



GLEN COVE CITY SCHOOLS

District-Wide
Energy Performance
Project

JUNE 2025



AGENDA

Introductions

Project At A Glance

Scope & Associated savings

Photo Summary

Incentives

Continued Service M&V

IRA Funds

AT A GLANCE

Financial Performance

Total Guaranteed Annual Savings	\$405K
Guaranteed Incentives	\$21K
Project Simple Payback (years)	15.28
Annual Energy Cost Savings	\$349K



\$405K

Guaranteed Annual Energy Savings



5,777

New LED Fixtures Installed



\$56,314

Annual O&M Savings



825 MWh

Electrical Production from Solar Panels



50%

Annual GHG Reduction

YOUR PROJECT

1. Solar PV
2. Lighting Upgrades
3. Boiler Upgrades
4. VFD and Motor Replacement
5. Ventilation Upgrade
6. BMS and Controls Upgrades
7. Computer Energy Manager
8. Plug Load Managers
9. Envelope Improvements
10. Insulation Improvements



DISTRICT-WIDE MEASURES

SOLAR PV

\$129k+ in savings
452.0 mTons CO₂ eliminated

INTERIOR + EXTERIOR LIGHTING

\$131k+ in savings
288.0 mTons CO₂ eliminated

HVAC UPGRADES

\$38k+ in savings
155.9 mTons CO₂ eliminated

BMS + CONTROLS

\$49k+ in savings
229.7 mTons CO₂ eliminated

COMPUTER ENERGY MANAGERS

\$18k+ in savings
76 mTons CO₂ eliminated

PLUG LOAD MANAGERS

\$15k+ in savings
58.4 mTons CO₂ eliminated

ENVELOPE IMPROVEMENTS

\$14k+ in savings
80.6 mTons CO₂ eliminated

MECHANICAL INSULATION

\$4k+ in savings
23.1 mTons CO₂ eliminated

SOLAR INSTALLATION

- 713kW DC of solar PV installed across high school, middle school, and elementary school
- Locations selected based on highest electric peak demands and available rooftop space
- Low maintenance: minimal operation and cleaning required
- Significantly reduces energy costs with on-site, carbon-free electricity
- Directly offsets school buildings' electrical usage, cutting district-wide consumption by 50%



LIGHTING UPGRADES

- Outdated fluorescent technology replaced with energy-efficient LED lighting
- Enhanced illumination across a 30,000 sqft ceiling tile grid
- Reduced fixture count while maintaining proper lighting levels where applicable
- Increased energy cost savings and lower maintenance needs
- On average, 40% decrease in wattage per fixture, boosting efficiency





BEFORE



AFTER

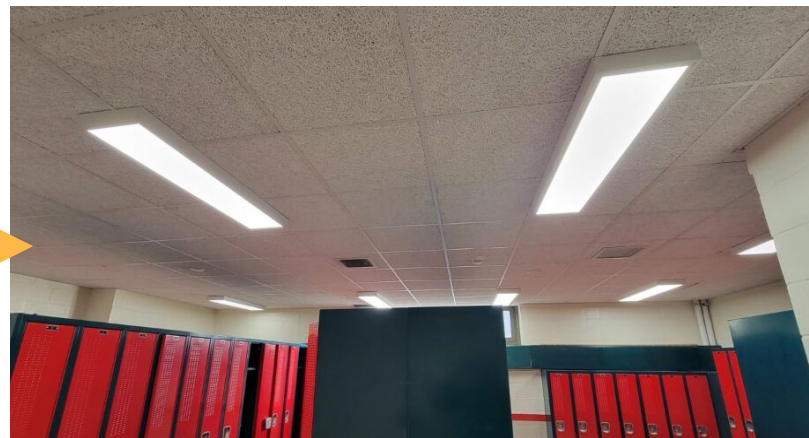
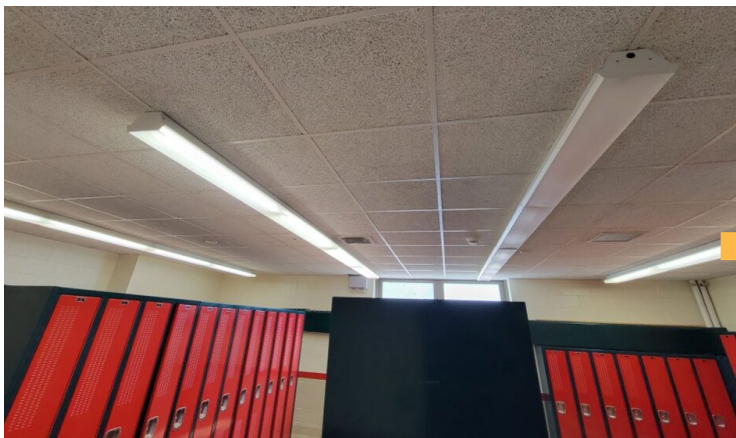




