

# Metuchen School District

*Energy Savings Improvement Program (ESIP)*

Overview

July 22<sup>nd</sup>, 2025

*What is the Energy Savings Improvement Program? |* **ESIP**

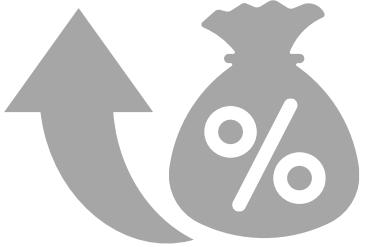
**ESIP** is a budget neutral financing mechanism that allows retrofitting public facilities with energy conservation measures without having to budget upfront for new capital investment.

[njcleanenergy.com](http://njcleanenergy.com)



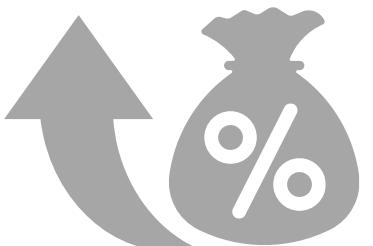


# OPTIONS FOR FUNDING CAPITAL IMPROVEMENTS



**BOND REFERENDUM**

.....  
**TAXPAYER IMPACT**



**LEASE PURCHASE**

.....  
**TAXPAYER IMPACT**



**ESIP**

.....  
**NO TAXPAYER IMPACT**

**ESIP is Funded by Energy Savings from the Installed  
Energy Conservation Measures (ECMs)**



# ENERGY SAVINGS IMPROVEMENT PROGRAM (ESIP) LEGISLATION

## P.L. 2009, c. 4 and P.L. 2012, c. 55

- Annual Savings must exceed all costs
- No Impact to Taxpayers
- Energy Savings Plan (ESP) must be reviewed by an independent 3<sup>rd</sup> Party
- Board of Public Utilities (BPU) Oversight
- Utilize Solar Savings
- 15 – 20 Year Terms
  - Lease Purchase Agreement
  - Refunding Bonds
- ECM Cost / Savings = Payback Period

