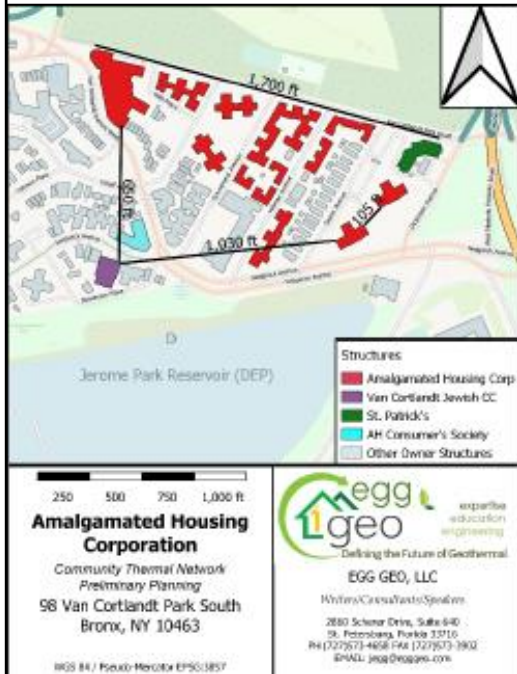


**Amalgamated Housing
Corporation Community Heat
Pump Systems
Category A Site-Specific
Scoping Study
NYSERDA PON 4614**

Bronx County

Technical Lead: Egg Geo LLC



V1 9/2022

The Site & Beneficiaries

Egg Geo is leading a team to study low- and no-emission heating and cooling for Amalgamated Housing Corporation's (AHC) 18 neighboring buildings, approximately 2 million square feet of floorspace, on the north end of Jerome Park Reservoir in the Bronx, NY. The project also includes St. Patrick's Home for the Aged, the Van Cortlandt Jewish Center, and the A.H. Consumer's Society – adding three commercial or mixed-use structures. The Jewish Center is a space for gathering and events, social services, and worship. A.H. Consumer Society includes one supermarket, a bank, a pharmacy, and a restaurant. The total floorspace exceeds 1,960,000 square feet, initially, and is home to more than 1,480 families. The team expects additional building owners may join.

Potential Thermal Resource

The complex has a boiler plant that provides the buildings with steam, which is exchanged with hot water for heating and is supplied to a steam absorption chiller for cooling. St. Patrick's healthcare facility can help diversify the heating and cooling loads, as it is a cooling dominant facility with energy expenditure during peak cooling months up to twice as much as in the heating months. This represents a great opportunity to share loads using a community heat pump system. Cross property line participants, such as the Van Cortlandt Jewish Community Center, the A.H. Consumer Society building, and St. Patrick's healthcare facility have individual boiler room operations to provide heating, and chiller operations. These mixed use and commercial properties offer tremendous load diversification opportunities for the community heat pump network.

Potential Configuration

The leading replacement for a campus upgrade is likely distributed heat pumps. The team knows that ground source heat exchange is a viable option for the Jerome Park Reservoir. There is adequate green space available for horizontal, vertical, or directional well arrays within the boundaries of the property itself. Preliminary investigation will also include wastewater heat recovery. AHC strongly supports this decarbonization initiative for their community and is also assessing building envelope and living unit HVAC improvements to help reduce their exposure from LL97.