



Paulsboro BOE ESIP

IGA Report - Final
October 30, 2023





ESIP Project Financials

ESIP ECM Cost and Savings

ESIP Project Cash Flow

ECM Matrix

Next Steps – Finalizing the IGA

Comments / Questions

Life Is On



20-Year ESIP Project - Financials

Total Project Value = \$8,601,397

Funding Sources:

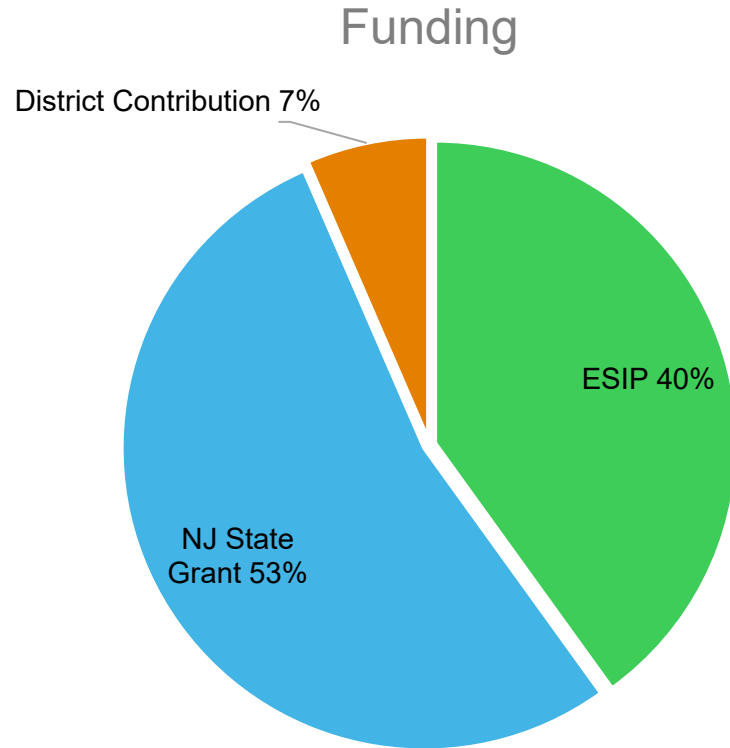
ESIP (Energy Savings) = \$3.44M

NJ State Grant = \$4.6M

District Contribution = \$560k

1st Year Savings:

- Utility = \$202,970
- O&M = \$ 20,468



ESIP Project – ECM Cost & Savings

FORM II

**ESCO's PRELIMINARY ENERGY SAVINGS PLAN (ESP):
ENERGY CONSERVATION MEASURES (ECMs) SUMMARY FORM
PAULSBORO PUBLIC SCHOOLS
ENERGY SAVINGS IMPROVEMENT PROGRAM**

ESCO Name: Schneider Electric

Proposed Preliminary Energy Savings Plan: ECMs		Estimated Installed Hard Costs ¹ (\$)	Estimated Annual Savings (\$)
Efficiency			
1	LED Lighting - Interior & Exterior	\$ 134,959	\$ 26,730
2	Building Envelope & Insulation	\$ 169,670	\$ 11,810
3	Vending Machine Controls & Low Flow HW Devices	\$ 2,985	\$ 1,064
HVAC & BAS			
4	New Unit Ventilators (DX Cooling) + Optimize BAS Controls	\$ 5,736,208	\$ 73,017
5	Replace Boilers & Air/Dirt Separators	\$ 115,511	\$ 29,034
6	Advanced Air Purification	\$ 347,590	\$ 49,198
Infrastructure			
7	Combined Heat & Power (CHP)	\$ 186,771	\$ 2,938

Project Summary: \$ 6,693,694 \$ 193,791

ESIP Project – Project Cash Flow

ESCO Name: Schneider Electric

Note: This energy savings plan is based on the following assumptions in all financial calculations:

(a) The cost of all types of energy should be assumed to inflate at **2.4% gas, 2.2% electric** per year.



1. Term of Agreement: 20 years
2. Construction Period ⁽²⁾ (months): 18 months
3. Cash Flow Analysis Format:

Cost of Construction ⁽¹⁾: \$ 8,601,397
 SSB-VEEVR Funding: \$ 4,596,442
 District Contribution: \$ 560,000
 Total To Be Financed: \$ 3,444,955

Interest Rate: 4.65%

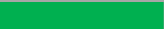
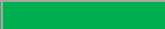
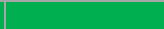
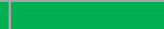










