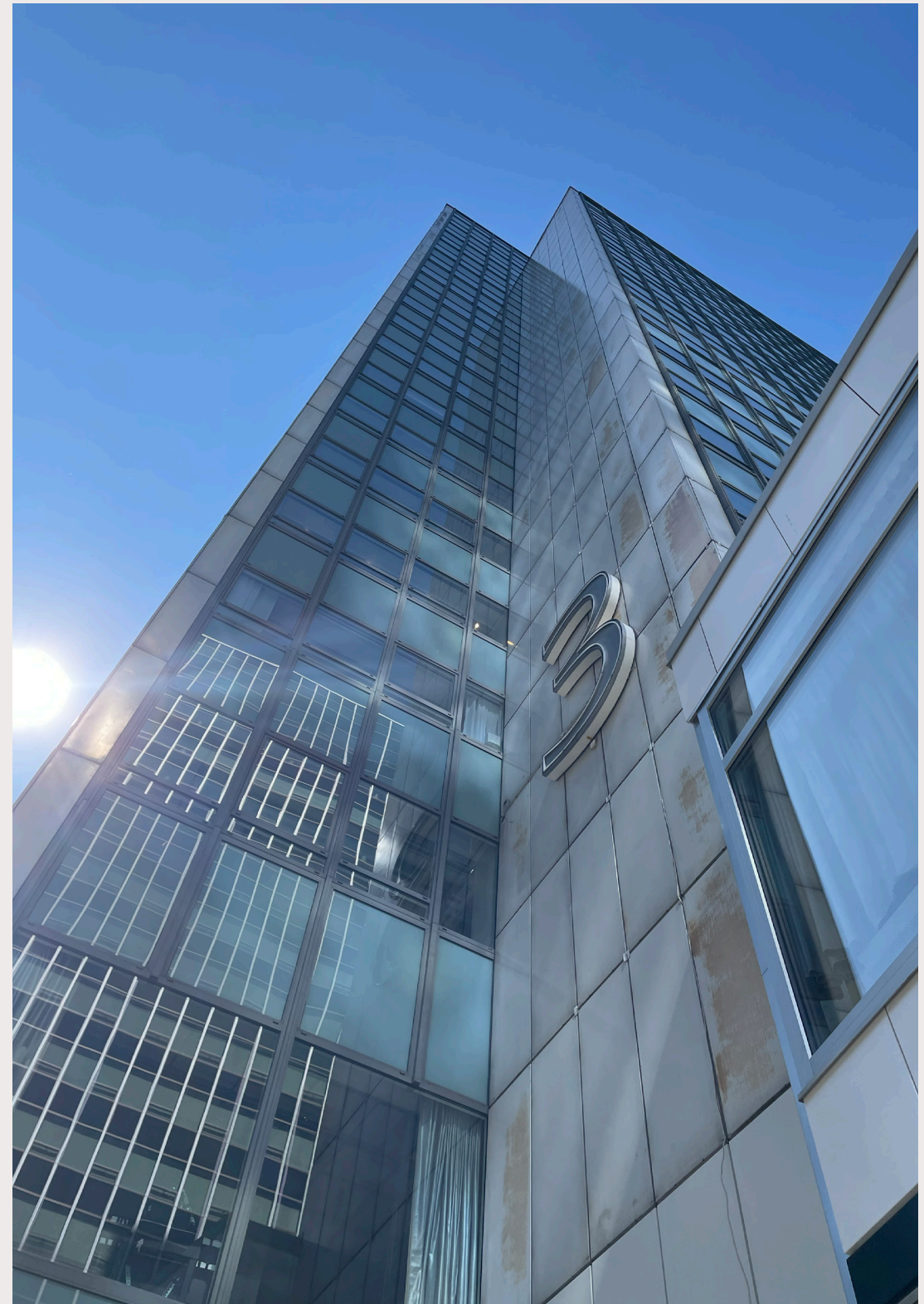


## Vasakronan – Hötorgshusen

One of Sweden’s largest real estate companies, Vasakronan is owned by the country’s four largest pension funds. With sustainability at the core of their mission, Vasakronan has halved energy use across its portfolio and reduced emissions by 95% since 2006.<sup>24</sup> At Hötorgshusen, one of Stockholm’s largest commercial complexes, Vasakronan was able to greenlight a geothermal retrofit project with a payback of 11 years, in alignment with the mission of its four owners—the First, Second, Third, and Fourth Swedish National Pension Funds—to “deliver a high and long-term risk-weighted return without damaging the environment.”<sup>25</sup>

year built:	1960(s)
size:	Four high-rise commercial buildings, central Stockholm
ownership:	Vasakronan (large real estate company, owned by national pension funds)
timeline:	2019–22
consumption:	pre-retrofit 154 kWh/m <sup>2</sup> /year (Tower 1-4, lower parts) post-retrofit 75 kWh/m <sup>2</sup> /year (Tower 1-4, lower parts)
retrofit measures:	Geothermal across all buildings (63 boreholes at 400 meters deep, with ground source heat pumps) Full envelope retrofit, new lighting and controls for one of four buildings, Hötorgshus 2

Vasakronan’s retrofit of the 1935-built commercial building Hästkopalatset also included geothermal systems, connected to an aquifer under the block, for heating and cooling. While district heating and cooling is still used at both sites to meet total demand, Vasakronan hopes to rely solely on geothermal for heating and cooling through gradual improvements and system optimization across its entire portfolio.<sup>26</sup>



## case study:

The project, a major retrofit of the 1960s-built four-building office complex Hötorgshuset, centered around the installation of 63 geothermal boreholes with GSHPs to provide heating and cooling across the complex. In addition, one of four buildings, Hötorgshuset 2, received a full envelope retrofit, along with new lighting and controls. Hötorgshuset 2 is expected to earn a LEED Platinum certification—a major step up from their “F” Energy Declaration Rating (on an A–G scale). The combined effort resulted in a nearly 50% energy use reduction across towers 1–4.



## Drawing Parallels: Geothermal in New York City

The Community Heat Pumps Pilot Program by NYSEERDA, issued in 2020, solicited proposals for projects that leverage GSHPs to serve multiple buildings.<sup>27</sup> Both Swedish and U.S. companies are entering the New York market with a focus on geothermal retrofits in existing buildings, while developers are beginning to opt for geothermal in new construction—like 1 Java Street, a 5-building, 834-unit multifamily complex in Brooklyn developed by Lendlease.

