

## Lendlease Secures Grants for New York's Largest Geothermal Residential Building

Funding will support geexchange system at 1 Java Street, an all-electric residential development located along Brooklyn's Greenpoint waterfront

(New York, March 22, 2023) [Lendlease](#), a leading global real estate and investment management group, and joint venture partner Aware Super, one of Australia's largest superannuation funds, today announced the acquisition of \$4 million in support from the New York State Energy Research and Development Authority (NYSERDA) to build a geexchange system at [1 Java Street](#) in Brooklyn. Once completed, the all-electric residential property will be the largest residential project in New York State to use a geothermal heat exchange system, according to NYSERDA.

Situated on a 2.6-acre site, 1 Java Street will be comprised of five interconnected buildings, including a 37-story and a 20-story tower. Based on square footage, building height, the 834 residential units and number of boreholes, the geothermal system will be the largest multifamily project in New York State. It is believed to be the largest high-rise residential geexchange system in the country.

"1 Java Street presents us with the opportunity to establish a pioneering model for geothermal energy – aligning with New York's ambitious climate goals, as well as our global targets of absolute zero carbon by 2040," said Scott Walsh, Project Director, New York Development for Lendlease. "Our decision to use geothermal was driven not only by the environmental benefits and cost savings, but also enhanced marketability upon completion."

The \$4 million in funding was obtained through a competitive grant from NYSERDA's Community Heat Pump Systems Pilot Program. The project – which has received support by local elected officials and the North Brooklyn Neighbors community planning organization – included a feasibility analysis, design work and the currently-underway installation of a community heat pump system, also known as a thermal energy network.

NYSERDA Director of Clean Heating and Cooling Donovan Gordon said, "Community thermal networks are an important step in scaling building electrification and helping more residents benefit from clean energy infrastructure that can lead to long-term energy savings. Our support for this innovative project using the latest in clean heating and cooling technology will help us meet New York State's climate and clean energy goals while reducing emissions in Brooklyn."

Once completed, the geothermal system at 1 Java Street will reduce annual carbon emissions from heating and cooling by 53% compared with typical residential systems. As an all-electric building, 1 Java Street will also avoid carbon emissions related to the use of natural gas.

The on-site geothermal and all-electric systems of 1 Java Street ensure the project will meet or exceed Local Law 97, New York's decarbonization legislation, and align with [Mission Zero](#), Lendlease's industry-leading initiative to reach absolute zero carbon – extending to its supply chain by 2040. 1 Java Street will also target a range of sustainability initiatives including LEED Gold, Fitwel and Waterfront Edge Design Guidelines certification.

Slated for completion in late 2025, 1 Java Street is the sixth project developed and operated as part of the Aware Super and Lendlease joint venture Americas multifamily portfolio, which achieved net zero carbon in 2021. The joint venture's stabilized assets were also recently recognized byGRESB as Regional Sector Leader for superior

ESG performance.

Aware Super Senior Portfolio Manager – Property, Alek Misev said: “We’re excited to celebrate the geothermal project that 1 Java Street is delivering for our property portfolio. The sustainable benefits to be generated from New York City’s largest residential geothermal project will not only demand less energy from the grid at peak times but also reduce carbon emissions, both of which are expected to uplift the value of this asset.”

30% of 1 Java Street's residential units have been designated as affordable housing under the Affordable New York Housing Program. In addition, over 13,000 square feet of space at the ground floor will be activated with retail. The property will also encompass a reimagined, 18,000-square-foot public waterfront esplanade that connects to the India Street Pier, which is served by the East River Ferry.

### **Overview of 1 Java Street’s Geothermal System**

The geothermal system at 1 Java Street is a vertical closed loop system with underground pipes that circulate a water solution to be heated or cooled by the earth; a heat pump will utilize that temperature differential to help heat or cool the building, reducing the need for utility power. In the winter, when the underground temperature exceeds the surface air temperature, the water solution is used to transfer heat from the ground to building interiors. The process is reversed in the summer, when heat from the building is released underground using the same system.

1 Java Street benefits from its 2.6-acre, full-block location, allowing for the drilling of 320 boreholes. As a closed loop system requires no future access or maintenance, 1 Java Street’s borefield is located beneath the building. The site’s underground geology, which is largely composed of bedrock, provides an ideal medium for efficient thermal exchange.

Compared to conventional technologies, closed loop geothermal systems are more energy efficient and emit fewer carbon emissions. The geothermal system designed for 1 Java Street will account for 1,050 fewer metric tons of CO<sub>2</sub> equivalent emissions than if the building used a traditional boiler/tower system. This is equivalent to planting over 5,200 trees.

The geothermal system will provide all the space heating, water heating, cooling for the project. In addition, 1 Java Street will be fully electric, with all, cooking, clothes drying and other functions performed by electric appliances and building systems. This means the property will comply with New York City’s Local Law 154 – the city’s legislation that mandates most new buildings over seven stories be fully electric by 2027.

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### **About 1 Java Street**

Developed by Lendlease, 1 Java Street is a sustainable, urban regeneration development along the Greenpoint waterfront in Brooklyn, New York. Scheduled for completion in late 2025, the project will comprise 834 rental units, 30% of which have been designated as affordable housing under the Affordable New York Housing Program. The all-electric property will utilize a vertical closed-loop geexchange system, making it the largest geothermal residential development in New York State. Designed by Marvel, 1 Java Street will be comprised of five interconnected buildings, including a 37-story and a 20-story tower. The property will feature nearly 13,000 square feet of retail space, as well as an 18,000-square-foot public waterfront esplanade connecting to the India Street Pier, which is served by the East River Ferry. Targeting LEED Gold certification and designed to meet or exceed Local Law 154, New York City’s legislation that mandates new construction to be all-electric, and Local Law 97, New York City’s decarbonization legislation, 1 Java Street aligns with Mission Zero, Lendlease’s industry-leading initiative to reach absolute zero carbon by 2040.



## About Lendlease

Lendlease ([www.lendlease.com](http://www.lendlease.com)) is a leading global real estate and investment group with operations in Australia, Asia, Europe and the Americas. Our purpose is to create places where communities thrive. Headquartered in Sydney, Australia, and listed on the Australian Securities Exchange, Lendlease has approximately 7,700 employees internationally. Our core capabilities are reflected in our operating segments of Development, Construction and Investments. The combination of these three segments provides us with a sustainable competitive advantage and allows us to provide innovative integrated solutions for our customers.

## For additional information, contact:

Matt Baker

Senior Account Manager – Taylor Johnson Public Relations

[mbaker@taylorjohnson.com](mailto:mbaker@taylorjohnson.com)

+1 312-267-4512

## Rendering Captions:

1. **1 Java Street from India Street Pier:** Located on the Greenpoint waterfront, 1 Java Street's public esplanade will connect to the India Street Pier, which is served by the East River Ferry.
2. **1 Java Street Geothermal Graphic (Winter Season Shown):** At 1 Java Street, a geothermal ground source heat pump system utilizes the stored temperature in the ground for heat exchange, which is required to operate HVAC heating and cooling systems in the building. In the winter, when the underground temperature exceeds the surface air temperature, water is used to transfer heat from the ground to building interiors. The process is reversed in the summer when heat from the building is transferred underground using the same system.

[Click here](#) to view image renderings via Dropbox.

