

Marcus Garvey Village

Microgrid Case Study

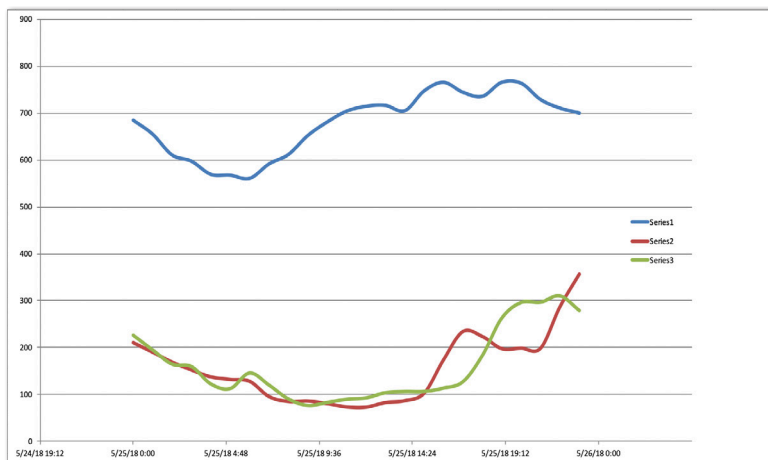


Project Snapshot

- Battery system received the first lithium ion chemistry approval in NYC under current permitting and safety requirements
- Significant cost and energy savings for 625-unit affordable housing complex in Brownsville, New York
- Customized incentive negotiated with local utility
- Battery storage enables PV and fuel cell assets to operate optimally as proposed; without storage, additional generation would create 200kW net-export and trip network protectors
- Battery allows the customer flexibility to operate the microgrid system across numerous programs, applications, and revenue models
- First customer-sided microgrid in BQDM network - Con Edison deferring a \$1.2BN substation upgrade by deploying \$250MN in customer-sided demand reduction solutions
- The project was awarded the 2017 Energy Storage North America (ESNA) Innovation Award for Distributed Storage

The GridMarket Process

1. L+M Developers requested GridMarket support assessing the opportunity for a multi-asset microgrid, combining an existing 480kW of solar PV and 400kW natural gas fuel cell with a battery
2. Analysis of energy consumption information
3. Site walkthroughs conducted to find available space and confirm required infrastructure
4. Identification and recommendation of ideal solutions
5. Proposals gathered from best-fit, top-tier solutions providers
6. Negotiation of custom incentive with local utility Con Edison - *affording benefit to the customer and a demand-constrained area of the grid*
7. Completed safety and permitting requirements with NY Fire Department and NY Department of Buildings
8. Decision made by L+M with GridMarket support to choose Demand Energy as battery and controls provider



The above figure displays two years of load reduction at Marcus Garvey Village as compared to the load prior to system installation

Project Name
Marcus Garvey Village

Project Location
Brownsville, New York

Microgrid Technologies
480kW Solar PV
400kW Fuel Cell
300kW/1200kWh Battery

Unique Value Summary

A model for DER Stacking to achieve cost savings, resilience, lower GHG emissions, and support for a vulnerable area of the grid