Fund Upgrades through your Current Utility Spend



No Upfront Capital Costs



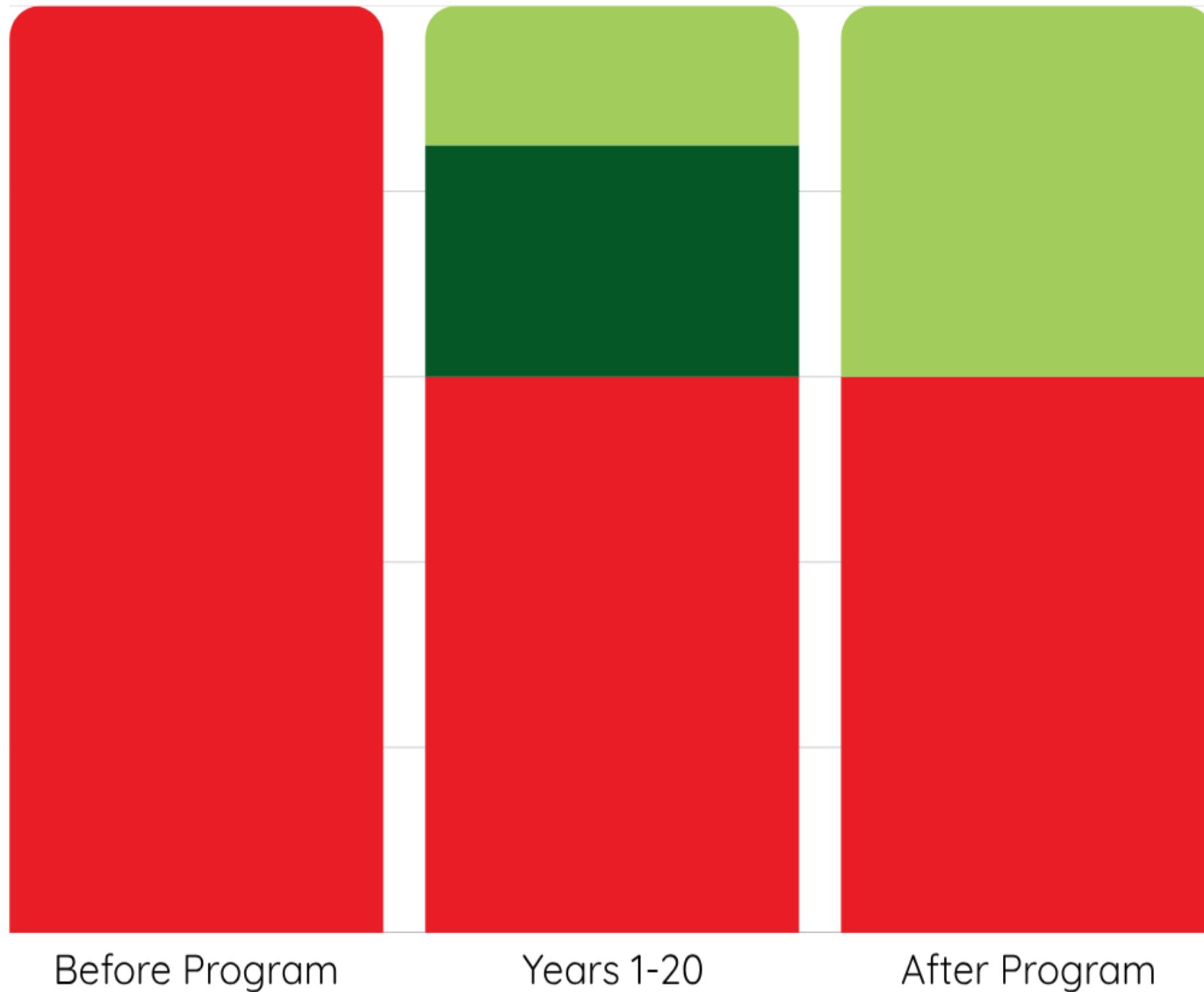
Budget Neutral Capital Improvements



Guaranteed Energy Savings



# ESIP BUDGET EXAMPLE



\*\*Reallocate funding from  
your electric and natural gas  
budget line items\*\*

Water, Oil, and Gasoline - *If applicable*

- Current Utility Spend
- Excess Positive Cash Flow
- Principal & Interest Payments

# **TYPICAL ENERGY CONSERVATION MEASURES**

## **Lighting System Upgrades**

- LED Lighting Upgrade – Retrofits and Flat Panels
- Exterior LED Site Lighting
- Lighting Controls
- Exit Sign LED Retrofit

## **HVAC & Mechanical Systems**

- HVAC System Replacements
- High-Efficiency Boilers or Furnaces Replacements
- Chiller Plant Replacement or Optimization
- Variable Frequency Drives (VFDs)
- Demand-Control Ventilation (DCV)
- Energy Recovery Ventilators (ERVs)
- Building Automation System (BAS) Upgrade
- Smart Thermostats & Occupancy Sensors
- Unit Ventilator Replacement (with Variable Refrigerant Flow – VRF)
- Destratification Fans
- Geothermal Heat Pump Systems
- Steam Trap Replacement

## **Renewable Energy Systems**

- Solar PV System Installation with roof restoration

## **Building Envelope**

- Roof Insulation & Air Sealing
- Window Replacement or Film Installation
- Weather Stripping & Door Seals
- Wall Insulation Improvements

## **Electrical & Power Systems**

- Energy-Efficient Transformers
- Power Factor Correction Equipment
- Plug Load Management Devices
- Advanced Energy Metering/Submetering

## **Water Conservation & Domestic Hot Water**

- Low-Flow Plumbing Fixtures (Aerators, Toilets, Faucets)
- Domestic Hot Water Heater Replacements
- Hot Water Pipe Insulation
- Irrigation System Efficiency Improvements
- Leak Detection and Monitoring Systems

## **Specialty Equipment & Systems**

- Kitchen Equipment Upgrades (Energy Star Rated)
- Commercial Refrigeration Improvements
- Server Room Cooling Optimization
- Pool Cover and Efficient Pool Heating

# Example ESIP Project Scenarios

**Budget Neutral Capital Improvements – Funded through Energy Savings**





# Energy Conservation Measure (ECM) Matrix

METUCHEN SCHOOL DISTRICT ECM MATRIX		Metuchen HS	Edgar MS	Campbell ES	Moss ES
ECM #	ECM DESCRIPTION				
1	LED Lighting Upgrades	✓	✓	✓	✓
2	Energy Management System Upgrades	✓	✓	✓	✓
3	Premium Efficiency Pump Motors and VFDs	✓	✓	✓	
4	Rooftop Unit Replacement		✓		
5	Pipe and Valve Insulation	✓	✓	✓	✓
6	HVAC Armor	✓	✓	✓	
7	Domestic Water Heater Replacement			✓	
8	Water Conservation	✓	✓	✓	
9	Building Envelope Weatherization	✓	✓	✓	✓
10	Plug Load Controls	✓	✓	✓	✓
11	eTemp Refrigeration Sensors	✓	✓	✓	✓
12	Retro-Commissioning	✓	✓	✓	✓
13	Solar Power Purchase Agreement	✓	✓	✓	✓
14	Roofing Upgrades	✓	✓	✓	✓
15	Combined Heating & Power	✓			
16	Window Film	✓	✓	✓	✓
17	Additon of Cooling - Rooftop Unit Installation	✓			



