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Singapore's DayOne unveils global data center for pioneering renewable energy initiatives in South East Asia

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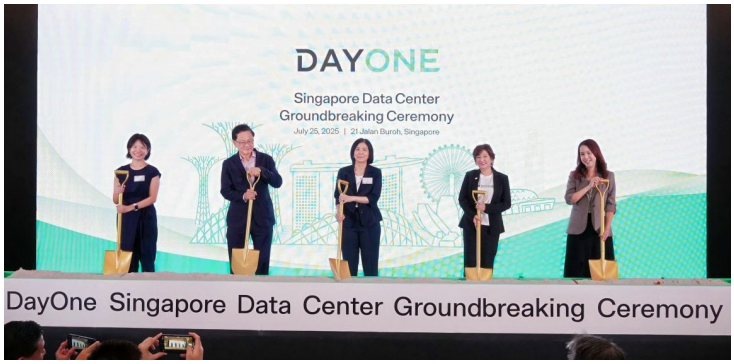
Southeast Asiaâ??s digital transformation with green infrastructure for hydrogen-based energy



Southeast Asiaâ??s digital transformation with green infrastructure for hydrogen-based energy

DayOne, a Singapore-headquartered global data center pioneer, broke ground on its first data center in Singapore. The 20-megawatt (MW) facility spans about 40,000 square meters of gross floor area, with Phase One scheduled to be ready-for-service (RFS) in 2026.

The groundbreaking event also saw the signing of two key strategic partnerships for DayOne â?? a Power Purchase Agreement (PPA) with Sembcorp Power Pte Ltd, a wholly-owned subsidiary of Sembcorp Industries (Sembcorp) to power its data center where all operations will be fully covered with renewable energy, and a research and development partnership agreement with the National University of Singapore (NUS) to advance data center innovation as part of the Sustainable Tropical Data Center Testbed Phase 2.0 (STDCT 2.0) initiative.

Singaporeâ??s first data center pioneering proof-of-concept for hydrogen-based energy to accelerate the adoption of innovative green solutions

The facility will feature green-powered high-density air-cooled Graphics Processing Unit (GPU) support, hybrid air and liquid cooling technologies. It is also expected to be Singaporeâ??s first data center with on-site Solid Oxide Fuel Cell (SOFC) power generation, part of a pioneering proof-of-concept for hydrogen-based energy. By piloting SOFC, DayOne aims to accelerate the adoption of innovative green solutions, enhance diversification of energy sources for the data center industry, and support the city-stateâ??s sustainability goals. Both LEED Platinum and BCA Green Mark Platinum certifications will be applied for, aligning with the highest environmental and energy performance standards for data centers.

â??This facility marks our commitment to Singapore as both home base and regional hub while highlighting our long-term vision to power Southeast Asiaâ??s digital transformation with green infrastructure. Our SG1 facility is an important milestone and a contribution to the nationâ??s ambition of being an AI-ready, sustainable digital economy. Backed by strong public-

private collaboration, weâ??re building infrastructure that is purpose-built for AI workloads, cloud computing and innovation.â?• Jamie Khoo, Chief Executive Officer, DayOne Data Center.

The groundbreaking ceremony was attended by senior government and industry leaders, including Ms. Aileen Chia, Deputy Chief Executive, Infocomm Media Development Authority (IMDA); Ms. Seah Yueh Chinn, Vice President, Digital Industry Singapore (DISG); and Ms. Christine Wong, Assistant Chief Executive Officer, JTC Corporation. Also in attendance were Mr. Lim Ah Doo, Co-Chairman of DayOne; Ms. Jamie Khoo, CEO of DayOne; Mr. Koh Chiap Khiong, President & CEO, Gas and Related Services and CEO, Singapore, Sembcorp; Professor Lee Poh Seng, National University of Singapore (NUS); and other partners.

Long-term Partnership with Sembcorp to achieve 100% renewable energy

DayOne formalized a long-term partnership with Sembcorp through a 10-year Power Purchase Agreement (PPA) to supply its facility. The energy will be backed by bundled renewable energy certificates (RECs), sourced locally or imported via grid-to-grid connection. This strategic agreement marks a significant milestone in DayOneâ??s journey towards 100% renewable electricity, reinforcing its commitment to sustainability and clean energy adoption. This partnership lays the foundation for continued collaboration to support DayOneâ??s future growth and expansion.

â??The rapid rise of AI infrastructure is driving unprecedented energy demand â?? and meeting this demand sustainably is critical to the future of the data center industry. By providing scalable and reliable renewable energy, we enable data centers to grow responsibly. Our collaboration with DayOne reflects this commitment to powering the next generation of digital infrastructure with clean, future-ready solutionsâ?• Koh Chiap Khiong, President & CEO, Gas and Related Services and CEO, Singapore at Sembcorp Industries.

R&D Partnership with National University of Singapore

Additionally, DayOne launched a new research and development partnership with the National University of Singapore (NUS) to jointly explore innovative technologies that improve data center efficiency and sustainability. The partnership will support activities under the Sustainable Tropical Data Center Testbed Phase 2.0 (STDCT 2.0), including pilot-scale testing of novel cooling solutions in tropical climates.

DayOneâ??s Singapore data center forms part of DayOneâ??s larger ambition to support digital transformation across the SIJORI Growth Triangle and build a resilient, low-carbon digital backbone for Southeast Asia. Established in 2022 and operating as an independent group since 2025, DayOne develops and operates data centers across Singapore, Malaysia, Indonesia, Thailand, Japan, Hong Kong SAR, and other key markets.