

**Pratt Institute**  
**Category A Feasibility Study**  
**NYSERDA PON 4614**

Kings County

Technical Lead: Antares Group

Anticipated completion of study/availability of final report: January 2022



**The Site & Beneficiaries**

**Pratt Institute is an existing Art & Design College with a 25-acre campus in the historic Clinton Hill section of Brooklyn** with two million square feet and 25 buildings. The study will review four different campus building clusters with different building types/systems in each cluster: Core Campus Cluster, East Campus Cluster, South Campus Cluster, and Chemistry / Machinery / Engineering Cluster. Each cluster has different loads and periods of use. These clusters, constituting approximately 1-million square feet of occupied classrooms, dormitories, offices, and other assembly spaces, will be analyzed to explore district-style heat pumps. The analysis will quantify the peak of the composited thermal load and compare it to the sum of the individual peaks in order to assess the load-flattening benefits of aggregating into a district. The space heating demand for the main Brooklyn campus, with the exception of Building #24 in the East Cluster, is currently served by an existing district steam system that uses a combination of oil and natural gas-fired steam boilers. The study will also evaluate and compare the electrical needs of individual and community style heat pumps as well as sources for the electricity, (Con Ed, on-site PV, & other types of generation).

**Potential Thermal Resources**

The primary opportunity anticipated will leverage heat pumps to move heat from one building to another, and supplemental thermal resources. The heat pump systems could be coupled to ground-coupled boreholes, standing columns, and or a common water loop. Abandoned open geo wells connected to an aquifer will be assessed for potential re-use.

**Potential Configuration**

The study will explore centralized and distributed heat pump solutions. Hybrid systems with supplementary cooling towers & boilers, and systems that include domestic hot water heating will be considered if geo options cannot meet the campus thermal loads. Benefits of these configuration include reduced dependency on fossil fuels, improved comfort and ventilation within the buildings and reductions in carbon generation to combat global warming.