



MONROE TOWNSHIP SCHOOL DISTRICT

Home of the Falcons

ENERGY SAVINGS IMPROVEMENT PROGRAM

***BUILDING UPGRADES DESIGNED, PROCURED,
IMPLEMENTED AND PAID FOR WITH SAVINGS
GENERATED***

Honeywell

November 11, 2024

MONROE SCHOOL DISTRICT'S TEAM

Caroline Jackson
Business Consultant

Paul Peters PE, CEM
Sr Solution Development Engr

Tim Laverick
Project Manager Leader

Lisa Montalto
Finance Director

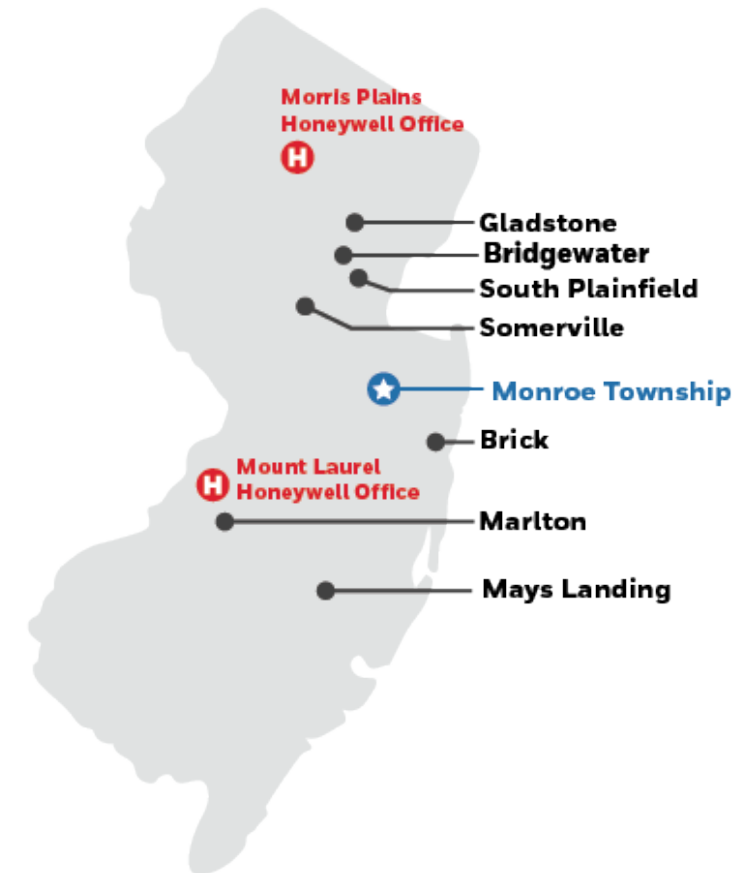
Sean Yates
NE Regional Manager

Emily Li
Solution Development Engr

Katherine Galvez
Project Manager

Frank Capitummino CEM
M&V Specialist

YOUR NEW JERSEY HONEYWELL TEAM



NJ ESIP Experience

AGENDA

1. Introductions
2. NJ Energy Savings Improvement Program (ESIP) Overview
3. ESIP SAVINGS & Rebates
4. Project Implementation Overview
5. Understanding Your Priorities
6. Review of Progress to date
7. Improvement Measures Evaluated
8. Potential Project Financials
9. Overview of Energy Conservation Measures
10. Next Steps

Common Acronyms in NJ Energy World:

- ESIP - Energy Savings Improvement Program
- ESCO - Energy Services Company
- IGA - Investment Grade Audit
- ESP - Energy Savings Plan
- HVAC - Heating Ventilation & Air Conditioning
- BPU - Board of Public Utilities
- M&V - Measurement and Verification
- PPA- Solar Power Purchase Agreement

Please ask questions anytime!

ENERGY SAVINGS IMPROVEMENT PROGRAM (ESIP)

Purpose:

NJ Law PL 2012 C.55 Enacted to enable public entities to re-direct a portion of their existing energy and operational expenditures to pay for energy related capital improvements to their facilities

Energy Savings Improvement Programs Highlights:

- Leverage energy savings, rebates/grants and utility incentives to fund projects
- Support staff with implementation resources for select projects
- Not considered traditional debt because it's primarily funded from the utility budget

Assurances Built into NJ Clean Energy Board of Public Utilities (BPU) Process:

- Follows the BPU process
- A Third-Party Engineer reviews savings and guarantee
- BPU reviews final Energy Savings Plan (ESP)



WHAT IS AN ESIP PROJECT?

