

# New Jersey's Clean Energy Program

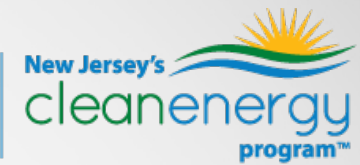
LGEA Exit Meeting for:  
*Salem County*

TRC Energy Services

February 13, 2019

# Introductions

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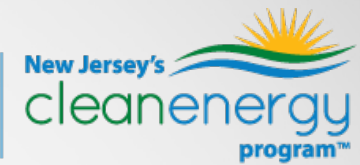


## *Salem County*

- Kelly Hannigan – CFO & Treasurer
- Benjamin Laury – Freeholder
- Scott Griscom – Freeholder
- Gordon Ostrum – Freeholder
- Charles Hassler – Freeholder
- Lee Ware – Freeholder
- Jeffrey Ridgway – County Administrator
- Debby Turner-Fox – Purchasing Agent
- Barbara Banks – Purchasing Assistant

# Introductions (cont.)

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## *NJ Clean Energy Program*

- Brian DeLuca, CEM – TRC Program Manager
- Alex Klieverik – TRC Auditor
- Sarah Walters– LGEA Account Manager
- Gary Finger – Outreach Account Manager
- Mike Thulen – ESIP Coordinator

# Agenda

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- The audit process overview
- Energy use & existing conditions
- Review of **E**nergy **C**onservation **M**easures (ECMs) identified
- Questions or concerns regarding the draft audit report
- Overview of NJCEP equipment incentives
- Next steps for Salem County

# LGEA Process

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- Application Approval
- Scheduling Call
- Audit
- Benchmarking & Analysis
- Draft Report
- Exit Meeting Presentation
- Final Report

# Site Visit and Utility Analysis



## Overview of Systems, Baseline & Existing Conditions:

- Building Envelope
- Lighting System
- HVAC and Mechanical Systems
- Plug Load Equipment

## Utility Consumption:

- Electric Consumption and Costs
- Natural Gas Consumption and Costs

## Sites Visited/Analyzed

- Mosquito Commission Office Building
- Prosecutors Modular Office
- Public Works Garage
- Emergency Services/911 Building
- Jail
- Agricultural Complex
- Salem County Board of Social Services
- Maintenance Shop
- Fenwick Building
- New Courthouse
- Johnson Building
- County Office Building aka White Building
- Administrative Building
- Old Courthouse
- 5th Street Complex
- Camp Crockett, Vo-Tech Pump Station, & Water Tower

# Benchmarking



## Mosquito Commission Office Building

**ENERGY STAR® Statement of Energy Performance**

# 52

**ENERGY STAR® Score<sup>1</sup>**

**Salem County Mosquito Commission**

**Primary Property Type:** Office  
**Gross Floor Area (ft²):** 10,338  
**Built:** 1980

**For Year Ending:** July 31, 2017  
**Date Generated:** December 17, 2018

1. The ENERGY STAR score is a 1-100 assessment of a building's energy efficiency as compared with similar buildings nationwide, adjusting for climate and business activity.

**Property & Contact Information**

<b>Property Address</b> Salem County Mosquito Commission 900 Route 45 Pilesgrove, New Jersey 08079	<b>Property Owner</b> County of Salem 110 Fifth Street, Suite 400 Salem, NJ 08079 856-935-7510	<b>Primary Contact</b> Debby Turner 110 Fifth Street, Suite 400 Salem, NJ 08079 856-935-7510 Ext. 8601 Debby.Turner-Fox@salemcountynj.gov
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**Property ID:** 6667560

**Energy Consumption and Energy Use Intensity (EUI)**

<b>Site EUI</b> 49.1 kBtu/ft²	<b>Annual Energy by Fuel</b> Fuel Oil (No. 2) (kBtu) 348,050 (69%) Electric - Grid (kBtu) 159,586 (31%)	<b>National Median Comparison</b> National Median Site EUI (kBtu/ft²) 50.4 National Median Source EUI (kBtu/ft²) 79.3 % Diff from National Median Source EUI -3% <b>Annual Emissions</b> Greenhouse Gas Emissions (Metric Tons CO2e/year) 42
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**Source EUI**  
77.2 kBtu/ft²

