

Small Planet Supply Packaged Central Water Heat Pump Project

Project Description

There is a lack of industry knowledge and experience in designing and installing central heat pump water heaters in California. The current practice requires creating a custom engineered design for each individual building served. The design utilizes heat pumps, tanks, controls, service power, and piping from unrelated individual manufacturers. Currently, this “crafted per building” design approach to decarbonization will not scale due to the highly customized requirement of both engineering design and installation. Small Planet Supply set out to address this barrier through the development of a standardized, modular, pre-packaged CHPWH to minimize the design requirement, installation, cost, and challenges inherent to the existing practice. By creating pre-engineered systems and providing all the equipment used through a single source, the process becomes a simple “plug and play” approach that allows scaling production volume to meet the market demand.

- Lack of both design knowledge and products to serve multifamily buildings
- The industry is currently not positioned to make decarbonization shift away from natural gas boilers to central heat pump water heaters

This project seeks to address these challenges by removing the need for custom designs and shortening the installation time of central heat pump water heaters. The project team designed a pre-packaged, modular central heat pump water heater for this building size that can be applied as a drop-in domestic hot water system. The standardized central heat pump water heater product does not require any customization and is ready for purchase and installation like any other off-the-shelf product.

**TIMELINE:**

January –
February 2023

**HOUSING TYPE:**

Multifamily

**TECHNOLOGY:**

Central Heat Pump
Water Heaters

**LOCATION:**

Delano, CA

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