# Potential ESIP Project - Scenario #1

## METUCHEN SCHOOL DISTRICT ECM MATRIX

ECM #	ECM DESCRIPTION	Metuchen HS	Edgar MS	Campbell ES	Moss ES
1	LED Lighting Upgrades	✓	✓	✓	✓
2	Energy Management System Upgrades	✓	✓	✓	✓
3	Premium Efficiency Pump Motors and VFDs	✓	✓	✓	
4	Rooftop Unit Replacement		✓		
5	Pipe and Valve Insulation	✓	✓	✓	✓
6	HVAC Armor	✓	✓	✓	
7	Domestic Water Heater Replacement			✓	
8	Water Conservation	✓	✓	✓	
9	Building Envelope Weatherization	✓	✓	✓	✓
10	Plug Load Controls	✓	✓	✓	✓
11	eTemp Refrigeration Sensors	✓	✓	✓	✓
12	Retro-Commissioning	✓	✓	✓	✓
13	Solar Power Purchase Agreement	✓		✓	✓
14	Roofing Upgrades	✓	✓	✓	✓
15	Combined Heating & Power	✓			
16	Window Film	✓	✓	✓	✓
17	Additon of Cooling - Rooftop Unit Installation	✓			✓

## Key ECMS

- **LED Lighting Upgrades**
  - Flat Panel Lay-In Option
- **Solar PPA**
  - Rooftop Solar Array at Metuchen High School
  - Roofing Warranties to match the PPA term (15 years)
- **EMS Upgrades**
  - Expanded Controls and Controller Replacements
- **Rooftop Unit Replacement**
  - (3) RTU at Edgar MS - ~60 tons of Cooling
- **Rooftop Unit Replacement – Addition of Cooling at High School**
  - (5) Heating Only RTUs to Cooling/Heating RTUs - ~94 tons of Cooling
- **Roofing Upgrades**
  - Metuchen HS – full roof restoration
  - Moss ES – full roof restoration



# Potential ESIP Project - Scenario #1

**FORM VI**

**ESCO's PRELIMINARY ENERGY SAVINGS PLAN (ESP):  
ESCO's PRELIMINARY ANNUAL CASH FLOW ANALYSIS FORM  
METUCHEN SCHOOL DISTRICT - ENERGY SAVING IMPROVEMENT PROGRAM**

ESCO Name: <u>DCO Energy</u>	Miscellaneous Costs Financed:							
	Cost of Issuance      \$125,000							
	Total      \$125,000							
Note: Respondents must use the following assumptions in all financial calculations: (a) The cost of all types of energy should be assumed to inflate at <b>2.4% gas, 2.2% electric per year</b> . No other escalators will be permitted. 1. Term of Agreement: <b>20 Years</b> 2. Construction Period <sup>(2)</sup> (months): 24 Months 3. Cash Flow Analysis Format:								
Total Estimated Project Cost <sup>(1)</sup> : \$6,800,000								
Misc Costs Financed: \$125,000	Interest Rate: <b>4.00%</b>							
Financed Amount: \$6,925,000								
Year	Annual Energy Savings	Annual Operational Savings	Energy Rebates / Incentives	Solar Savings	Total Annual Savings	Annual Project Costs	Net Cash-Flow to Client	Cumulative Cash Flow
Installation (2 Years)	\$ 370,990				\$ 370,990	\$ (263,150)		\$ -
Year 1	\$ 279,777	\$ 36,247	\$ 426,988	\$ 110,064	\$ 853,076	\$ (956,607)	\$ 4,309	\$ 4,309
Year 2	\$ 285,978	\$ 36,247	\$ 426,988	\$ 111,987	\$ 861,200	\$ (856,890)	\$ 4,309	\$ 8,619
Year 3	\$ 292,317	\$ 19,269		\$ 113,943	\$ 425,530	\$ (421,220)	\$ 4,309	\$ 12,928
Year 4	\$ 298,798	\$ 19,269		\$ 115,934	\$ 434,002	\$ (429,692)	\$ 4,309	\$ 17,238
Year 5	\$ 305,425	\$ 19,269		\$ 117,959	\$ 442,654	\$ (438,344)	\$ 4,309	\$ 21,547
Year 6	\$ 312,201			\$ 120,020	\$ 432,220	\$ (427,911)	\$ 4,309	\$ 25,857
Year 7	\$ 319,128			\$ 122,116	\$ 441,244	\$ (436,935)	\$ 4,309	\$ 30,166
Year 8	\$ 326,211			\$ 124,249	\$ 450,459	\$ (446,150)	\$ 4,309	\$ 34,476
Year 9	\$ 333,452			\$ 126,419	\$ 459,871	\$ (455,561)	\$ 4,309	\$ 38,785
Year 10	\$ 340,856			\$ 128,626	\$ 469,482	\$ (465,172)	\$ 4,309	\$ 43,095
Year 11	\$ 348,426			\$ 130,872	\$ 479,298	\$ (474,988)	\$ 4,309	\$ 47,404
Year 12	\$ 356,165			\$ 133,157	\$ 489,322	\$ (485,013)	\$ 4,309	\$ 51,713
Year 13	\$ 364,078			\$ 135,481	\$ 499,560	\$ (495,250)	\$ 4,309	\$ 56,023
Year 14	\$ 372,169			\$ 137,846	\$ 510,015	\$ (505,706)	\$ 4,309	\$ 60,332
Year 15	\$ 380,441			\$ 140,252	\$ 520,694	\$ (516,384)	\$ 4,309	\$ 64,642
Year 16	\$ 388,899				\$ 388,899	\$ (384,589)	\$ 4,309	\$ 68,951
Year 17	\$ 397,546				\$ 397,546	\$ (393,237)	\$ 4,309	\$ 73,261
Year 18	\$ 406,388				\$ 406,388	\$ (402,078)	\$ 4,309	\$ 77,570
Year 19	\$ 415,427				\$ 415,427	\$ (411,118)	\$ 4,309	\$ 81,880
Year 20	\$ 424,670				\$ 424,670	\$ (420,360)	\$ 4,309	\$ 86,189
<b>Totals</b>	\$ 7,319,342	\$ 130,301	\$ 853,977	\$ 1,868,925	\$ 10,172,545	\$ (10,086,356)	\$ 86,189	

