Center Business

MHI Perfectly Poised to Deliver for Data Center Growth

We invited three U.S.-based senior executives to discuss the significance of MHI's involvement in the burgeoning data center business, and the opportunities the company is pursuing in that market space. The primary catalyst for this dialogue was the rapid increase in electricity demand driven in part by data center expansion and artificial intelligence (AI) workloads. Also adding valuable insights to the discussion was Tokyo-based Senior General Manager Shin Gomi from Global Data Center & Energy Management, part of the MHI Growth Strategy Office, formed in 2020.

John Winter

President & CEO, Concentric, LLC

Bill Newsom

President and CEO, Mitsubishi Power Americas, Inc.

Dr. Xiufang Gao

Senior Director of Market Intelligence & Strategy, Mitsubishi Power Americas, Inc.

Shin Gomi

Senior General Manager of Global Data Center & Energy Management, Growth Strategy Office

MITSUBISHI HEAVY INDUSTRIES GROUP | MHI REPORT 2025

Overview | Messages from Management | Special Feature | Business Strategies | Governance | Sustainability & HR Strategies | Performance Data | 21

Special Feature 01 ▶ **At the Forefront of Our Future Growth Areas**

2024 saw record transaction volume in the U.S. data center sector, and in early 2025, MHI established a new U.S. base in Dallas, Texas, to drive its data center business there. As a lead-in for our readers, could I ask the three of you based in the United States to provide some U.S. market perspectives?

Newsom For the last two decades, we have seen flat growth in the power sector. According to McCoy Power Reports, two years ago, there were only 3 GW of large gas turbines ordered in North and South America; however, in calendar year 2025, that number is expected to be in the 25 GW range. Three factors are driving what is the largest power infrastructure expansion in U.S. market history: AI and machine learning, which account for 40%–50% of the overall growth; the electrification of everything that is possible to electrify; and the reshoring of manufacturing facilities.

On average in the United States, we're now seeing demand growth of about 3% year over year, and in some pockets up to 6%–8%. For example, in 2022, Georgia Power—one of our key customers—conducted its integrated resource planning, which indicated that it would need 400 MW through 2030. One year later, they updated their plan to 6.6 GW due to the immense demand in their service territory. That's a 15-fold increase, and 80% of that is due to data center growth in the state of Georgia. That's just one customer in one state; we are seeing this across the entire United States. I have been in the industry for over 30 years, and with Mitsubishi Power for 21 years. I've never seen power generation demand this significant. Power is urgently needed today to meet this demand. It's like a modern-day gold rush. Everybody wants to get their power plant up and running as quickly as they can to meet this immense growth. It's an interesting time in the market, to say the least.

Gao Today, data centers in the United States represent 45% of the global market, and with all the investments from hyperscalers and major U.S. tech companies, that share is expected to increase in the years to come. The scale and speed of this transformation are unlike anything any industry has ever seen before. ChatGPT launched in late 2022, and by February 2025, ChatGPT had surpassed 400 million weekly active users. The rapid adoption of AI and cloud computing is leading to an increase in demand and higher rack power densities.

Data centers are evolving to support the powerful chips needed for AI. A few years ago, the average rack density was below 10 kW per rack. The AI chips being deployed today are over 40 kW per rack and projected to reach 1 MW per rack by the end of the decade. This has changed the importance of power and cooling, which were once regarded as supporting systems and now represent the main challenges.

There is no AI without energy. As a company involved in solutions on both the supply and demand sides of the energy market, we can provide unique value to our customers.

Winter As a top provider of power solutions in North America and an MHI Group company since 2023, we at Concentric are laser-focused on the data center market. The key foundation that will drive data center growth is the transition from the current generative AI stage to agentic AI—systems that can autonomously make decisions, take actions, and adapt to new situations without constant human supervision—the applications for which range from design and business processes to transportation. McKinsey projects that agentic AI will touch 70% of enterprise workflows by 2030. So, we're not just expanding infrastructure, we're laying the foundation for a new digital economy. This moment is not about doing what worked in the last cycle; it's about adapting for the one that's already under way.