**Signature & Stamp of Verifying Professional**

I \_\_\_\_\_ (Name) verify that the above information is true and correct to the best of my knowledge.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Licensed Professional**

\_\_\_\_\_  
 ( ) - \_\_\_\_\_

**Professional Engineer Stamp**  
(if applicable)

Building Name	ENERGY STAR Score
Mosquito Commission Office Building	52
Prosecutors Modular Office	19
Public Works Garage	N/A
Emergency Services/911 Building	N/A
Jail	N/A
Agricultural Complex	11
Salem County Board of Social Services	84
Maintenance Shop	N/A
Fenwick Building	60

ENERGY STAR Scores are percentile ranking from 1 (least efficient) to 100 (most efficient). It compares your building's energy performance to similar buildings nationwide.

# Benchmarking



## County Jail

**ENERGY STAR® Statement of Energy Performance**

# N/A

**Salem County Correctional Facility**

Primary Property Type: Prison/Incarceration  
Gross Floor Area (ft²): 99,594  
Built: 1993

For Year Ending: June 30, 2017  
Date Generated: December 18, 2018

ENERGY STAR® Score<sup>1</sup>

1. The ENERGY STAR score is a 1-100 assessment of a building's energy efficiency as compared with similar buildings nationwide, adjusting for climate and business activity.

**Property & Contact Information**

<b>Property Address</b> Salem County Correctional Facility 125 Cemetery Road Pilesgrove, New Jersey 08098	<b>Property Owner</b> County of Salem 110 Fifth Street, Suite 400 Salem, NJ 08079 856-935-7510	<b>Primary Contact</b> Debby Turner 110 Fifth Street, Suite 400 Salem, NJ 08079 856-935-7510 Ext. 8601 Debby.Turner-Fox@salemcountynj.gov
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Property ID: 6667564

**Energy Consumption and Energy Use Intensity (EUI)**

<b>Site EUI</b> 170.4 kBtu/ft²	<b>Annual Energy by Fuel</b> Electric - Grid (kBtu) 8,417,540 (50%) Natural Gas (kBtu) 8,556,971 (50%)	<b>National Median Comparison</b> National Median Site EUI (kBtu/ft²) 81.5 National Median Source EUI (kBtu/ft²) 158.4 % Diff from National Median Source EUI 109%
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<b>Source EUI</b> 326.9 kBtu/ft²	<b>Annual Emissions</b> Greenhouse Gas Emissions (Metric Tons CO2e/year) 1,307
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**Signature & Stamp of Verifying Professional**

I \_\_\_\_\_ (Name) verify that the above information is true and correct to the best of my knowledge.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Licensed Professional

\_\_\_\_\_  
( ) \_\_\_\_\_

Professional Engineer Stamp  
(if applicable)

Building Name	ENERGY STAR Score
New Courthouse	20
Johnson Building	50
County Office Building aka White Building	82
Administrative Building	34
Old Courthouse	62
5th Street Complex	52
Camp Crockett, Vo-Tech Pump Station, & Water Tower	N/A

ENERGY STAR Scores are percentile ranking from 1 (least efficient) to 100 (most efficient). It compares your building's energy performance to similar buildings nationwide.