## Potential ESIP Project

Potential Annual Energy Cost Savings

**\$279,777**

Potential Annual Solar PPA Savings

**\$110,064**

Self-Funding Facility Improvements

**\$6,800,000**



# Potential ESIP Project - Scenario #2

## METUCHEN SCHOOL DISTRICT ECM MATRIX

ECM #	ECM DESCRIPTION	Metuchen HS	Edgar MS	Campbell ES	Moss ES
1	LED Lighting Upgrades	✓	✓	✓	✓
2	Energy Management System Upgrades	✓	✓	✓	✓
3	Premium Efficiency Pump Motors and VFDs	✓	✓	✓	
4	Rooftop Unit Replacement		✓		
5	Pipe and Valve Insulation	✓	✓	✓	✓
6	HVAC Armor	✓	✓	✓	
7	Domestic Water Heater Replacement			✓	
8	Water Conservation	✓	✓	✓	
9	Building Envelope Weatherization	✓	✓	✓	✓
10	Plug Load Controls	✓	✓	✓	✓
11	eTemp Refrigeration Sensors	✓	✓	✓	✓
12	Retro-Commissioning	✓	✓	✓	✓
13	Solar Power Purchase Agreement	✓	✓	✓	✓
14	Roofing Upgrades	✓	✓	✓	✓
15	Combined Heating & Power	✓			
16	Window Film	✓	✓	✓	✓
17	Additon of Cooling - Rooftop Unit Installation	✓			✓

## Key Measures

- **LED Lighting Upgrades**
  - Flat Panel Lay-In Option
- **Solar PPA**
  - Rooftop Solar Array at Metuchen High School
  - Roofing Warranties to match the PPA term (15 years)
- **EMS Upgrades**
  - Expanded Controls and Controller Replacements
- **Rooftop Unit Replacement**
  - (3) RTU at Edgar MS - ~60 tons of Cooling
- **Roofing Upgrades**
  - Metuchen HS - full roof restoration
  - Edgar MS - full roof restoration
  - Campbell ES - full roof restoration
  - Moss ES - full roof restoration



# Potential ESIP Project - Scenario #2

**FORM VI**

**ESCO's PRELIMINARY ENERGY SAVINGS PLAN (ESP):  
ESCO's PRELIMINARY ANNUAL CASH FLOW ANALYSIS FORM  
METUCHEN SCHOOL DISTRICT - ENERGY SAVING IMPROVEMENT PROGRAM**

