

QUEENS COLLEGE, NEW YORK

Electric Vehicle to Grid (V2G) Specialty Energy Storage/Microgrid

Goals and Challenges

Established in 1937, Queens College is a public university with 40 buildings across 80 acres. Through partnerships with Willdan|Genesys, NUVVE, Con Edison, and the College aimed to improve the energy efficiency, energy management, and resiliency of the campus by using cost effective and energy efficient/generating dual inverter electric vehicles and charging stations.

Solutions and Outcome

Willdan|Genesys designed the Vehicle to Grid (V2G) for the College. V2G is an electric vehicle system, developed by the University of Delaware and used by NUVVE, which is comprised of dual converter electric vehicles and charging stations that can be connected to the grid. This allows vehicles to serve many purposes, including energy storage.

The college can now include electric vehicles in its fleet; the vehicles will be used to advance energy storage applications by participating in a research and development program. This program evaluates energy management by using the vehicles for peak shaving, time-shifting, demand response, and frequency regulation in exchange for reduced electric rates. Solar PV can also be connected to the chargers.

Improvement Details

- A new solar energy system mounted on the roof of the Summit Apartments (via a connection of V2G and SHINES – solar-plus-storage-system) for charging campus electric vehicles provides a potential future local usage of PV power.

Project Cost:



\$300,000



Featured Solutions

- 3 vehicles to be fueled by renewable electric energy