Gomi It's anticipated that the global data center market will be worth over $600 billion by 2030. A similar situation to that in the United States is unfolding in other markets. To provide specific examples, in the Asia-Pacific market, Japan is booming and other countries are investing more aggressively, while Singapore is reaching its maximum capacity. Likewise, in the Europe, Middle East, and Africa region, the Frankfurt, London, Amsterdam, Paris, and Dublin, or FLAPD, axis of data hubs will gain in importance.

Winter A key difference there is that while the United States sets technological and procurement standards, customers in Europe, Middle East, Africa, and Asia-Pacific expect localized execution and region-specific regulatory and reliability considerations.

Newsom MHI is undergoing a significant transformation to meet the demands of a global digital economy. Hyperscalers, with multi-trillion-dollar market caps, are in an AI technology race, revolutionizing how we live our day-to-day lives. While estimates vary on how much global data is currently in the cloud, the explosive pace of data creation means there's enormous room for growth as cloud adoption continues to accelerate. MHI is at the forefront through its involvement in manufacturing power generation equipment that provides firm, reliable electricity to power data centers, which are key enablers for AI. As regards gas turbine supply capacity in response to the growing global demand for computing power, Mitsubishi Power— a power solutions brand of Mitsubishi Heavy Industries—will continue to work to meet the needs of the growing market while maintaining a lean business structure.

Turning now to MHI-specific aspects, what do you perceive as the market requirements, and to what extent do the aims of MHI's strategy dovetail with them?

Gao Suppliers across the value chain—original equipment

Special Feature 01 ▶ **At the Forefront of Our Future Growth Areas**

manufacturers (OEMs), integrators, and even component manufacturers—are moving quickly to position themselves as full-solution providers. The shift reflects a broader change in how customers procure infrastructure: They want fewer vendors, more integration, faster deployment, and post-commissioning continuity. To compete in the U.S. data center market, OEMs are expected to provide fully integrated infrastructure solutions that are engineered for quick delivery, flexibility, and life cycle reliability. MHI stands out by having built for this market from the outset. It's a native strategy built around performance, integration, and execution. MHI's current strategy aligns with these imperatives across cooling, power distribution, and emergency power.

Newsom I want to emphasize the life cycle reliability, because MHI's DNA is all about reliability; from the way we serve our customers, to the way we conduct research and development, test, and fully validate our solutions. We are the only gas turbine manufacturer operating a grid-connected combined-cycle power plant to test and verify that our products and technologies meet the highest level of reliability through long-term verification. This approach is hyper-aligned with what data centers want—unequivocal reliability, or as they say in the data center community, five nines.