# All Opportunities



Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Natural Gas Savings (MMBtu)	Annual Fuel 2 Savings (MMBtu)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO <sub>2</sub> e Emissions Reduction (lbs)
<b>Lighting Upgrades</b>	1,138,670	274.0	-194.4	-12.1	-206.5	\$171,720.81	\$631,691.90	\$106,693.00	\$524,998.90	3.1	1,121,887
Install LED Fixtures	337,254	56.1	-34.4	-1.6	-36.1	\$55,692.13	\$343,078.20	\$45,760.00	\$297,318.20	5.3	335,315
Retrofit Fluorescent Fixtures with LED Lamps and Drivers	359,629	88.3	-72.1	-5.9	-78.0	\$51,260.11	\$108,694.50	\$16,816.00	\$91,878.50	1.8	352,733
Retrofit Fixtures with LED Lamps	441,755	129.6	-87.9	-4.6	-92.4	\$64,762.79	\$179,846.78	\$44,117.00	\$135,729.78	2.1	433,809
Install LED Exit Signs	32	0.0	0.0	0.0	0.0	\$5.78	\$72.42	\$0.00	\$72.42	12.5	31
<b>Lighting Control Measures</b>	100,392	29.3	-19.9	-1.4	-21.3	\$15,070.17	\$114,270.00	\$13,635.00	\$100,635.00	6.7	98,539
Install Occupancy Sensor Lighting Controls	93,156	27.2	-18.4	-1.4	-19.8	\$13,979.87	\$105,070.00	\$12,480.00	\$92,590.00	6.6	91,427
Install High/Low Lighting Controls	7,236	2.1	-1.5	0.0	-1.5	\$1,090.30	\$9,200.00	\$1,155.00	\$8,045.00	7.4	7,112
<b>Motor Upgrades</b>	7,087	2.5	0.0	0.0	0.0	\$950.42	\$60,931.18	\$0.00	\$60,931.18	64.1	7,137
Premium Efficiency Motors	7,087	2.5	0.0	0.0	0.0	\$950.42	\$60,931.18	\$0.00	\$60,931.18	64.1	7,137
<b>Variable Frequency Drive (VFD) Measures</b>	153,065	42.5	0.0	0.0	0.0	\$20,869.15	\$166,271.32	\$8,900.00	\$157,371.32	7.5	154,135
Install VFDs on Constant Volume (CV) Fans	66,114	29.0	0.0	0.0	0.0	\$8,606.19	\$114,730.07	\$8,000.00	\$106,730.07	12.4	66,576
Install VFDs on Chilled Water Pumps	42,236	8.0	0.0	0.0	0.0	\$6,228.48	\$23,789.70	\$0.00	\$23,789.70	3.8	42,532
Install VFDs on Heating Water Pumps	40,364	5.8	0.0	0.0	0.0	\$5,396.27	\$22,557.10	\$0.00	\$22,557.10	4.2	40,647
Install VFDs on Cooling Tower Fans	4,350	-0.4	0.0	0.0	0.0	\$638.21	\$5,194.45	\$900.00	\$4,294.45	6.7	4,380
<b>Electric Unitary HVAC Measures</b>	99,576	37.9	0.0	0.0	0.0	\$14,260.07	\$339,378.32	\$17,394.36	\$321,983.96	22.6	100,272
