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Singapore's largest industrial district cooling system begins operations to support STMicroelectronics' decarbonization strategy

- *Designed, built, owned, and operated by a joint venture between SP Group and Daikin Airconditioning (Singapore), the innovative district cooling system will significantly improve the environmental performance of ST's high-volume semiconductor manufacturing site in Singapore*
- *New system expected to reduce carbon emissions by 120,000 tonnes per year, cooling-related electricity costs by 20 percent each year, and repurposing over half a million cubic meters of water consumption per year*

Geneva, Switzerland, and Singapore – October 21, 2025 -- STMicroelectronics (NYSE: STM), a global semiconductor leader serving customers across the spectrum of electronics applications, and SP Group (SP), a leading utilities group in the Asia Pacific and Singapore's national grid operator, have commenced operations for Singapore's largest industrial district cooling system at STMicroelectronics' (ST) Ang Mo Kio TechnoPark. The event was inaugurated by Ms. Low Yen Ling, Senior Minister of State, Ministry of Trade and Industry and Ministry of Culture, Community and Youth.

The system is expected to reduce carbon emissions by up to 120,000 tonnes per year and enable 20 per cent savings on cooling-related electricity consumption. It will also repurpose over half a million cubic meters of water each year by using reject reverse osmosis water, previously used in ST Cooling Towers, to support the new district cooling operations.

This marks ST's first use of district cooling at a manufacturing facility and will strengthen ST's commitment to be carbon neutral by 2027.

"The deployment of Singapore's largest industrial district cooling system at our Ang Mo Kio TechnoPark demonstrates our commitment to pioneering energy-efficient solutions that reduce carbon emissions and conserve resources. This achievement strengthens our partnership with Singapore in advancing its national sustainability goals," said Rajita D'Souza, President of Human Resources and Corporate Social Responsibility at STMicroelectronics. *"By integrating advanced technologies like the district cooling system, we are driving a smarter, more sustainable future — showcasing how industry leadership and environmental stewardship align to create lasting value for our business, communities, and the planet."*

"SP Group's strategic partnership with STMicroelectronics marks a pivotal milestone in our nation's transition towards a low-carbon future. This project showcases how collaborative innovation can transform urban infrastructure to deliver sustainable, energy-efficient solutions. District cooling will continue to play a vital role in Singapore's net-zero ambitions, enabling carbon emissions reduction and enhancing energy resilience across industrial and urban developments," said Stanley Huang, SP's Group Chief Executive Officer.

Technical information about the district cooling system

Designed, built, owned, and operated by a joint venture between SP and Daikin Airconditioning (Singapore), the system has an installed capacity of up to 36,000 refrigeration tonnes (RT). It delivers continuous chilled water to cool both manufacturing and office spaces via a centralized closed-loop pipe network replacing individual chillers in each building. The total area served by the system is approximately 90,000 square metres.

Chillers in series counterflow configuration reduce the energy required to cool the water. This ensures an efficient and reliable 24/7 operation, with remote monitoring capabilities augmenting the operations team on site to come.

“This partnership with SP reflects Daikin’s commitment to delivering advanced, energy-efficient solutions that go beyond immediate operational needs. Our goal is to contribute to a more sustainable built environment, where technology plays a key role in enhancing resilience, reducing environmental impact, and supporting Singapore’s long-term climate ambitions,” said Chua Ban Hong, Managing Director at Daikin Airconditioning (Singapore).

Additionally, the new installations free up around 4,000 square meters of space at Ang Mo Kio TechnoPark, which will enable ST to install other equipment contributing to environmental impact mitigation. This includes perfluorocarbon (PFC) abatement equipment, with near-future plans for additional water reclamation systems and volatile organic compounds (VOC) abatement as part of its ongoing sustainability efforts.

The project achieved over 2 million accident-free man hours, underscoring the commitment to safety during construction. The district cooling plant has been awarded the Green Mark Platinum Super Low Energy certification by the Building and Construction Authority for its exceptional energy efficiency and sustainable design. Incorporating whole-life carbon assessments during design and construction of the plant also enabled a reduction of about 44 percent in embodied carbon compared to industrial building benchmarks, achieved through optimized material choices and system design to further lower the plant’s carbon footprint.

Further collaboration between STMicroelectronics and SP Group

To accelerate its decarbonization roadmap, ST has also partnered with SP to upgrade the cooling system at its Toa Payoh site. Under a 20-year chilled-water-as-a-service agreement, SP will design, build, operate, and maintain a new high-efficiency chiller system, scheduled for completion by December 2025. The system will improve energy efficiency and aims to reduce carbon emissions by approximately 2,140 tonnes annually.

In addition to sustainable cooling solutions, STMicroelectronics and SP Group are implementing a range of sustainable technologies across ST’s Ang Mo Kio and Toa Payoh campuses. This includes the deployment of the energy management information system (EMIS), comprising 2,400 smart electricity meters and multi-utility sensors. With SP’s smart metering infrastructure in place, ST can monitor its overall energy consumption – enabling data-driven decisions that enhance efficiency and sustainability.

SP has also implemented smart water meters that track water inflow to five of ST’s buildings. This provides ST with an accurate view of its water consumption, allowing the organization to enhance its critical wafer fabrication operations by ensuring greater water efficiency. Together, the partnership delivers on a shared vision for a smarter, cleaner energy future through integrated digitalization and decarbonization at scale.

About STMicroelectronics

At ST, we are 50,000 creators and makers of semiconductor technologies mastering the semiconductor supply chain with state-of-the-art manufacturing facilities. An integrated device manufacturer, we work with more than 200,000 customers and thousands of partners to design and build products, solutions, and ecosystems that address their challenges and opportunities, and the need to support a more sustainable world. Our technologies enable smarter mobility, more efficient power and energy management, and the wide-scale deployment of cloud-connected autonomous things. We are on track to be carbon neutral in all direct and indirect emissions (scopes 1 and 2), product transportation, business travel, and employee commuting emissions (our scope 3 focus), and to achieve our 100% renewable electricity sourcing goal by the end of 2027.

Further information can be found at www.st.com.

About SP Group

SP Group is a leading utilities provider in Asia Pacific, empowering the future of energy through low-carbon, smart solutions. It owns and operates electricity and gas transmission and distribution networks in Singapore and Australia. As Singapore's national grid operator, SP Group serves approximately 1.7 million industrial, commercial, and residential customers with world-class transmission, distribution, and market support services.

Beyond traditional utilities, SP Group delivers integrated sustainable energy solutions across Singapore, China, Thailand, and Vietnam. These solutions include district cooling and heating, renewable energy, EV charging infrastructure, and digital energy platforms tailored for districts, communities, and commercial and industrial customers.

For more information, please visit spgroup.com.sg or follow us on [Facebook](#), [LinkedIn](#) and [Instagram](#).

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