

**Spring Creek Towers
Category A Feasibility Study
NYSERDA PON 4614**

Kings County

Technical Lead: Endurant
Energy (formerly GI Energy)

Anticipated completion of
study/availability of final
report: November 2021



V1 6/2021

The Site & Beneficiaries

Spring Creek Towers is an existing multifamily residential complex in the Spring Creek section of Brooklyn with 46 buildings and is the nation's largest subsidized affordable housing complex serving approximately low- to moderate-income 15,000 residents. The site has an existing district hot water system and distribution piping infrastructure, and the hot water is produced by a natural gas-fired Combined Heat and Power (CHP) system. The complex of buildings features 5,881 apartments, collectively 8.2-million square feet, and will be analyzed to explore district-style heat pumps leveraging water-source thermal resources.

Potential Thermal Resources

The concept will explore using groundwater pumped by the Metropolitan Transportation Authority at a nearby subway station to depress the groundwater table and minimize groundwater infiltration into the subway tunnel (greywater flow is at least 2.5 million gallons per day).

Potential Configuration

Will explore 4G design, consisting of a central Thermal Building, which houses the heat pumps and from which hot water and chilled water will be distributed via conveyance pipes to the end-use buildings (simple radiators can be used in the end-use buildings). Benefits of this configuration include: opportunity to integrate with existing thermal infrastructure and use the heat pumps as the first-call (reserving the fossil fuel systems as supplement to meet extreme peaks or for systemwide redundancy for resilience); focusing the location where electric infrastructure upgrades are needed to meet the expanded electrification demand to occur at the Thermal Building (as opposed to at the end-use buildings) to minimize disruption to mission-focused activities during construction; and cost containment.