ESCO Name:	DCO Energy							
Note: Respondents must use the following assumptions in all financial calculations: (a) The cost of all types of energy should be assumed to inflate at <b>2.4% gas, 2.2% electric per year</b> . No other escalators will be permitted.								
1. Term of Agreement:	<b>20 Years</b>							
2. Construction Period <sup>(2)</sup> (months):	24 Months							
3. Cash Flow Analysis Format:								
Total Estimated Project Cost <sup>(1)</sup> :	<b>\$6,813,030</b>							
Misc Costs Financed:	<b>\$125,000</b>							
Financed Amount:	<b>\$6,938,030</b>							
Year	Annual Energy Savings	Annual Operational Savings	Energy Rebates / Incentives	Solar Savings	Total Annual Savings	Annual Project Costs	Net Cash-Flow to Client	Cumulative Cash Flow
Installation (2 Years)	<b>\$ 371,323</b>				<b>\$ 371,323</b>	<b>\$ (263,645)</b>		<b>\$ -</b>
Year 1	<b>\$ 280,793</b>	<b>\$ 30,607</b>	<b>\$ 428,469</b>	<b>\$ 110,064</b>	<b>\$ 849,933</b>	<b>\$ (953,611)</b>	<b>\$ 4,000</b>	<b>\$ 4,000</b>
Year 2	<b>\$ 287,017</b>	<b>\$ 30,607</b>	<b>\$ 428,469</b>	<b>\$ 111,987</b>	<b>\$ 858,080</b>	<b>\$ (854,080)</b>	<b>\$ 4,000</b>	<b>\$ 8,000</b>
Year 3	<b>\$ 293,381</b>	<b>\$ 19,269</b>		<b>\$ 113,943</b>	<b>\$ 426,593</b>	<b>\$ (422,593)</b>	<b>\$ 4,000</b>	<b>\$ 12,000</b>
Year 4	<b>\$ 299,887</b>	<b>\$ 19,269</b>		<b>\$ 115,934</b>	<b>\$ 435,090</b>	<b>\$ (431,090)</b>	<b>\$ 4,000</b>	<b>\$ 16,000</b>
Year 5	<b>\$ 306,539</b>	<b>\$ 19,269</b>		<b>\$ 117,959</b>	<b>\$ 443,768</b>	<b>\$ (439,768)</b>	<b>\$ 4,000</b>	<b>\$ 20,000</b>
Year 6	<b>\$ 313,340</b>			<b>\$ 120,020</b>	<b>\$ 433,360</b>	<b>\$ (429,360)</b>	<b>\$ 4,000</b>	<b>\$ 24,000</b>
Year 7	<b>\$ 320,294</b>			<b>\$ 122,116</b>	<b>\$ 442,410</b>	<b>\$ (438,410)</b>	<b>\$ 4,000</b>	<b>\$ 28,000</b>
Year 8	<b>\$ 327,404</b>			<b>\$ 124,249</b>	<b>\$ 451,653</b>	<b>\$ (447,653)</b>	<b>\$ 4,000</b>	<b>\$ 32,000</b>
Year 9	<b>\$ 334,673</b>			<b>\$ 126,419</b>	<b>\$ 461,092</b>	<b>\$ (457,092)</b>	<b>\$ 4,000</b>	<b>\$ 36,000</b>
Year 10	<b>\$ 342,106</b>			<b>\$ 128,626</b>	<b>\$ 470,732</b>	<b>\$ (466,732)</b>	<b>\$ 4,000</b>	<b>\$ 40,000</b>
Year 11	<b>\$ 349,705</b>			<b>\$ 130,872</b>	<b>\$ 480,577</b>	<b>\$ (476,577)</b>	<b>\$ 4,000</b>	<b>\$ 44,000</b>
Year 12	<b>\$ 357,474</b>			<b>\$ 133,157</b>	<b>\$ 490,631</b>	<b>\$ (486,631)</b>	<b>\$ 4,000</b>	<b>\$ 48,000</b>
Year 13	<b>\$ 365,418</b>			<b>\$ 135,481</b>	<b>\$ 500,899</b>	<b>\$ (496,899)</b>	<b>\$ 4,000</b>	<b>\$ 52,000</b>
Year 14	<b>\$ 373,540</b>			<b>\$ 137,846</b>	<b>\$ 511,386</b>	<b>\$ (507,386)</b>	<b>\$ 4,000</b>	<b>\$ 56,000</b>
Year 15	<b>\$ 381,844</b>			<b>\$ 140,252</b>	<b>\$ 522,096</b>	<b>\$ (518,096)</b>	<b>\$ 4,000</b>	<b>\$ 60,000</b>
Year 16	<b>\$ 390,334</b>				<b>\$ 390,334</b>	<b>\$ (386,334)</b>	<b>\$ 4,000</b>	<b>\$ 64,000</b>
Year 17	<b>\$ 399,015</b>				<b>\$ 399,015</b>	<b>\$ (395,015)</b>	<b>\$ 4,000</b>	<b>\$ 68,000</b>
Year 18	<b>\$ 407,891</b>				<b>\$ 407,891</b>	<b>\$ (403,891)</b>	<b>\$ 4,000</b>	<b>\$ 72,000</b>
Year 19	<b>\$ 416,965</b>				<b>\$ 416,965</b>	<b>\$ (412,965)</b>	<b>\$ 4,000</b>	<b>\$ 76,000</b>
Year 20	<b>\$ 426,244</b>				<b>\$ 426,244</b>	<b>\$ (422,244)</b>	<b>\$ 4,000</b>	<b>\$ 80,000</b>
<b>Totals</b>	<b>\$ 7,345,188</b>	<b>\$ 119,021</b>	<b>\$ 856,938</b>	<b>\$ 1,868,925</b>	<b>\$ 10,190,072</b>	<b>\$ (10,110,072)</b>	<b>\$ 80,000</b>	