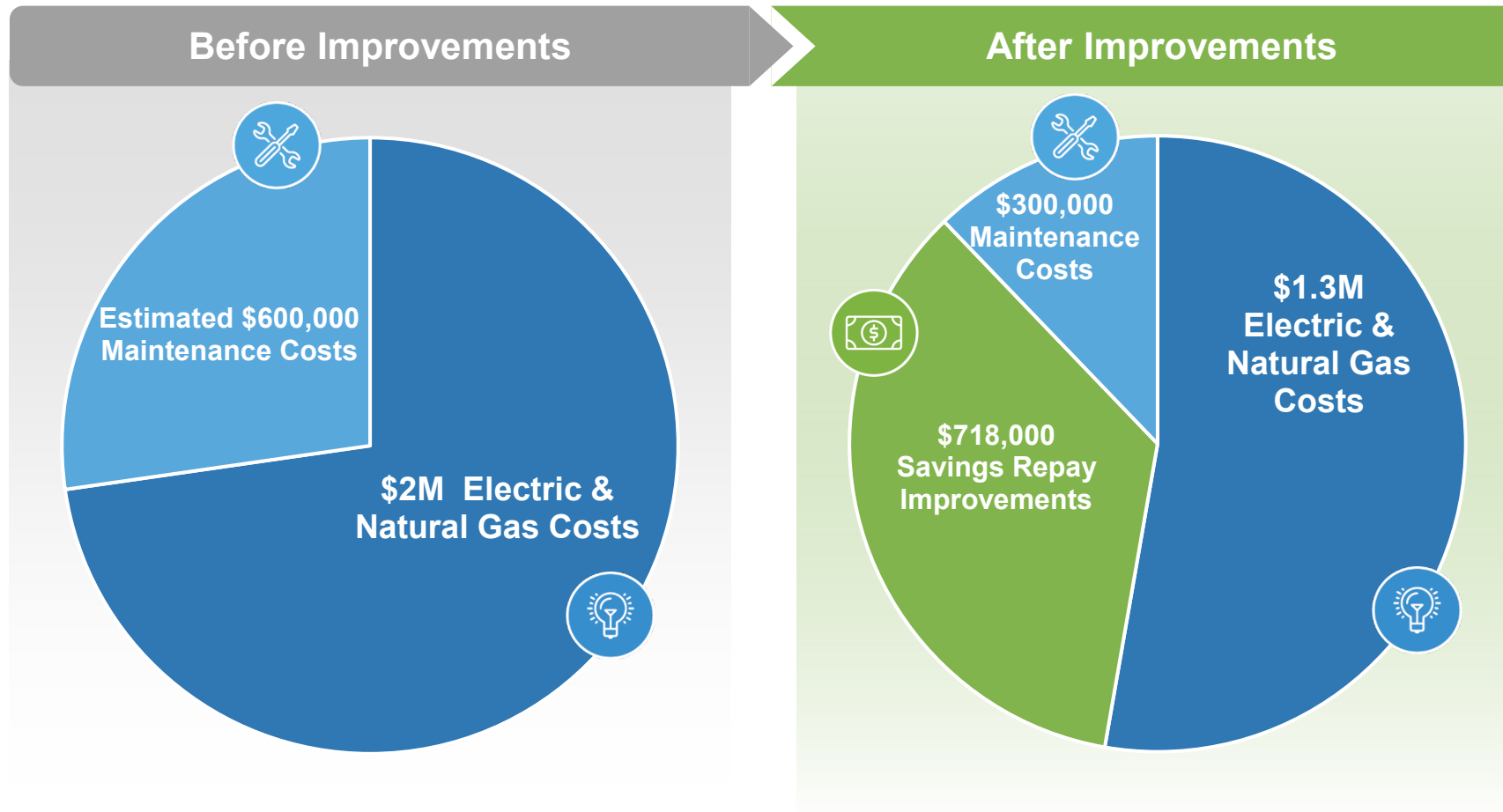
The Energy Savings Improvement Program (ESIP) is a funding mechanism used to finance energy efficiency upgrades at public institutions throughout New Jersey. It allows a public entity to use energy savings to pay for the cost of energy-related capital upgrades.

HOW DOES IT WORK?

Over a 15-year period, the savings achieved from the energy conservation measures and upgrades pay for the cost of the project.

Self Funding Proven Program

ESIP – A BUDGET NEUTRAL SOLUTION



No Up-front Capital Outlay Required / Leverages Available Rebates & Grants / No Debt Limit Impact

Efficiency Improvements Pay for Facility Upgrades

STATE & FEDERAL REBATES, INCENTIVES & GRANTS



Funding Beyond Energy Savings

\$590,000
Estimated

Current Local Incentives/Grants

- JCP&L/PSE&G Prescriptive Rebates
- JCP&L PSE&G Custom Rebates
- Potential Decarbonization Incentive



IMPLEMENTATION OVERVIEW

FROM ESP DEVELOPMENT TO ESIP IMPLEMENTATION



Pre ESIP to ESCO Selection

Local Government Energy Audit
Verify Utility Baseline- Collect Utility Bills
Determine Project Potentials
Decide Purchasing Method- State RPF or Co-op Selection

**Identify ESIP Committee -
Agree on Project Goals and Objectives**



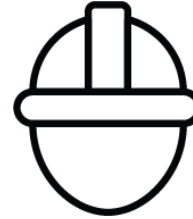
Phase I – Solution Development (ESP Development)

Kick-off Meeting
Audit buildings
Design & Develop ECM Measures
Rebates & Incentive Options

Develop:

- Resource Plan
- Financing Solution
- Measurement & Verification Plan
- Communication & Awareness Plan

**Output – ESP Report Completed
Projects & Savings Identified**



Phase 2,3,4 Design, Procurement, Construction

Contract Finalized

Design Solutions

Procurement of Subcontractors

Install Measures

Manage:

