

New York WET Projects

- ✓ Domestic Hot Water
- ✓ Heating & Cooling
- ✓ Geothermal Field Offset
- ✓ Thermal Energy Networks



Alafia

Brooklyn, NY

SHARC

CASE STUDY

Vital Brooklyn Initiative

- \$373M project will bring 2,400 affordable apartments to the neighborhood
- Phase One (under construction):
 - (1) SHARC 660 serving 2 buildings
 - (2) PIRANHA T15HC serving 1 building
- Closed loop geothermal system supports water-source heat pumps (WSHP) to provide heating, cooling and domestic hot water.
- Designed to Enterprise Green Communities and Passive House Standards.



Whitney Young Manor

Yonkers, NY

SHARC

CASE STUDY

A radical transformation for Yonkers' affordable housing

This \$12 million decarbonization retrofit incorporates a **SHARC 660** wastewater heat recovery system, air-source heat pumps (ASHP) and water-source heat pumps (WSHP)

- 195 affordable apartments in two towers (230,000 SqFt)
- New hydronic distribution piping enables integration of different heating sources & heat sharing between end-uses



2019 baseline	Expected by 2035
96 kBtu/SF/yr	48 kBtu/SF/yr Reduction of 50%
54% Natural Gas + 46% Electricity	25% Natural Gas + 75% Electricity
1,456 tCO2e/yr	273 tCO2e/yr Reduction of 81%

Curtis +
Ginsberg
Architects

BRIGHT
POWER

Empire Building Challenge
PARTNER
Reimagining Low-carbon Buildings

The Towers

by Amalgamated Housing Cooperative
Bronx, NY

SHARC

CASE STUDY

Low Carbon Retrofit

New centralized hydronic distribution piping for two 20-story towers. Using geothermal and wastewater heat recovery that captures energy from domestic water sources, will allow Amalgamated to decommission its cooling towers.

- **(4) PIRANHA T15** provides domestic hot water for 316 affordable apartments
- Wastewater Energy Transfer allows for a reduction in the number of geothermal boreholes required

Current baseline	Expected by 2035
111.6 kBtu/SF/yr	32.5 kBtu/SF/yr Reduction of 71%
84% Natural Gas + 14% Electricity + 2% Oil	100% Electricity
2,771 tCO2e/yr	202 tCO2e/yr Reduction of 93%



AMALGAMATED HOUSING COOPERATIVE



EN-POWER GROUP



Local 1 Training Center

Long Island City, NY



PIRANHA qualifies for the 30% Investment Tax Credit (ITC)

- Workforce Development
 - ✓ Installation
 - ✓ Start-up
 - ✓ Commissioning
 - ✓ Operation & Maintenance
- UA developing comprehensive curriculum around wastewater energy transfer
- First Local training center in New York: Albany, Syracuse, Buffalo to follow



Obstacle Statement



Regarding the decarbonization and electrification of the New York City building portfolio, critical obstacles to overcome collectively are...

- Securing approval from the DEP to allow for connection to the NYC sanitary sewers
- Updating New York State and utility programs so that wastewater energy transfer is incentivized like geothermal

