

Montclair BOE

Energy Savings Improvement Program (ESIP)

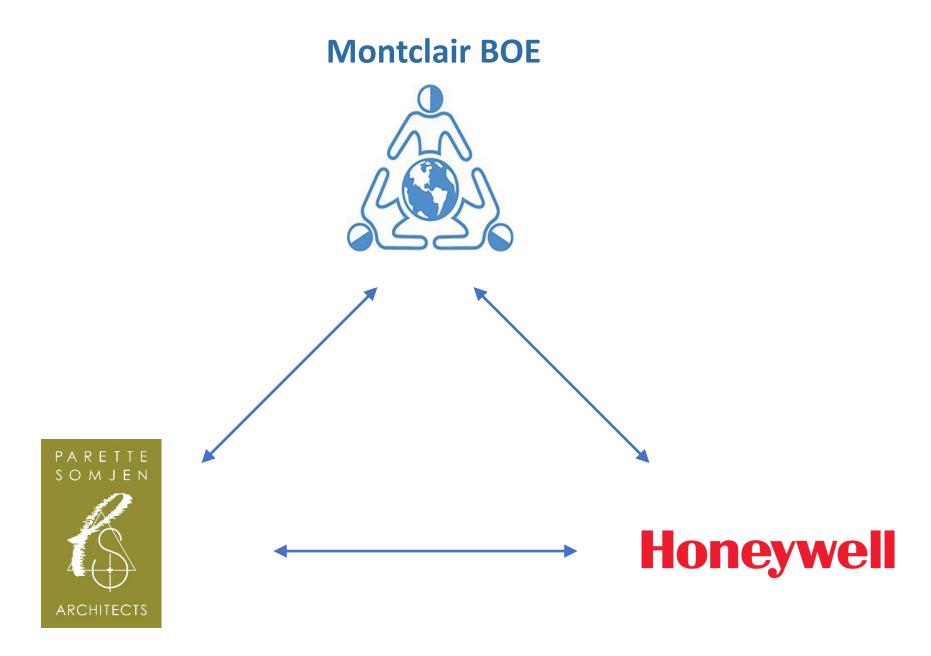
Energy Savings Plan Summary (ESP)

AGENDA

- Team Introductions
- ESIP Process Overview
- ESIP Timeline
- ESIP Project Summary
- Environmental Summary

Team Introductions





ESIP Process Overview

ESIP Process Overview



PURPOSE

NJ PL 2012 C.55 was enacted to gives schools the opportunity to re-direct a portion of their existing energy and operational expenses to pay for energy-related improvements using the energy savings that result from the improvements.

- ➤ ESIP is overseen by the New Jersey Board of Public Utilities (BPU)
- ➤ Projects are funded entirely with the resulting savings
- ➤ Energy Service Company (ESCO) guarantees the savings
- > Projects improve comfort, reliability and efficiency of the existing buildings
- ➤ Projects produce significant energy efficiency rebates