Winter To pick up on the power generation angle, MHI was architecting this strategy years ago and is positioning ourselves to
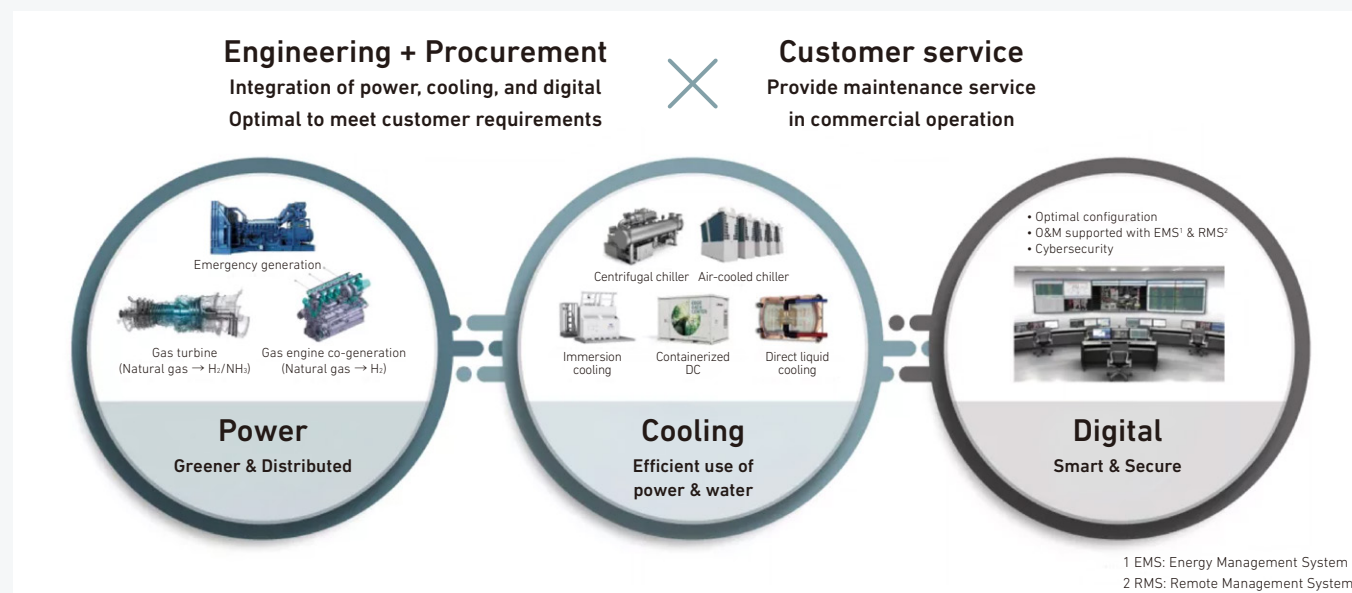
capitalize on this growth by offering solutions for both utility-side decarbonization and high efficiency. U.S. buyers want solutions that are engineered for high density, not retrofitted. Procurement teams no longer want equipment; they want life cycle partners, and buyers expect OEMs to provide support from design engineering to commissioning to post-sale service. MHI delivers all aspects of that life cycle service under the watchwords of "end-to-end control," "architected for scale," and "speed without compromise" in a customer-aligned commercial model.

Gomi Yes, we're not chasing this wave—we strategized for it before it hit and are thus in a position to ride it and gain the full benefits of it. As the only OEM offering the full powertrain and cooling, from generation to rack, MHI is positioned to provide full-stack, vertically integrated solutions for high-density computer environments.

Computing volatility is changing how operators approach power and cooling architecture. Historically, power systems around data centers were designed to handle stable, predictable loads. That assumption no longer holds. AI workloads introduce sharp spikes in draw, partial utilization patterns, and dual-redundancy demands that legacy systems weren't designed for. Our power generation and distribution systems, together with our cooling systems, are built for AI-specific load variability and redundancy.

Newsom Today, data centers in the United States are focusing on winning the AI race by developing and deploying the technology ahead of other countries. To meet the demand, we need those electrons today, with a path to clean energy in the future. MHI is well-positioned to support this goal. The power systems we are deploying can utilize low-carbon fuels on the front end—in the form of green hydrogen, blue hydrogen, or ammonia—or install carbon capture technology on the back end, delivering future-proof solutions that can be deployed now without disrupting or requiring reinvestment in a new asset.

Engineering + Procurement
Integration of power, cooling, and digital
Optimal to meet customer requirements

Customer service
Provide maintenance service
in commercial operation

Emergency generation

Gas turbine
(Natural gas → H_2/NH_3)

Gas engine co-generation
(Natural gas → H_2)

Power
Greener & Distributed

Centrifugal chiller　Air-cooled chiller

Immersion cooling　Containerized DC　Direct liquid cooling

Cooling
Efficient use of power & water

• Optimal configuration
• O&M supported with EMS[1] & RMS[2]
• Cybersecurity

Digital
Smart & Secure

1 EMS: Energy Management System
2 RMS: Remote Management System

Data centers consume vast amounts of power, not only to run the servers themselves but also to cool them—the latter accounting for 10%–30% of a large data center's power consumption. How are MHI's power generation competitors doing today? Are they making aggressive investments?