## Potential ESIP Project

Potential Annual Energy Cost Savings

**\$280,793**

Potential Annual Solar PPA Savings

**\$110,064**

Self-Funding Facility Improvements

**\$6,813,000**



# Potential ESIP Project - Scenario #3

## METUCHEN SCHOOL DISTRICT ECM MATRIX

ECM #	ECM DESCRIPTION	Metuchen HS	Edgar MS	Campbell ES	Moss ES
1	LED Lighting Upgrades	✓	✓	✓	✓
2	Energy Management System Upgrades	✓	✓	✓	✓
3	Premium Efficiency Pump Motors and VFDs	✓	✓	✓	
4	Rooftop Unit Replacement		✓		
5	Pipe and Valve Insulation	✓	✓	✓	✓
6	HVAC Armor	✓	✓	✓	
7	Domestic Water Heater Replacement			✓	
8	Water Conservation	✓	✓	✓	
9	Building Envelope Weatherization	✓	✓	✓	✓
10	Plug Load Controls	✓	✓	✓	✓
11	eTemp Refrigeration Sensors	✓	✓	✓	✓
12	Retro-Commissioning	✓	✓	✓	✓
13	Solar Power Purchase Agreement	✓	✓	✓	✓
14	Roofing Upgrades	✓	✓	✓	✓
15	Combined Heating & Power	✓			
16	Window Film	✓	✓	✓	✓
17	Additon of Cooling - Rooftop Unit Installation	✓			✓

## Key Measures

- **LED Lighting Upgrades**
  - Flat Panel Lay-In Option
- **Solar PPA**
  - **Rooftop Solar Array at Metuchen High School**
  - **Roofing Warranties to match the PPA term (15 years)**
- **EMS Upgrades**
  - Expanded Controls and Controller Replacements
- **Rooftop Unit Replacement**
  - (2) RTU at Edgar MS - ~50 tons of Cooling
- **Roofing Upgrades**
  - Metuchen HS - full roof restoration
  - Edgar MS - full roof restoration
  - Campbell ES - full roof restoration
  - Moss ES - full roof restoration