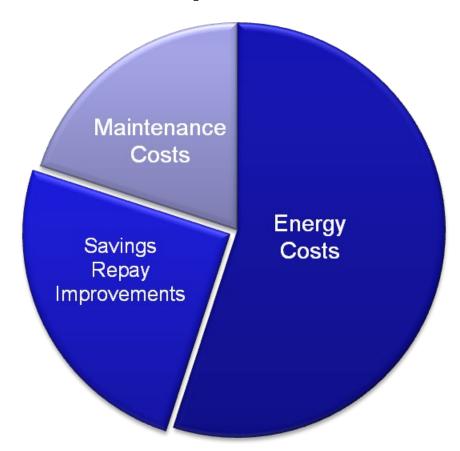
ESIP Process Overview



Before Improvements



After Improvements



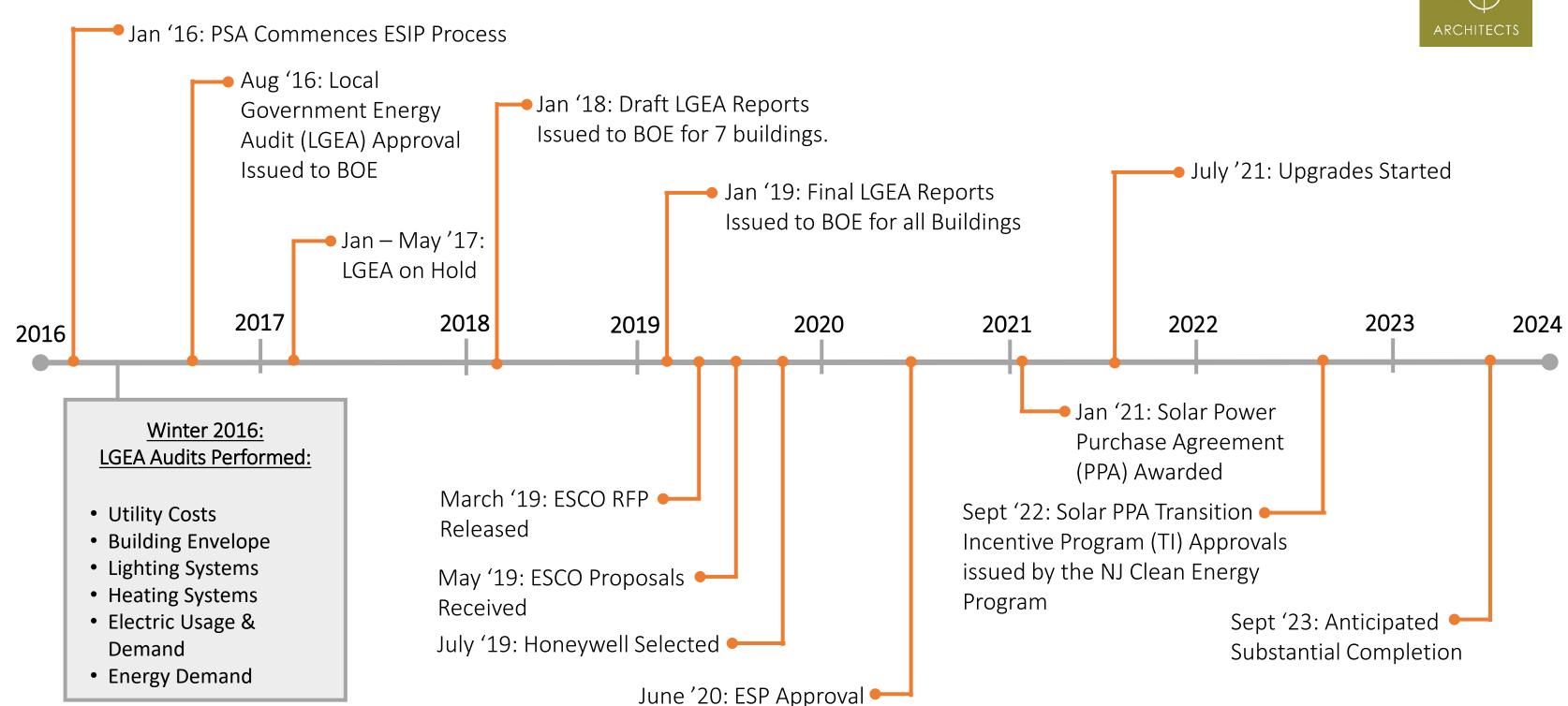
Why It Works:

- ➤ No Up-front Capital Expenditures
- Projects are Funded with Energy and Operational Savings
- > The ESCO, Honeywell, Guarantees the Savings

ESIP Timeline

ESIP Timeline





ESIP Project Summary

PARETTE SOMJEN

ESIP Project Summary

Montclair Public Schools	15 Year Lease Purchase 1.5% Interest Rate							
Total Project Value*	\$10,720,000.00							
Total Energy and Operational Savings	\$12,044,131.00							
Potential Rebates Paid Directly to School District	\$559,434.00							
Positive Cash Flow for School District	\$475,097.00							

^{*}Includes Professional Design and Issuance Fees



ESIP Projects Summary



ELECTRICAL

- **Lighting Upgrades**
- **Vending Misers**
- **De-Stratification Fans**



Mechanical

- **Roof Top Unit Replacement**
- **Premium Efficiency Motors** and Variable Frequency Drives (VFD)
- **Piping Insulation Upgrades**
- **Steam Trap Replacements/** Refurbishment



Building Management System

Building Automation, **Demand Control** Cantillation Ventilation, & **Exhaust Fan Controls**



Building Envelope

- **Building Envelope**
- **Improve Classroom Comfort**



Transformer Replacement

High Efficiency Transformers



Roof - Re-sealing

- **Silicone Roof Coating**
- **Extend Roof Warranty for** 15 years



Solar Power Purchase Agreement (PPA)