Gao Traditional industrial players are addressing power from a bottleneck perspective, but few are focusing on delivering a comprehensive solution. Everybody is very busy addressing power capacity within their portfolio, but we are the only OEM focusing on being a one-stop-shop solution provider that also provides solutions addressing cooling and other parts of data centers.

Gomi In the United States, go-to-market strategies are focused on speed, technical trust, and direct engineering alignment. I think that, compared to our competitors, we possess the product lineups and bring the partners together. This is why I believe we are uniquely positioned.

Newsom All the players in the market are trying to ramp up as quickly as they can to be able to meet with—and say yes to—all their customers. However, it's a step-by-step process, and we're making very methodical decisions intentionally regarding approach. In the early 2000s, the bubble in the combined cycle gas turbine market burst because it was predicated on very small independent power producers chasing spark spreads with merchant plants. Today, the business fundamentals are totally different. You have the hyperscalers, which have multi-trillion market caps and enough capital to deploy to win the AI race in the United States. Because the market factors are so different, we don't see this as a bubble, but rather as a long-term, sustainable market. Our goal as a company is to ramp up and provide support as effectively as possible. We're making great strides in securing our supply chain, enabling us to ramp up production and meet this demand.

Winter OEMs with limited-service capabilities will face procurement challenges. Whereas others are retrofitting, MHI was architected for this from day one. Major OEMs are rapidly expanding

into high-density, AI-ready infrastructure, investing in cooling innovations, integrated life cycle services, and software bundling to stay competitive. Others are using M&A, strategic alliances, and power electronics innovation to reposition for hyperscale demand and grid-interactive capabilities. What makes MHI stand out from the crowd is that we design and manufacture full powertrains, from backup generation to thermal systems. There is no bolt-on product strategy; everything is designed with engineered interlocks and backed by a legacy of high-reliability engineering. There is zero reliance on third-party service networks; MHI can go direct and offer tightly integrated life cycle packages.

In order to seize this incredible market opportunity, M&A is a must and a key pillar in our strategy to create a one stop shop and effective commercial operation. Fortunately, we've had this model for a decade and have executed 25+ acquisitions to date—we are ready. This will allow MHI to accelerate penetration into a rapidly growing customer base; additionally, it fuels the expansion of capabilities.

You've built a clear picture of the opportunities, but what are the challenges from a technology-wise, best-in-class perspective that MHI is facing in the data center market, and what changes need to be made? Could you pick out aspects you consider key in this regard?

Newsom Rather than performance specs, it is speed, trust, and commercial readiness that now win the deal, and there is real cost in delays. Sales cycles are compressing, so our teams must move rapidly from the inquiry to proposal stages. As I mentioned earlier, this expansion cycle is already under way. Hyperscalers and developers are locking in key supply chain partners, and the pace of transactions—particularly those involving critical infrastructure OEMs, system integrators, and service providers—is making it difficult for late movers to catch up. Execution speed is no longer a preference; it is a gatekeeper. MHI presents a strong value proposition. We are optimizing processes, streamlining approvals, and identifying opportunities that will enable us to remain agile in meeting the

dynamic needs of the market. Every missed opportunity increases the future entry cost.

Winter For me, the greatest challenge would have to be market recognition. Known for quality, reliability, and engineering excellence, particularly in traditional power generation markets, MHI is still building a name for itself in the U.S. data center market, where success now depends on showing up as a trusted engineering partner, rather than merely a product vendor. Winning OEMs are those that come in with integration-ready pre-designs and plans encompassing complete life cycles. We are continuing to establish a foothold in the market as a strategic partner in this ecosystem, delivering a one-stop-shop solution. That is a reputational gap the company must quickly close by raising its profile—on design calls, requests for proposal responses, and site walk-throughs—and by maintaining an on-the-ground presence that provides proof positive that MHI fully understands how this space operates. That includes fluency in data center project workflows, terminology, procurement dynamics, and installation practices.

