Dishwasher Electrification





Newly installed, all-electric dishwasher at Stanford Hospital

Program Description

The Commercial & Industrial Energy Efficiency Program provides City of Palo Alto Utilities (CPAU) commercial and industrial customers with a free high-level assessment of their facility's energy usage and concrete recommendations for saving energy.

Project Overview

The Commercial & Industrial Energy
Efficiency Program provided an on-site
investigation of Stanford Health Care's
new adult hospital facility at 500
Pasteur Drive that qualified the
customer for an incentive of \$56,735
from CPAU's Business Customer
Rebate Program (BCR)

Veolia, the designated engineering consulting company for this program, evaluated energy efficiency opportunities and CPAU informed the customer of the potential incentive amount and estimated energy savings if they chose to proceed with the recommended installation.

This customer decided to replace their existing Hobart Model FT1000ER commercial dishwasher that uses steam and electricity with a Hobart Model FT1025e all-electric dishwasher. Once the installation was complete, Veolia conducted power monitoring to confirm energy savings. The customer was then provided with their incentive check from CPAU based on the verified savings.

Program Benefits

- On-site, custom facility energy evaluation from a qualified engineering consulting company.
- Detailed report on facility's energy use and recommendations for energy efficiency projects, including associated energy savings, costs and greenhouse gas emissions.
- Independent verification of achieved energy savings after installation.
- Turnkey project implementation services can be provided by the City's engineering consultant for an additional fee.



HIGHLIGHTS

Year Built 2019

Location

500 Pasteur Drive, Palo Alto

Project Cost \$462.715

Services Provided

Commercial & Industrial Energy Efficiency Program

Equipment Installed

Hobart Model FT1025e all-electric dishwasher

Project Date

September 2024

CPAU Rebate

\$56,735

Estimated Emissions Reduction

88,873 lbs CO2e/yr

Estimated Annual Energy Savings

226,940 kWh

The Commercial & Industrial Energy Efficiency and Business Customer Rebate Programs are brought to you by the City of Palo Alto Utilities





8 passenger cars not being driven for 1 year



5 households' electricity use per year



938 tree seedlings grown for 10 years



12 tons of waste recycled instead of landfilled



4,165 gallons of gasoline saved



0.30 acres of forest preserved from deforestation

GHG reductions represented in equivalent savings

Installation

Stanford Health Care removed their old Hobart Model FT1000ER dishwasher and installed a new Hobart Model FT1025e all-electric dishwasher. To accommodate the new unit, they also upgraded the electrical and plumbing systems. The image on the first page shows the newly installed dishwasher. Veolia verified the installation of the unit and conducted power monitoring for the following 35 days. The installation was successfully completed in September, 2024 and the total cost of the measure was \$462,715.

Results: Energy Savings

The results of the power monitoring were used to estimate annual energy and GHG savings. As a result of the dishwasher replcement, the customer saw an increase in electricity use and decrease in natural gas use, which is expected for a fuel-switching project. Overall, the project led to net energy savings of **226,940 kWh**.

The energy savings are equivalent to annual greenhouse gas (GHG) savings of **88,873 lbs CO2** equivalent or **40 MT CO2** equivalent per year. The figure above shows these GHG reductions represented in equivalent savings.

The verified post-installation energy savings were 70% more than the projected savings. This was a result of increased dishwasher usage from pre-installation to post-installation. Additionally, the new dishwasher's monitored power was lower than what was initially calculated, meaning it was more efficient than expected.

Results: Cost Savings

Due to the increase in electricity use from the electrification effort, the customer incurred an annual utility cost increase of **\$6,920**. However, there were still overall energy savings, which resulted in a final incentive amount of **\$56,735**.

CityofPaloAlto.org/Departments/Utilities/Electrification/Business-Electrification/Commercial-Industrial-Energy-Efficiency-Program CityofPaloAlto.org/Departments/Utilities/Electrification/Business-Electrification/Business-Customer-Rebates

The Commercial & Industrial Energy Efficiency and Business Customer Rebate Programs are brought to you by the City of Palo Alto Utilities