Solar PPA Renewable **Energy 765 KW**



Water Conservation

Water Conservation through aerators

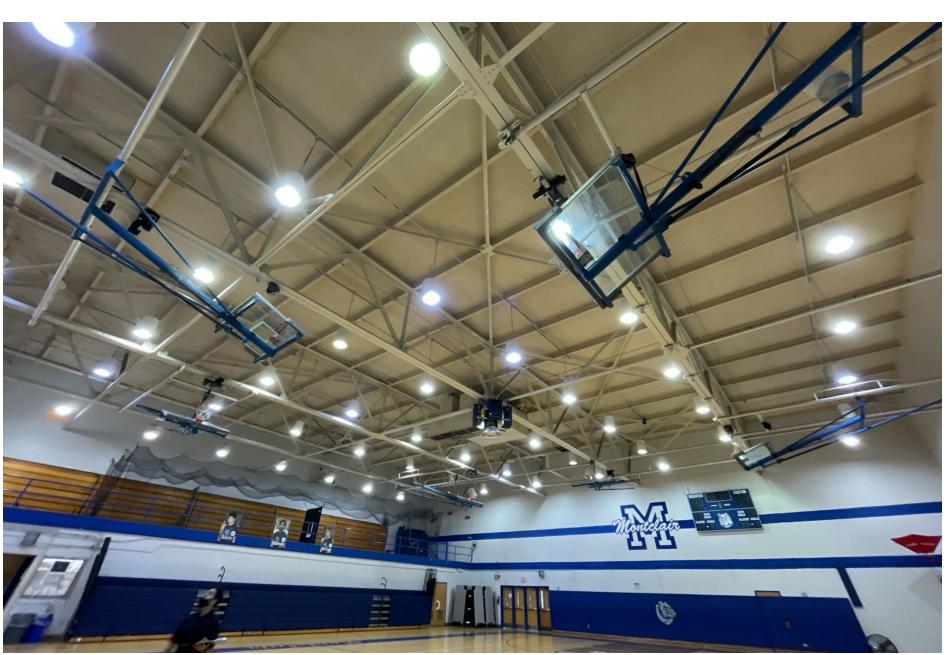
ESIP Projects Summary

Honeywell Not Applicable ON Schedule Behind Sched In Progress Complete	Overall Percentage	Pre-K/DLC	Bradford	Bullock	Buzz Aldrin	Edgemont	Glenfield	Hillside	High School	George Inness	Nishuane	Northeast	Renaissance	Watchung	Woodman Field	Central Heating Plant	Board of Education
ECM1 - Electrical																	
A - Lighting Upgrades	95%																
C - Vending Misers	100%																
D - De-Stratification Fans	100%																
ECM2 - Mechanical																	
D - RTU Replacements	25%														П		
G - Premium Efficiency Motors and VFD's	50%																
H - Piping Insulation Ugrades	90%																
J - Steam Trap Replacements/Reburbishment	100%																
ECM3 - Building Management System																	
A-C - BA, DCV, & Exhaust Fan Controls	22%	Г															
ECM4 - Building Envelope Improvements	99%																
ECM7 - Transformer Replacements	100%																
ECM9 - Roof Re-Sealing	25%																
ECM12 - Water Conservation	90%																