# Potential ESIP Project - Scenario #3

FORM VI ESCO's PRELIMINARY ENERGY SAVINGS PLAN (ESP): ESCO's PRELIMINARY ANNUAL CASH FLOW ANALYSIS FORM METUCHEN SCHOOL DISTRICT - ENERGY SAVING IMPROVEMENT PROGRAM																								
<p>ESCO Name: DCO Energy</p> <p>Note: Respondents must use the following assumptions in all financial calculations:          (a) The cost of all types of energy should be assumed to inflate at <b>2.4% gas, 2.2% electric per year</b>. No other escalators will be permitted.</p> <p>1. Term of Agreement: <b>20 Years</b></p> <p>2. Construction Period <sup>(2)</sup> (months): 24 Months</p> <p>3. Cash Flow Analysis Format:</p>																								
<table border="1"> <thead> <tr> <th colspan="2">Miscellaneous Costs Financed:</th> </tr> </thead> <tbody> <tr> <td>Cost of Issuance</td> <td>\$125,000</td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td>Total</td> <td>\$125,000</td> </tr> </tbody> </table>									Miscellaneous Costs Financed:		Cost of Issuance	\$125,000											Total	\$125,000
Miscellaneous Costs Financed:																								
Cost of Issuance	\$125,000																							
Total	\$125,000																							
<p>Total Estimated Project Cost<sup>(1)</sup>: <b>\$6,639,316</b></p> <p>Misc Costs Financed: <b>\$125,000</b></p> <p>Financed Amount: <b>\$6,764,316</b></p> <p>Interest Rate: <b>4.00%</b></p>																								
Year	Annual Energy Savings	Annual Operational Savings	Energy Rebates / Incentives	Solar Savings	Total Annual Savings	Annual Project Costs	Net Cash-Flow to Client	Cumulative Cash Flow																
Installation (2 Years)	<b>\$ 369,967</b>				<b>\$ 369,967</b>	<b>\$ (257,044)</b>		<b>\$ -</b>																
Year 1	<b>\$ 279,437</b>	<b>\$ 29,689</b>	<b>\$ 425,642</b>	<b>\$ 110,064</b>	<b>\$ 844,832</b>	<b>\$ (942,756)</b>	<b>\$ 15,000</b>	<b>\$ 15,000</b>																
Year 2	<b>\$ 285,631</b>	<b>\$ 29,689</b>	<b>\$ 425,642</b>	<b>\$ 111,987</b>	<b>\$ 852,950</b>	<b>\$ (837,950)</b>	<b>\$ 15,000</b>	<b>\$ 30,000</b>																
Year 3	<b>\$ 291,965</b>	<b>\$ 19,269</b>		<b>\$ 113,943</b>	<b>\$ 425,177</b>	<b>\$ (410,177)</b>	<b>\$ 15,000</b>	<b>\$ 45,000</b>																
Year 4	<b>\$ 298,440</b>	<b>\$ 19,269</b>		<b>\$ 115,934</b>	<b>\$ 433,643</b>	<b>\$ (418,643)</b>	<b>\$ 15,000</b>	<b>\$ 60,000</b>																
Year 5	<b>\$ 305,060</b>	<b>\$ 19,269</b>		<b>\$ 117,959</b>	<b>\$ 442,288</b>	<b>\$ (427,288)</b>	<b>\$ 15,000</b>	<b>\$ 75,000</b>																
Year 6	<b>\$ 311,829</b>			<b>\$ 120,020</b>	<b>\$ 431,849</b>	<b>\$ (416,849)</b>	<b>\$ 15,000</b>	<b>\$ 90,000</b>																
Year 7	<b>\$ 318,749</b>			<b>\$ 122,116</b>	<b>\$ 440,865</b>	<b>\$ (425,865)</b>	<b>\$ 15,000</b>	<b>\$ 105,000</b>																
Year 8	<b>\$ 325,825</b>			<b>\$ 124,249</b>	<b>\$ 450,074</b>	<b>\$ (435,074)</b>	<b>\$ 15,000</b>	<b>\$ 120,000</b>																
Year 9	<b>\$ 333,060</b>			<b>\$ 126,419</b>	<b>\$ 459,478</b>	<b>\$ (444,478)</b>	<b>\$ 15,000</b>	<b>\$ 135,000</b>																
Year 10	<b>\$ 340,456</b>			<b>\$ 128,626</b>	<b>\$ 469,083</b>	<b>\$ (454,083)</b>	<b>\$ 15,000</b>	<b>\$ 150,000</b>																
Year 11	<b>\$ 348,019</b>			<b>\$ 130,872</b>	<b>\$ 478,891</b>	<b>\$ (463,891)</b>	<b>\$ 15,000</b>	<b>\$ 165,000</b>																
Year 12	<b>\$ 355,752</b>			<b>\$ 133,157</b>	<b>\$ 488,908</b>	<b>\$ (473,908)</b>	<b>\$ 15,000</b>	<b>\$ 180,000</b>																
Year 13	<b>\$ 363,657</b>			<b>\$ 135,481</b>	<b>\$ 499,139</b>	<b>\$ (484,139)</b>	<b>\$ 15,000</b>	<b>\$ 195,000</b>																
Year 14	<b>\$ 371,741</b>			<b>\$ 137,846</b>	<b>\$ 509,587</b>	<b>\$ (494,587)</b>	<b>\$ 15,000</b>	<b>\$ 210,000</b>																
Year 15	<b>\$ 380,005</b>			<b>\$ 140,252</b>	<b>\$ 520,257</b>	<b>\$ (505,257)</b>	<b>\$ 15,000</b>	<b>\$ 225,000</b>																
Year 16	<b>\$ 388,455</b>				<b>\$ 388,455</b>	<b>\$ (373,455)</b>	<b>\$ 15,000</b>	<b>\$ 240,000</b>																
Year 17	<b>\$ 397,094</b>				<b>\$ 397,094</b>	<b>\$ (382,094)</b>	<b>\$ 15,000</b>	<b>\$ 255,000</b>																
Year 18	<b>\$ 405,928</b>				<b>\$ 405,928</b>	<b>\$ (390,928)</b>	<b>\$ 15,000</b>	<b>\$ 270,000</b>																
Year 19	<b>\$ 414,959</b>				<b>\$ 414,959</b>	<b>\$ (399,959)</b>	<b>\$ 15,000</b>	<b>\$ 285,000</b>																
Year 20	<b>\$ 424,193</b>				<b>\$ 424,193</b>	<b>\$ (409,193)</b>	<b>\$ 15,000</b>	<b>\$ 300,000</b>																
<b>Totals</b>	<b>\$ 7,310,223</b>	<b>\$ 117,185</b>	<b>\$ 851,285</b>	<b>\$ 1,868,925</b>	<b>\$ 10,147,619</b>	<b>\$ (9,847,619)</b>	<b>\$ 300,000</b>																	