Install High Efficiency Air Conditioning Units	94,467	36.9	0.0	0.0	0.0	\$13,296.98	\$317,338.17	\$16,628.00	\$300,710.17	22.6	95,128
Install High Efficiency Heat Pumps	5,109	1.1	0.0	0.0	0.0	\$963.09	\$22,040.15	\$766.36	\$21,273.79	22.1	5,144
<b>Electric Chiller Replacement</b>	111,780	49.9	0.0	0.0	0.0	\$16,399.69	\$136,767.15	\$7,740.00	\$129,027.15	7.9	112,562
Install High Efficiency Chillers	111,780	49.9	0.0	0.0	0.0	\$16,399.69	\$136,767.15	\$7,740.00	\$129,027.15	7.9	112,562
<b>Gas Heating (HVAC/Process) Replacement</b>	0	0.0	1,137.5	26.0	1,163.5	\$12,840.85	\$282,417.10	\$30,005.50	\$252,411.60	19.7	137,439
Install High Efficiency Hot Water Boilers	0	0.0	979.6	0.0	979.6	\$10,631.05	\$246,315.83	\$26,410.50	\$219,905.33	20.7	114,693
Install High Efficiency Steam Boilers	0	0.0	86.3	0.0	86.3	\$987.52	\$14,364.93	\$395.00	\$13,969.93	14.1	10,099
Install High Efficiency Furnaces	0	0.0	46.9	26.0	73.0	\$915.76	\$17,060.97	\$3,200.00	\$13,860.97	15.1	9,753
Install High Efficiency Unit Heaters	0	0.0	24.7	0.0	24.7	\$306.52	\$4,675.37	\$0.00	\$4,675.37	15.3	2,893
<b>HVAC System Improvements</b>	10,453	0.0	207.4	0.0	207.4	\$3,642.50	\$17,672.46	\$0.00	\$17,672.46	4.9	34,806
Implement Demand Control Ventilation (DCV)	10,453	0.0	207.4	0.0	207.4	\$3,642.50	\$17,672.46	\$0.00	\$17,672.46	4.9	34,806
<b>Domestic Water Heating Upgrade</b>	18,399	0.0	20.9	0.0	20.9	\$3,150.52	\$164.91	\$0.00	\$164.91	0.1	20,979
Install Low-Flow DHW Devices	18,399	0.0	20.9	0.0	20.9	\$3,150.52	\$164.91	\$0.00	\$164.91	0.1	20,979
<b>Food Service Equipment &amp; Refrigeration Measures</b>	11,721	0.5	0.0	0.0	0.0	\$1,525.79	\$8,397.61	\$375.00	\$8,022.61	5.3	11,803
Refrigerator/Freezer Case Electrically Commutated Motors	3,289	0.4	0.0	0.0	0.0	\$428.13	\$1,819.80	\$0.00	\$1,819.80	4.3	3,312
Refrigeration Controls	8,432	0.1	0.0	0.0	0.0	\$1,097.66	\$6,577.81	\$375.00	\$6,202.81	5.7	8,491
<b>Plug Load Equipment Control - Vending Machine</b>	21,619	2.5	0.0	0.0	0.0	\$3,348.99	\$4,830.00	\$0.00	\$4,830.00	1.4	21,770
Vending Machine Control	21,619	2.5	0.0	0.0	0.0	\$3,348.99	\$4,830.00	\$0.00	\$4,830.00	1.4	21,770
<b>TOTALS</b>	1,672,762	439.1	1,151.5	12.5	1,164.0	\$263,778.96	\$1,762,791.95	\$184,742.86	\$1,578,049.09	6.0	1,821,328