- Permits
- Subcontractors (Local & Regional)
- Health & Safety Processes

Commissioning

Training for School District

**Output – Rebates/Grants
Secured; Improvements
Installed**



Phase 5 Post Construction Guarantee Period

First Party Guarantee

Ongoing Measurement & Verification

Ongoing Communication & Awareness

Support & Maintenance Services

**Output – Annual Cost
Avoidance Report**

REVIEW OF PROGRESS

LGEA Reports- Sample Quote Request- In Progress

ESIP Intake Form- Submitted to BPU

Resolution to Select Energy Services Company (ESCO) via Co-op- Complete

Honeywell will complete Energy Savings Plan – Complete

- Organize Utility Baseline
- Complete Site visits
- Identify Existing Equipment and Needs
- Coordinate with current projects and planned projects- savings
- Identify utility rebates or grant opportunities
- Report on solar opportunities

Resolution to utilize Competitive Contracting to procure a Solar PPA at Select buildings– Complete

Moving through the ESIP Process

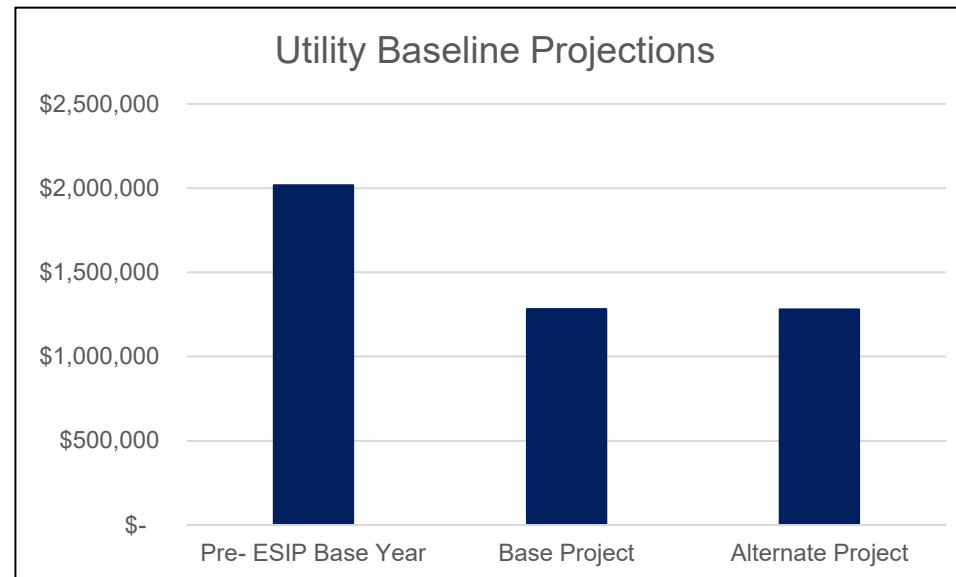
MEASURES EVALUATED WITH SAMPLE PROJECT SELECTED

Energy Conservation Measure (ECM) Category	Monroe Twp. High School	Monroe Twp. Middle School	Applegarth School	Woodland School	Mill Lake School Complex	Brookside School	Barclay Brook School	Oak Tree School	Administration Building	Transportation Building	Sports Field
1A LED Lighting	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
1B Stadium Lights											✓
1C Destratification Fans	✓ Art Room	✓	✓	✓	✓	✓	✓	✓			
2A Boiler Replacements		✓	✓	✓	✓		✓	✓			
2B Domestic Water Heater Replacements	✓			✓							
2C Roof Top Unit Upgrades		✓ 3 Units	✓	✓	✓ 11 Units		✓		✓		
2D Split System Upgrades			✓		✓						
2E Premium Efficiency Motors and VFDs		✓									
2F Chiller Replacements				✓			✓	✓			
2G Unit Ventilator Replacements		✓	✓	✓	✓	✓	✓				
2H AHU Replacements		✓		✓			✓				
2I Electrification for Applegarth School			✓								
3A Building Management Controls	✓	✓	✓	✓	✓		✓	✓	✓	✓	
3B Building Sustainability Manager HBSM	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
4A Building Envelope Improvements	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
4B Roof Replacements		✓	✓		✓	✓			✓		
5A Cogeneration CHP	✓										
6A Solar PPA		✓	✓	✓	✓			✓			
6B Community Solar	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6C Solar PV Ownership		✓	✓	✓	✓			✓			
7A Transformer Replacements		✓		✓	✓	✓	✓				

✓	Evaluated and Selected
✓	Evaluated and Not Selected
✓	Rod Grant
✓	Alternate-Capital Project

ESIP BENCHMARK PROJECT SCENARIOS

	Base Project Self Funded	Alternate Project w/Capital Contribution
Total Project Value	\$12.1M	\$16.1M
Capital Contribution	\$0	\$4M
Estimated Finance Rate	4.25%	4.25%
Estimated Solar PPA Rate (\$/ kwh)	\$0.04	\$0.04
Total Energy Savings (20 Yrs)	>\$14.1M	>\$14.3M
Total Utility Rebates /Incentives	\$590K	\$780K
Total Solar Savings (15 Yrs)	\$2.6M	\$2.6M
Total Positive Cash Flow (20 Yrs)	Yes	Yes