Year	Annual Electric Savings	Annual Natural Gas Savings	Annual Distributed Gen. Savings	Annual Operational Savings	Energy Rebates / Incentives	Total Annual Savings	Annual Project Costs	Annual Service Costs ⁽³⁾	Board Costs	Net Cash-Flow to Client	Cumulative Cash Flow
Installation	\$ 49,794	\$ 125,172	\$ 2,632			\$ 177,599					\$ -
1	\$ 56,908	\$ 143,054	\$ 3,008	\$ 20,468	\$ 145,193	\$ 368,630	\$ 522,056	\$ 21,173	\$ 543,229	\$ 3,000	\$ 3,000
2	\$ 58,160	\$ 146,487	\$ 3,074	\$ 20,468		\$ 228,189	\$ 214,577	\$ 10,612	\$ 225,189	\$ 3,000	\$ 6,000
3	\$ 59,439	\$ 150,003	\$ 3,142	\$ 4,668		\$ 217,252	\$ 214,252	\$ -	\$ 214,252	\$ 3,000	\$ 9,000
4	\$ 60,747	\$ 153,603	\$ 3,211	\$ 4,668		\$ 222,229	\$ 219,229	\$ -	\$ 219,229	\$ 3,000	\$ 12,000
5	\$ 62,083	\$ 157,289	\$ 3,282	\$ 4,668		\$ 227,322	\$ 224,322	\$ -	\$ 224,322	\$ 3,000	\$ 15,000
6	\$ 63,449	\$ 161,064	\$ 3,354	\$ -		\$ 227,867	\$ 224,867	\$ -	\$ 224,867	\$ 3,000	\$ 18,000
7	\$ 64,845	\$ 164,930	\$ 3,428	\$ -		\$ 233,203	\$ 230,203	\$ -	\$ 230,203	\$ 3,000	\$ 21,000
8	\$ 66,271	\$ 168,888	\$ 3,503	\$ -		\$ 238,663	\$ 235,663	\$ -	\$ 235,663	\$ 3,000	\$ 24,000
9	\$ 67,729	\$ 172,941	\$ 3,580	\$ -		\$ 244,251	\$ 241,251	\$ -	\$ 241,251	\$ 3,000	\$ 27,000
10	\$ 69,219	\$ 177,092	\$ 3,659	\$ -		\$ 249,971	\$ 246,971	\$ -	\$ 246,971	\$ 3,000	\$ 30,000
11	\$ 70,742	\$ 181,342	\$ 3,740	\$ -		\$ 255,824	\$ 252,824	\$ -	\$ 252,824	\$ 3,000	\$ 33,000
12	\$ 72,299	\$ 185,694	\$ 3,822	\$ -		\$ 261,815	\$ 258,815	\$ -	\$ 258,815	\$ 3,000	\$ 36,000
13	\$ 73,889	\$ 190,151	\$ 3,906	\$ -		\$ 267,946	\$ 264,946	\$ -	\$ 264,946	\$ 3,000	\$ 39,000
14	\$ 75,515	\$ 194,715	\$ 3,992	\$ -		\$ 274,221	\$ 271,221	\$ -	\$ 271,221	\$ 3,000	\$ 42,000
15	\$ 77,176	\$ 199,388	\$ 4,080	\$ -		\$ 280,644	\$ 277,644	\$ -	\$ 277,644	\$ 3,000	\$ 45,000
16	\$ 78,874	\$ 204,173	\$ 4,169	\$ -		\$ 287,217	\$ 284,217	\$ -	\$ 284,217	\$ 3,000	\$ 48,000
17	\$ 80,609	\$ 209,073	\$ 4,261	\$ -		\$ 293,944	\$ 290,944	\$ -	\$ 290,944	\$ 3,000	\$ 51,000
18	\$ 82,383	\$ 214,091	\$ 4,355	\$ -		\$ 300,829	\$ 297,829	\$ -	\$ 297,829	\$ 3,000	\$ 54,000
19	\$ 84,195	\$ 219,229	\$ 4,451	\$ -		\$ 307,875	\$ 304,875	\$ -	\$ 304,875	\$ 3,000	\$ 57,000
20	\$ 86,047	\$ 224,491	\$ 4,549	\$ -		\$ 315,087	\$ 289,097	\$ -	\$ 289,097	\$ 25,990	\$ 82,990
Totals	\$ 1,460,374	\$ 3,742,873	\$ 77,199	\$ 54,940	\$ 145,193	\$ 5,480,578	\$ 5,365,804	\$ 31,785	\$ 5,397,589	\$ 82,990	

ECM Matrix










Legend	
Included ECMs	
Non-ESIP Project - Energy Savings or Baseline Adj.	

ECM Matrix	Jr.Sr HS	Loudenslager	Billingsport	BOE	Garage
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Efficiency

LED Lighting - Interior & Exterior					
Building Envelope & Weatherization					
HW Pipe Insulation					
Low Flow Hot Water Devices					
Vending Machine Controls					

Comfort & IAQ

Replace UVs w/ DX Cooling UVs					
Install Condensing Boilers & Air/Dirt Separators					
Enhanced Air Purification - Bi-Polar Ionization					
Building Exhaust System Upgrade					










Building Automation Systems

Optimize BAS/HVAC Controls					
Demand Controlled Ventilation					

Infrastructure

Micro CHP Boiler					
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Customer-Driven Projects

LED Lighting - Albright					
Replace Steam Heating & DHW Plants					
Replace Auditorium AHUs					
Replace Gym AHUs - Add Cooling					

Offsite Solar PV Scope:

- Had to be dropped from ESIP due to solar developer being unable to build PV system according to NJ BPU & ACE regulations.

Next Steps – Finalizing the Investment Grade Audit (IGA)

- ✓ 3rd party review of Energy Savings Plan (ESP)
- Project Financing...
- NJBPU review of ESP (In Progress)
- District approval of final ESIP project and contract signing
- Construction starts 1-2 months after contract is signed

Life Is On



Schneider
Electric