## Potential ESIP Project

Potential Annual Energy Cost Savings  
**\$279,437**

Potential Annual Solar PPA Savings  
**\$110,064**

Self-Funding Facility Improvements  
**\$6,639,316**



# Solar Potential

## METUCHEN PS - SOLAR PPA RATES & SAVINGS

BUILDING	MOUNTING CATEGORY	PROPOSED CAPCAITY (kW)	PROPOSED GENERATION (KWh)	\$\$/kWh RATES		1ST YEAR COST SAVINGS (\$)
				UTILITY	SOLAR PPA	
Metuchen High School	Roof	672.2	806,668	\$0.158	\$0.040	\$110,064
Edgar Middle School	Roof	0	0	\$0.155	\$0.040	\$0
Campbell Elementary School	Roof	0	0	\$0.143	\$0.040	\$0
Moss Elementary School	Roof	0	0	\$0.155	\$0.040	\$0
TOTAL		672.2	806,668			\$110,064

## METUCHEN PS - SOLAR PPA RATES & SAVINGS

BUILDING	MOUNTING CATEGORY	PROPOSED CAPCAITY (kW)	PROPOSED GENERATION (KWh)	\$\$/kWh RATES		1ST YEAR COST SAVINGS (\$)
				UTILITY	SOLAR PPA	
Metuchen High School	Roof	672.2	806,668	\$0.158	\$0.040	\$110,064
Edgar Middle School	Roof	322.4	380,457	\$0.155	\$0.040	\$50,651
Campbell Elementary School	Roof	492.0	580,589	\$0.143	\$0.040	\$69,575
Moss Elementary School	Roof	166.4	196,334	\$0.155	\$0.040	\$26,006
TOTAL		1,653.1	1,964,047			\$256,296

## Solar PPA – Roof Mounted Opportunity

- **Based on recent Solar PPA bid results (current pricing)**
  - Capacity, Generation and proposed public bid rate per kWh
- **Confirmed against PSEG Solar Suitability Interconnection Maps**
  - Edgar MS, Campbell ES & Moss ES are located on restricted circuits as of May of 2025 – no Solar PV opportunity available at this present time

## Solar PPA – Roof Mounted Opportunity

- **Based on recent Solar PPA bid results (current pricing)**
  - Capacity, Generation and proposed public bid rate per kWh
- **PSEG Solar Suitability Interconnection Maps**
  - Assumes all circuits are available with no capacity limitations



# ESIP DIY Process

## Local Government Energy Audit (LGEA)

(4 – 18 Months)

- Submit LGEA Application to [LGEA@NJCleanEnergy.com](mailto:LGEA@NJCleanEnergy.com) OR Utilize PSE&G Program (Eng. Sol.)
- Provide Building Data & 14 Months of Utility Data
- 4-18 Months for TRC or Trade Ally to complete LGEA (length depends on queue)

## Award IGA to AOR/EOR in Partnership with ESCO

(1 BOE Meeting)

- BOE awards and authorizes AOR/EOR to move forward with Investment Grade Audit (IGA)

## Investment Grade Audit (IGA)

(3-6 Months)

- 3-6 Month in-depth analysis of facilities
- Evaluate/RFP a Solar Power Purchase Agreement (PPA)
- Propose Energy Conservation Measures (ECMs), Financial Analysis, and Energy Savings

## Energy Savings Plan (ESP)

(1-2 Month Review Period)

- Select a self-funding Scope of Work from IGA to be implemented
- ESP must be approved by independent 3<sup>rd</sup> Party Verifier and NJ BPU

## Financing and Design

(2 – 6 Months)

- After all approvals, financing is closed, and BOE provides approval: Design and Implementation begins
- Procurement of Subcontractors must follow 18A (Public Bid, Co-ops, and professional services)