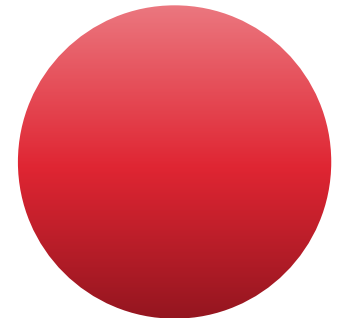
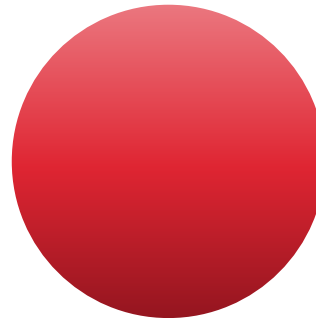
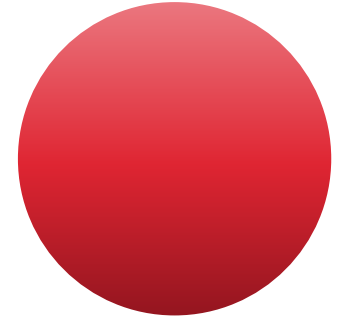
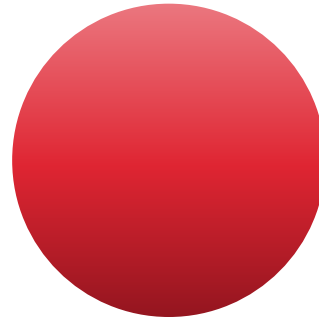
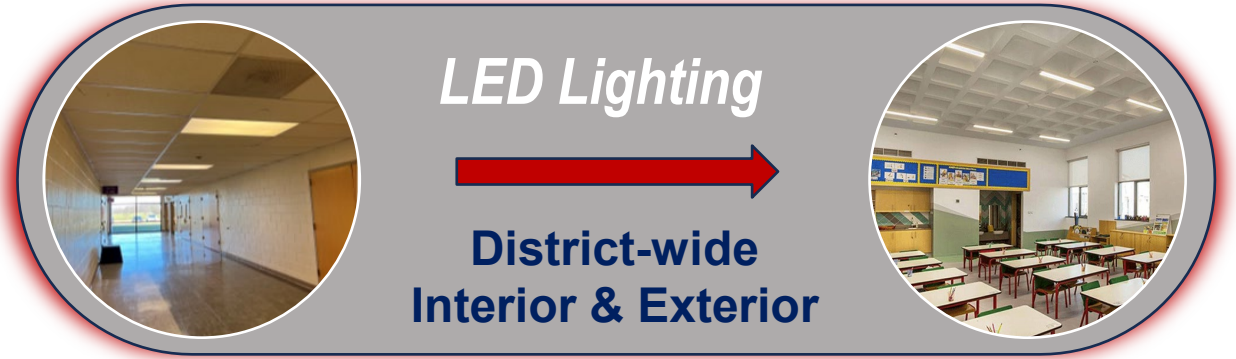




MONROE TOWNSHIP SCHOOL DISTRICT

SELECTED IMPROVEMENTS

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New Boiler Systems

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**Middle & Woodland
Schools**

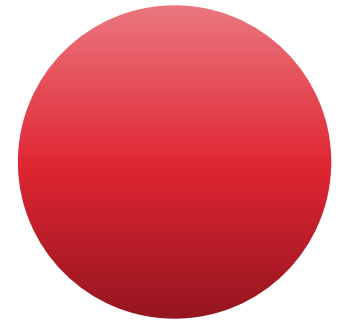
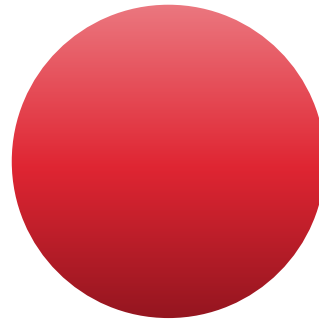
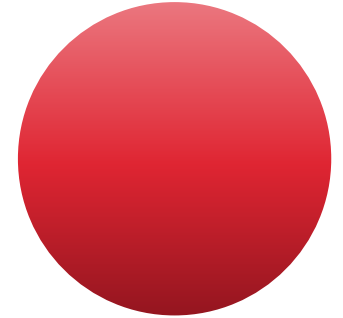
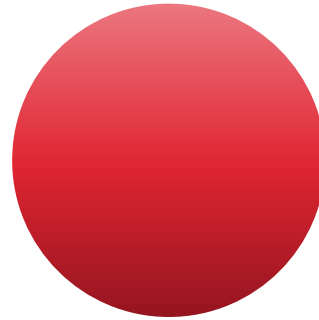
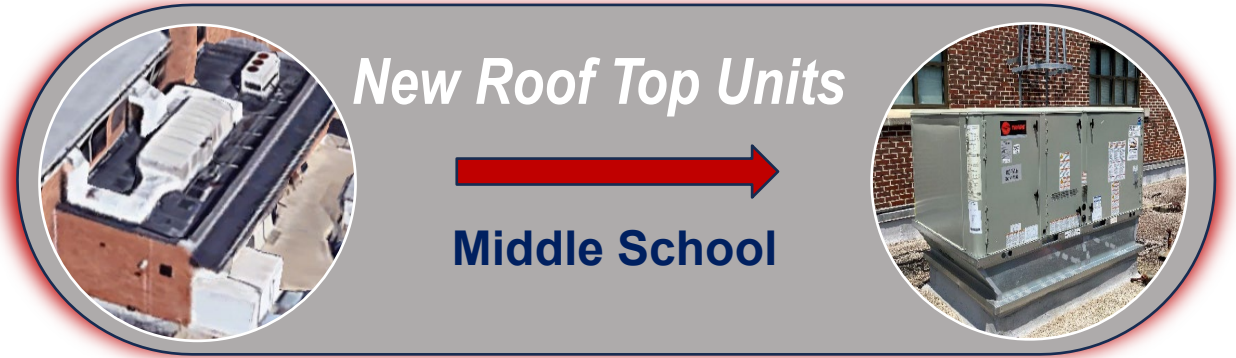




