

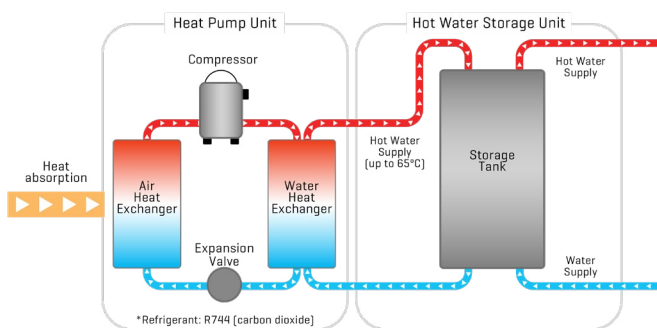


Owner: Providence Housing Development Corporation | Location: Rochester, NY | Completion Date: Ongoing

Project Description

To assist Providence Housing Development Corporation, SCI conducted WUFI energy modeling targeting low carbon construction and Passive House PHIUS+ 2018. The project received \$1 Million Building of Excellence award for low carbon construction. The project features all electric systems including heat pumps for heating, cooling, and Sanden split system air source heat pump hot water heating, advanced insulation to meet PHIUS+ 2018, and solar production to achieve Net-Zero energy. SCI will also serve as the PHIUS+ Verifier to confirm all program requirements are met through construction and will conduct training on high-performance building practices.

Sanden CO2 Based DHW System



Project Information

Location	Rochester, NY
Climate Zones	5
Heating Degree Days	6,621
Average HERS Index	34 pre PV, 10 post PV
Square Footage	50,220 sf

Technical Details

Walls	2.5" R-12.6 ZIP-R continuous rigid plus R-21 interior batt
Windows	Triple pane windows and doors
Air Barrier	ZIP-R taping, plus potential of Aerobarrier interior air sealing for compartmentalization
Roof	R-70 flat roof
Slab	R-10 slab edge, no under slab insulation
Heating/ Cooling	Mini split air source heat pump per apartment
Ventilation	Individual ERV per apartment, ~83% efficiency
Hot Water	Sanden CO2 based central hot water system. Air to air heat pump with large central storage tank
Solar Electric	89,000 kWh/yr in rooftop solar production, with remainder of site energy purchased through off-site solar to achieve Net-Zero



**Buildings of
Excellence
Award**

Stage: Early Design
Award: \$1,000,000