Gao I agree that we must show that we can shorten lead times, and I want to add on to John's comments on market recognition. These are opportunities for us to work together with customers to solve those problems and to develop a collaborative partnership. Every data center is engineered to spec, and the design

tolerances for power and cooling are often site-specific and shaped by AI and high-performance computing workloads. MHI must be comfortable with this dynamic and ensure we are not only capable of supporting customized packages but also enabling integration alongside third-party equipment. This includes control systems, monitoring platforms, installation sequencing, and the delivery of performance-optimized data centers and modules to the site. This is where our one-stop-shop strategy gives us leverage, but only if we execute at the right speed, work closely with customers, and offer clarity on the value we are bringing.

Lastly, what does all that demand represent? What will the world be like after date center infrastructure has been built, and where will MHI be participating?

Newsom AI's impact has been primarily through customer-facing tools, such as chatbots and content generators; however, its impact will be more profound at the enterprise level. According to McKinsey, only a small fraction of its potential value has been realized thus far. The most transformative value of AI is in functions such as procurement, R&D, engineering, fraud detection, clinical trials, and supply chain optimization. These aren't experiments; they are business models that require immense computing power, extremely low latency, and operational continuity on a global scale. And they are

evolving at such a pace that infrastructure cannot keep up. This is where MHI comes in, building on its more than 140-year track record in mission-critical engineering by delivering fully integrated power, cooling, and monitoring solutions.

Gomi To use the wave analogy again, yes, the real AI wave has yet to hit. AI's footprint in digital infrastructure today is still nascent. Data centers of 100 MW+, with some reaching for GW scale capacity to support high-intensity AI workloads, are purpose-built from the ground up. Aligning our strengths with this next generation of infrastructure—namely in liquid cooling solutions, high-capacity gensets, integrated controls, and in our unique selling point of powertrain and cooling integration—MHI possesses benefits of scale with the agility of a new, purpose-built division. The future of AI is a digital society, and as a company that makes contributions to the world with technology, MHI is participating in systematic change by building necessary infrastructure in collaboration with our partners and customers, with integrated liquid cooling, software-defined control layers, and power architectures designed to accommodate load variability. Those that can support this level of demand will form the backbone of how AI reshapes industry. Those who cannot will be left behind. Rather than chasing and riding the wave, MHI is working to help shape the ocean. Stating where MHI will be playing its part requires no crystal ball-gazing. Execution is the gap in today's market and represents the barrier for many traditional OEMs. The global supply chain, engineering base, and reputation are already in place; the focus now is on internal decision-making agility to move in lockstep with the market, something the team is actively building. MHI is building its data center strategy in a deliberate manner, without inherited silos or legacy friction. This will enable alignment between product development, engineering teams, and field deployment at the speed the market demands.

Winter This is not about storage servers, it's about building the substrate for a global digital society, about powering a new way of life. Global demand for computing and storage will continue to grow—as

Shin stated, this is not a single wave, it is a sustained shift. Entire industries—from healthcare to finance—are shifting toward layers of automated intelligence. Infrastructure built now will enable a generation of self-operating digital systems. Forming part of the AI wave are two converging undercurrents: the explosion of digital transactions and the emergence of autonomous systems. The former ranges from smart contracts to digital currencies to micro-payments in gaming, streaming, and embedded commerce. These shifts are not just speculative. They are reshaping how business is transacted, how value is stored, and how networks are secured. The latter, ranging from the aforementioned agentic AI applications managing workflows across departments to real-world robotics and logistics automation, are data-hungry, latency-sensitive systems. They need distributed infrastructure, not just centralized hyperscale. We in MHI Group are not chasing trends—we're fulfilling our mission. And right now, that mission is digital infrastructure.

I think the final message is clear: The infrastructure of tomorrow must be fast, clean, intelligent, and inclusive, and MHI intends to lead in making that vision a reality. Thank you all for contributing such valuable insights into such a complex, thought-provoking topic.