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SELECTED IMPROVEMENTS

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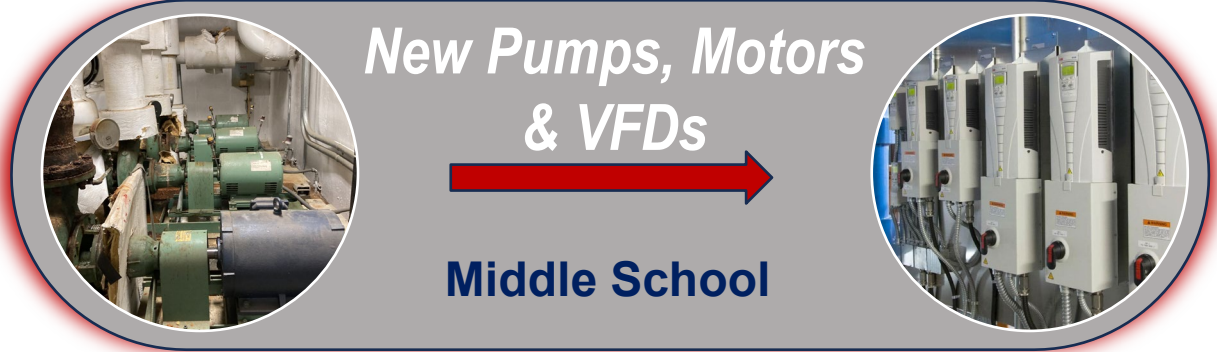




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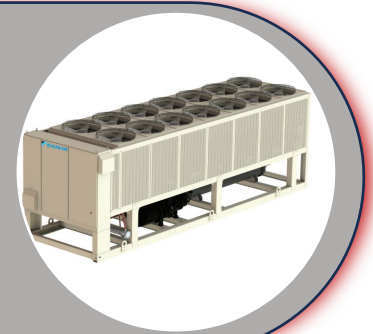
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New Chillers



**Woodland &
Barclay Brook**

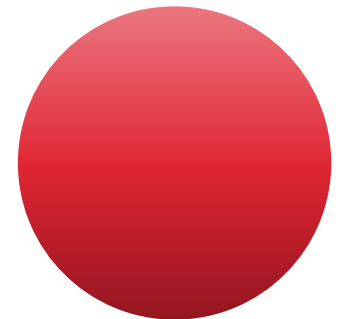
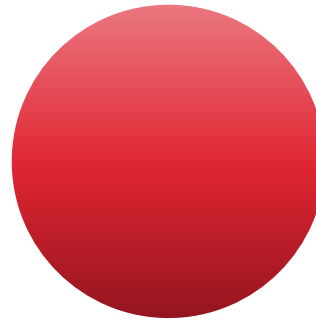
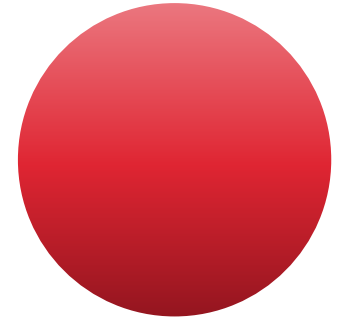
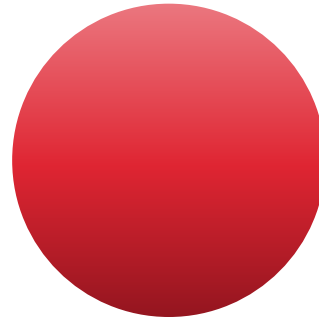
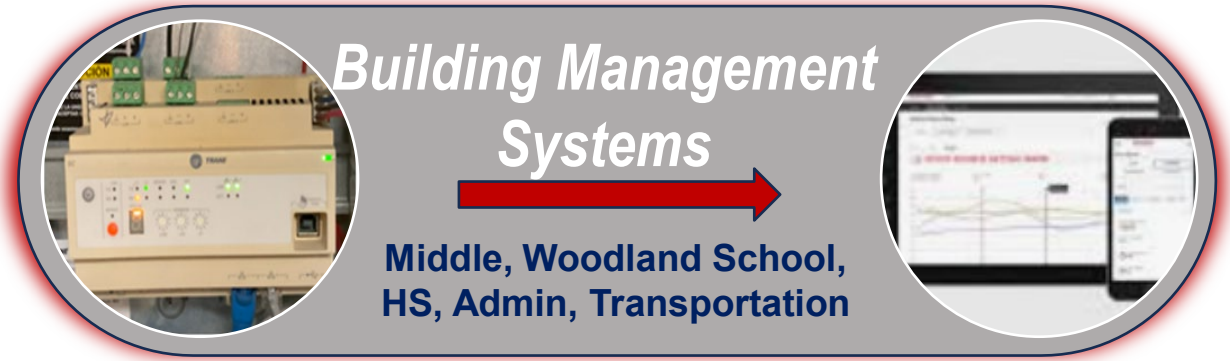