Electrical





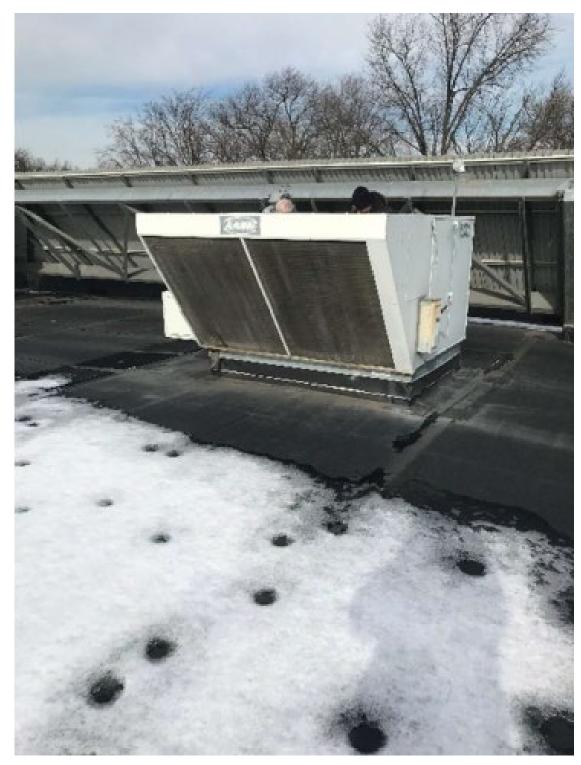


New Destratification Fans at Rand MS

Lighting at Montclair High School

Mechanical





Existing RTU at Bradford ES



New RTU at Bradford ES

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Building Envelope



New Attic Insulation at Bradford





New Door Weather Stripping & Sweeps at Community Pre-K

Transformer Replacement



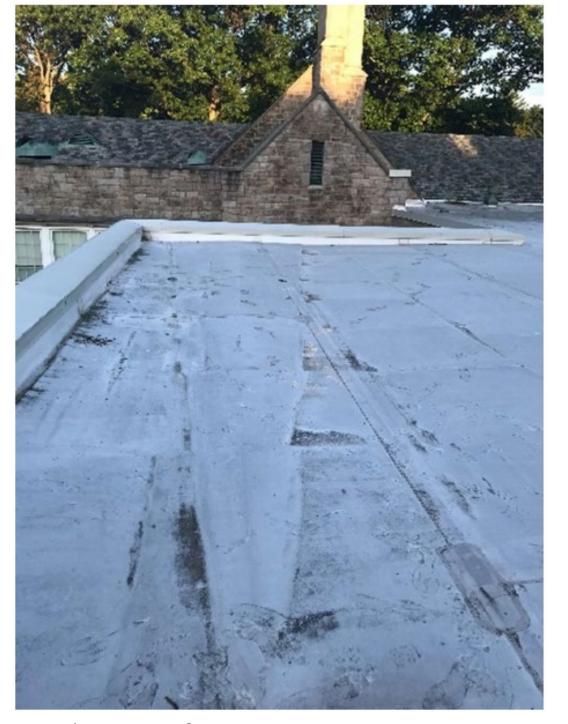


New Transformer at Bradford

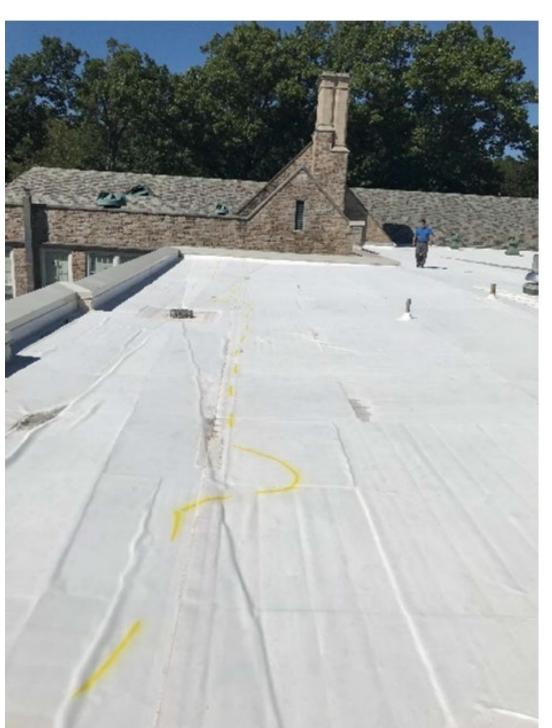
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APCHITECTS

Roof Re-Sealing



Northeast – Before



Northeast - After

Solar Power Purchase Agreement





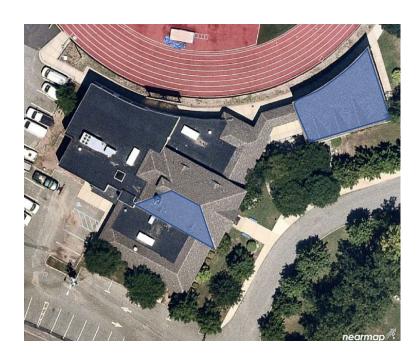
High School



Bradford







Woodman



George Inness

Environmental Summary

Environmental Summary



Electrical Savings	2,052,491 kWh Saved
Gas Savings	291,481 Therms
Green House Gas Emissions	2627 Metric Tons
Automobiles Removed	544
Trees Saved / Planted	2488 Acres

THANK YOU