

# DSNY Staten Island 1/3 Garage Facility

## PROJECT SPECIFICS:

- DSNY Staten Island District 1/3 Garage - New Construction and Rehabilitation
- Client Agency: NYC Department of Sanitation
- 1000 West Service Drive, Staten Island, NY 10314
- 120,000 sqft
- NYC's Pilot 80x50 Program participant
- Local Law 86 compliance

## KEY TERMS:

New construction; Rehabilitation; LL86; NYC Capital project; NYC 80x50, NYC Climate Mobilization Act; LEED; NYCECC; LL21; Building Simulation; Energy analysis; Energy conservation; ECM

## Sustainability and energy efficiency targets:

- Participate in NYC's 80x50 pilot program
- Meet Local Law 86
- LEED v4 BD+C Silver rating
- Reduce energy cost by 25%– 30%
- 30% potable water reduction per US EPA Energy Policy Act of 1992
- Exceed NYCECC
- Install on-site solar panel system
- Meet Local Law 21 of 2011, the Cool Roof Law

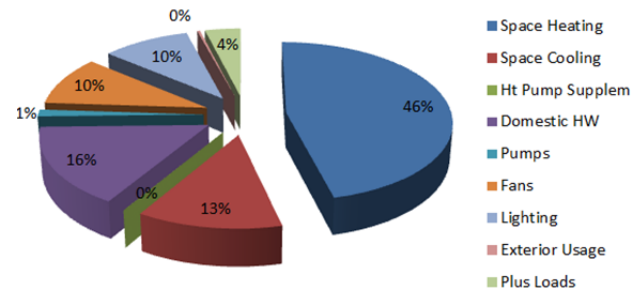


Figure 1 Basis of Design - Annual Energy Consumption by End Use



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## 80X50 DEEP ENERGY CONSERVATION MEASURES STUDIED:

- Improved Exterior Wall Thermal Performance – Whole Building
- Improved Windows – All Exterior Glazing
- Improved Roof Thermal Performance – Whole Building
- Improved Slab on grade Thermal Performance – Whole Building
- Reduced Exterior Air Infiltration – Whole Building
- Reduced Exterior Air Infiltration – Personnel Areas Only
- Improved Thermal Performance at Personnel-Repair-Garage Partition Walls
- Enhanced LPD Reduction
- Increased Occupancy Sensors for Lighting
- Solar Hot Water System
- Reduce Thermal Stratification in Parking & Repair Area
- Passive Solar Wall Assembly on South Wall
- PV system with Skylights
- Integrated Passive Solar Roof

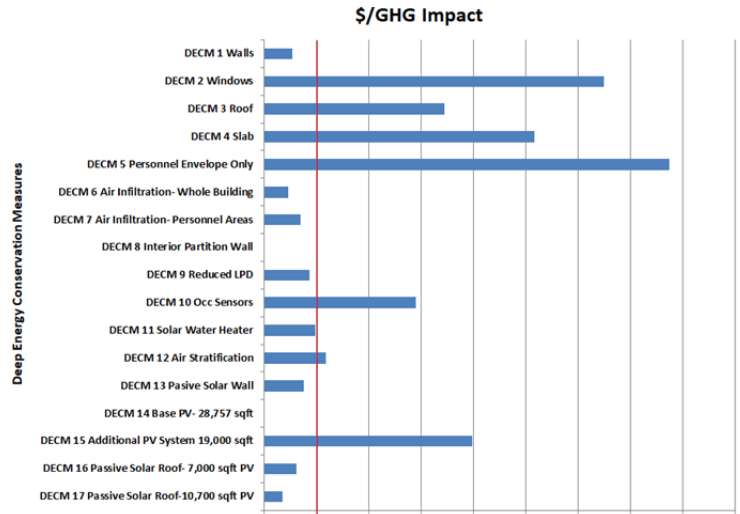


Figure 2 DECM Analysis: \$/ton GHG emissions

### Selected EEMs for implementation:

- Improved Exterior Wall Thermal Performance – Whole Building
- Improved Windows – All Exterior Glazing
- Improved Roof Thermal Performance – Whole Building
- Improved Slab on grade Thermal Performance – Whole Building
- Reduced Exterior Air Infiltration – Personnel Areas Only
- Improved Thermal Performance at Personnel- Repair-Garage Partition Walls
- Enhanced LPD Reduction
- Solar Hot Water System
- Reduce Thermal Stratification
- Solar panels on rooftop