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SELECTED IMPROVEMENTS

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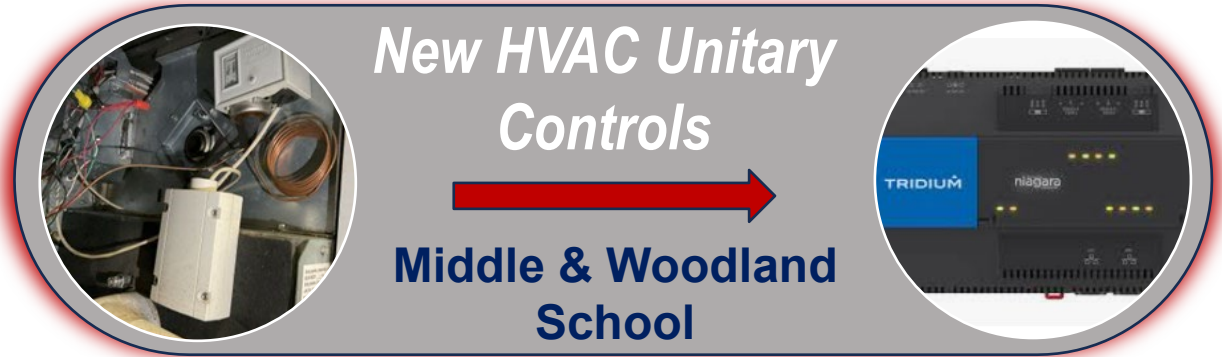




MONROE TOWNSHIP SCHOOL DISTRICT

SELECTED IMPROVEMENTS

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Building Envelope



District-wide





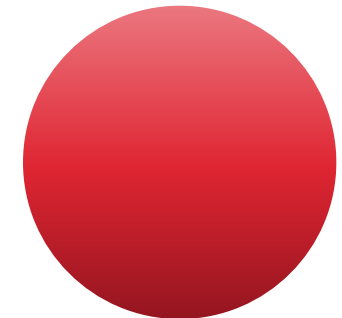
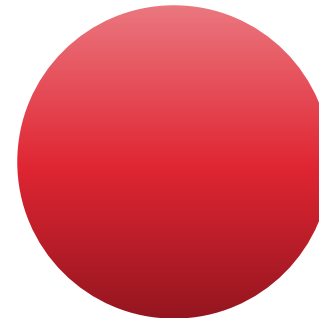
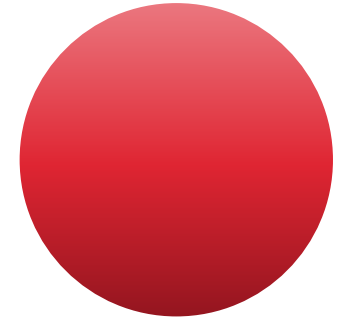
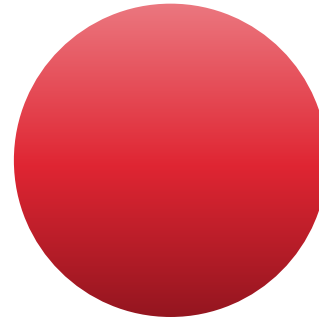
MONROE TOWNSHIP SCHOOL DISTRICT

SELECTED IMPROVEMENTS

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*Combined Heat
& Power (CHP)*
→
High School

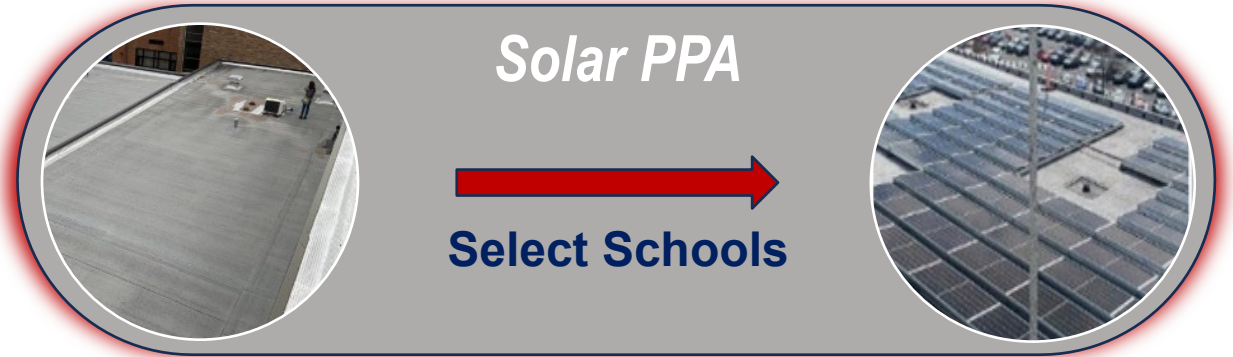




MONROE TOWNSHIP SCHOOL DISTRICT

SELECTED IMPROVEMENTS

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MONROE TOWNSHIP SCHOOL DISTRICT