BEFORE



AFTER



BEFORE



AFTER



BOILER UPGRADES

- Demolition of outdated furnaces in mechanical spaces
- New condensing hot water boiler system improves efficiency and reduces costs
- Old furnace (pictured) operated at full blast, cycling on/off inefficiently
- New system runs at low temperature, boosting efficiency to 92.5% (up from 80%)
- Thousands in annual maintenance savings
- Automatic controls prevent alarm-triggered resets, allowing remote scheduling and adjustments





VFD & MOTOR REPLACEMENT

- Electrically commutated motors installed for maximum energy efficiency
- VFDs adjust motor speed on pumps and fans to match heating water demand
- Ensures optimal efficiency by aligning pump output with actual flow and heating requirements
- Reduces maintenance needs and extends the lifespan pumps and motors



SOLAR PV TRANSFORMER & MAIN BREAKER

- **Transformer:** Steps down 480V from rooftop solar inverters to 208V for seamless integration
- Provides power to the school or grid based on demand
- **Main breaker:** Protects against overcurrent and enables full system disconnect



UTILITY DISCONNECT SWITCH

- Required by PSEGLI for system isolation
- Safely shuts off PV solar system, preventing power supply to the building
- Ensures safe electrical work by eliminating solar power flow



RTU UPGRADE

- Demolished outdated RTUs and AHU
- Installed two new RTUs with updated flashing and roofing membrane
- Improved efficiency with modern motors and cooling systems
- Reduced energy consumption compared to previous equipment
- Aging equipment increases energy use and maintenance needs—replacement ensures long-term reliability



ENVELOPE REPLACEMENTS

- Insulated weak points to minimize air infiltration and energy waste
- Cellulose insulation installed in the Landing Elementary School attic for better student comfort
- Weather stripping added to exterior doors district-wide to reduce drafts
- Windows and roof-wall intersections sealed to prevent heat loss
- Enhancements lower utility cost and improve student and staff comfort



INCENTIVES

- **Contracted vs Committed**

- PSEGLI Contracted Amount \$0K
- PSEGLI Pre-Approved Amount \$110K
- National Grid Contracted Amount \$21K
- National Grid Pre-Approved Amount \$78K

- **Received to Date**

- PSEGLI Amount \$103,347
- PSEGLI Pre-Approved Amount \$85,401

\$188K+

RECEIVED TO DATE

M&V PERIOD

- **Start Date:** August 2025
- **Duration:** 3 years from substantial completion
- Savings are guaranteed and will be continuously monitored and verified
- If savings fall short, Ecosystem will analyze performance and implement corrective actions
- If remediation efforts are unsuccessful, financial compensation will be provided

IRA INITIATIVE

- Solar PV measure qualifies for Inflation Reduction Act's Investment Tax Credit
- Anticipating approximately \$450,000, (25% of the measure cost)



THANK YOU!

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