SELECTED IMPROVEMENTS

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*Education
Programs*

STEM Enrichment



SOLAR PPA- RENEWABLE ENERGY SOLUTION

Existing Condition

There is currently no solar power supporting:

- Monroe Middle School
- Applegarth School
- Barclay School
- Oaktree School
- Woodland School
- Alternate HS Canopies

Proposed Solution

Honeywell Proposes a Solar Power Purchase Agreement System at these schools to provide renewable savings to the district

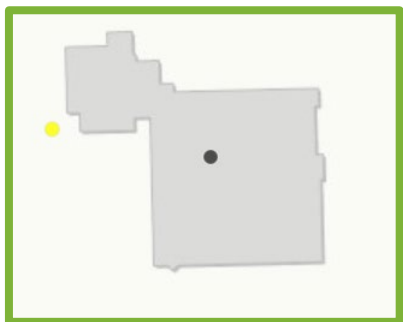


POTENTIAL SOLAR

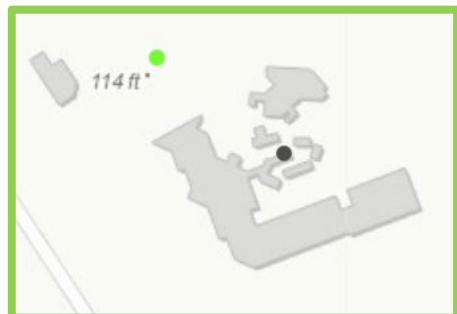
- **2MW Potential over building listed**
- **Current Rate is on average \$0.124 per kwh**
- **Estimated Rate is \$0.04 per kwh**
- **Estimated Saving is over \$150,000 per year**
- **Funding over \$2M of the ESIP project**
- **Solar PPA RFP is being reviewed by now and will be issued soon**



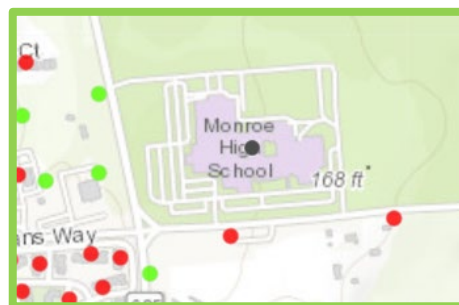
Applegarth Sch.
Roof & Ground



Oak Tree Sch. Ground



Barclay Brook Sch. Roof



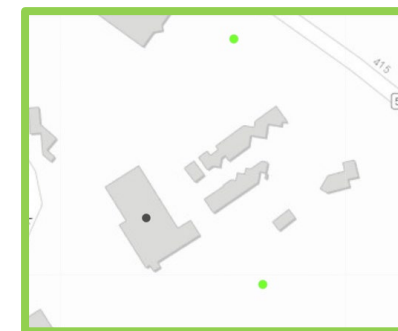
Alternate- Monroe HS
Canopy



Monroe MS Roof



Woodland Sch Roof



Transportation
Building Roof

SOLAR PV- HIGH SCHOOL CANOPIES AS AN ALTERNATE



- Best Area for Canopies in in the yellow areas on Map
- Sample pictures of design strategy to minimize impact to parking lot

High School Solar Canopys – Alternate Bid

ESIP PROJECT INCLUDES

- **All measures as described in the Scope of work**
- **Investment Grade Audit**
 - Project Development
 - Load Calculations
 - Financial Analysis
 - Coordination with 3rd Party Engineer
 - Coordination with BPU
- **Engineering Design Services**
- **Procurement Process**
 - Design Documents
 - Site walkthroughs to award of contract
- **Project Management**
- **Site Supervision**
- **Architectural Services**
 - DOE Applications
 - Amendment for your LRFP
- **Warranty work during construction**
- **Training**
- **No Change Orders**
- **Guaranteed Maximum Price**

The ESIP Project is a turn-key Project

THIRD PARTY ENGINEER REVIEW

- Verify the baseline energy use
- Review the energy savings calculations
- Review the efficiency of the equipment
- Make suggestions based on their experience
- Honeywell adjusted the Energy Savings Plan to reflect the comments
- Submitted for review from Board of Public Utilities

Required Step Provide Assurances

NJ BOARD OF PUBLIC UTILITIES REVIEW

- **NJ Board of Public Utilities (BPU)**
 - Michele Rossi, ESIP Coordinator
- **Verify the process adherence**
- **Verify Third Party Review completion**
- **Verify all rebate were considered and accurately applied**



Hello Caroline,

The revised (and attached) Energy Savings Plan submitted on 9/1/23 for the Clearview Regional School District has been approved.

The upgrades that will be implemented will not only increase energy efficiency but also save a significant amount of money. These improvements will reduce overall energy consumption and ultimately help to diminish the district's carbon footprint. I applaud Clearview Regional for making this commitment to pursue an ESIP project.

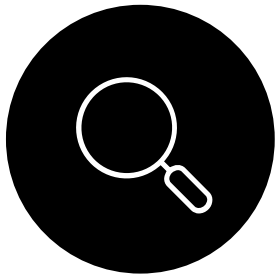
I will be checking in periodically, but please do not hesitate to reach out should you or any representatives from the district should have questions moving forward.

Best,

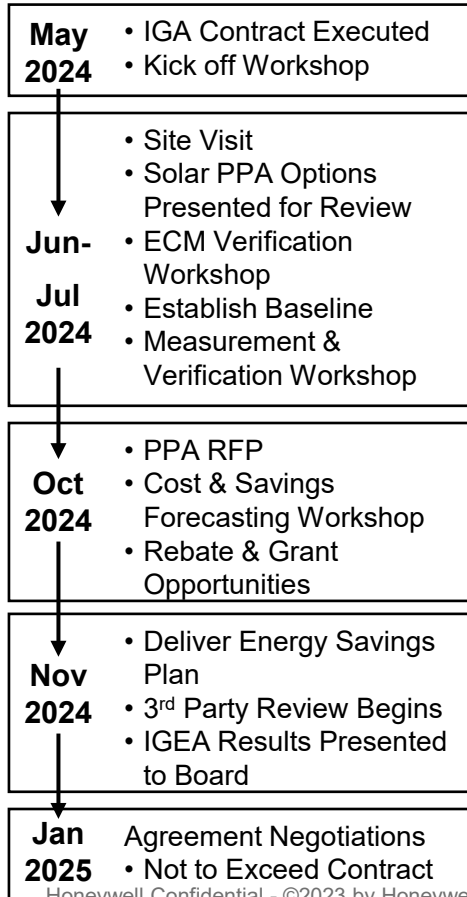
Michelle Rossi

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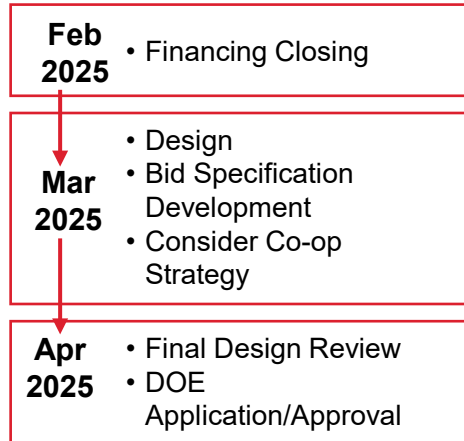
BPU Approval



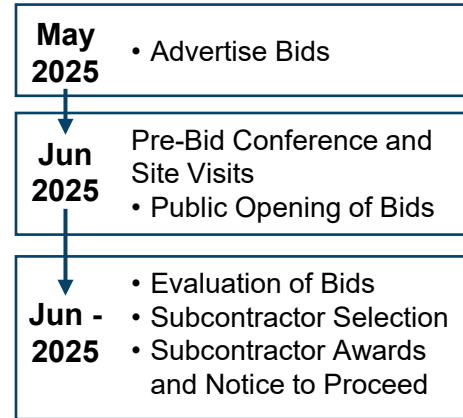
PHASE 1 Discovery Solutions Development (ESP Development)



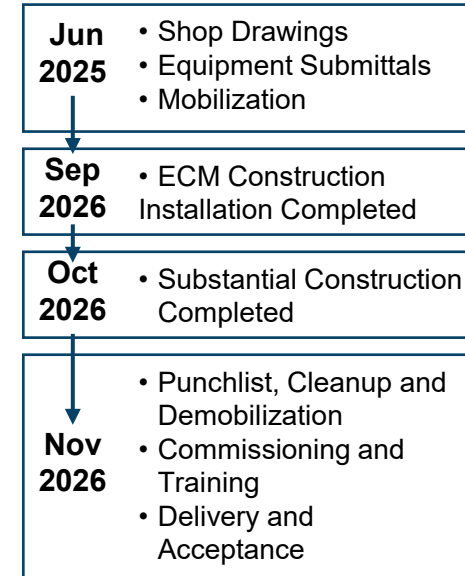
PHASE 2 ECM Design and Bid Development



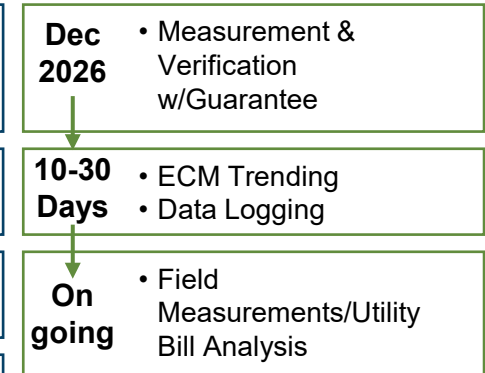
PHASE 3 Procurement



PHASE 4 Construction



PHASE 5 Performance/ Guarantee Period



REVIEW OF NEXT STEPS

- **LGEA Reports- Sample Quote Request- In Progress**
- **Solar PPA RFP – Being Reviewed**
- **3rd Party Review**
- **Board of Public Utilities Review**
- **Finalize Scope**
- **Upcoming Resolutions**
 - **Adopt the Energy Savings**
 - **Resolution to move forward with Municipal Lease Purchase or a Refunding Bond (Financial Advisor Recommendation)**
 - **Approve the Monroe ESIP Project for a not to exceed amount**
 - **Approve Updates to your Long-Range Facilities Plan**
 - **Approve Department of Education (DOE) Applications**

We will Guide you through the ESIP Process

THANK YOU

Additional Questions?

We at **Honeywell** look forward to helping **Monroe Township School District** develop your Energy Savings Improvement Project



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