\* - All incentives presented in this table are based on NJ Smart Start Building equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

\*\* - Simple Payback Period is based on net measure costs (i.e. after incentives).

# Cost Effective Opportunities\*



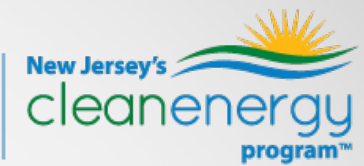
\* Opportunities considered cost effective have a payback period less than 2/3rds of the useful life of the measure

Energy Conservation Measure		Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Natural Gas Savings (MMBtu)	Annual Fuel 2 Savings (MMBtu)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO <sub>2</sub> e Emissions Reduction (lbs)
<b>Lighting Upgrades</b>		<b>1,138,670</b>	<b>274.0</b>	<b>-194.4</b>	<b>-12.1</b>	<b>-206.5</b>	<b>\$171,720.81</b>	<b>\$631,691.90</b>	<b>\$106,693.00</b>	<b>\$524,998.90</b>	<b>3.1</b>	<b>1,121,887</b>
ECM 1	Install LED Fixtures	337,254	56.1	-34.4	-1.6	-36.1	\$55,692.13	\$343,078.20	\$45,760.00	\$297,318.20	5.3	335,315
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	359,629	88.3	-72.1	-5.9	-78.0	\$51,260.11	\$108,694.50	\$16,816.00	\$91,878.50	1.8	352,733
ECM 3	Retrofit Fixtures with LED Lamps	441,755	129.6	-87.9	-4.6	-92.4	\$64,762.79	\$179,846.78	\$44,117.00	\$135,729.78	2.1	433,809
ECM 4	Install LED Exit Signs	32	0.0	0.0	0.0	0.0	\$5.78	\$72.42	\$0.00	\$72.42	12.5	31
<b>Lighting Control Measures</b>		<b>98,038</b>	<b>28.2</b>	<b>-19.7</b>	<b>-0.9</b>	<b>-20.5</b>	<b>\$14,670.88</b>	<b>\$106,518.00</b>	<b>\$13,145.00</b>	<b>\$93,373.00</b>	<b>6.4</b>	<b>96,278</b>
ECM 5	Install Occupancy Sensor Lighting Controls	91,900	26.6	-18.4	-0.9	-19.2	\$13,749.09	\$100,518.00	\$11,990.00	\$88,528.00	6.4	90,249
ECM 6	Install High/Low Lighting Controls	6,138	1.6	-1.3	0.0	-1.3	\$921.79	\$6,000.00	\$1,155.00	\$4,845.00	5.3	6,029
<b>Motor Upgrades</b>		<b>5,485</b>	<b>2.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>\$714.01</b>	<b>\$40,918.26</b>	<b>\$0.00</b>	<b>\$40,918.26</b>	<b>57.3</b>	<b>5,523</b>
ECM 7	Premium Efficiency Motors	5,485	2.0	0.0	0.0	0.0	\$714.01	\$40,918.26	\$0.00	\$40,918.26	57.3	5,523
<b>Variable Frequency Drive (VFD) Measures</b>		<b>86,951</b>	<b>13.4</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>\$12,262.96</b>	<b>\$51,541.25</b>	<b>\$900.00</b>	<b>\$50,641.25</b>	<b>4.1</b>	<b>87,559</b>
ECM 8	Install VFDs on Chilled Water Pumps	42,236	8.0	0.0	0.0	0.0	\$6,228.48	\$23,789.70	\$0.00	\$23,789.70	3.8	42,532
ECM 9	Install VFDs on Heating Water Pumps	40,364	5.8	0.0	0.0	0.0	\$5,396.27	\$22,557.10	\$0.00	\$22,557.10	4.2	40,647
ECM 10	Install VFDs on Cooling Tower Fans	4,350	-0.4	0.0	0.0	0.0	\$638.21	\$5,194.45	\$900.00	\$4,294.45	6.7	4,380
<b>Electric Chiller Replacement</b>		<b>111,780</b>	<b>49.9</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>\$16,399.69</b>	<b>\$136,767.15</b>	<b>\$7,740.00</b>	<b>\$129,027.15</b>	<b>7.9</b>	<b>112,562</b>
ECM 11	Install High Efficiency Chillers	111,780	49.9	0.0	0.0	0.0	\$16,399.69	\$136,767.15	\$7,740.00	\$129,027.15	7.9	112,562
<b>Gas Heating (HVAC/Process) Replacement</b>		<b>0</b>	<b>0.0</b>	<b>41.5</b>	<b>26.0</b>	<b>67.5</b>	<b>\$868.47</b>	<b>\$13,035.92</b>	<b>\$1,200.00</b>	<b>\$11,835.92</b>	<b>13.6</b>	<b>9,110</b>
ECM 12	Install High Efficiency Furnaces	0	0.0	16.7	26.0	42.8	\$561.95	\$8,360.55	\$1,200.00	\$7,160.55	12.7	6,217
ECM 13	Install High Efficiency Unit Heaters	0	0.0	24.7	0.0	24.7	\$306.52	\$4,675.37	\$0.00	\$4,675.37	15.3	2,893
<b>HVAC System Improvements</b>		<b>10,453</b>	<b>0.0</b>	<b>207.4</b>	<b>0.0</b>	<b>207.4</b>	<b>\$3,642.50</b>	<b>\$17,672.46</b>	<b>\$0.00</b>	<b>\$17,672.46</b>	<b>4.9</b>	<b>34,806</b>
ECM 14	Implement Demand Control Ventilation (DCV)	10,453	0.0	207.4	0.0	207.4	\$3,642.50	\$17,672.46	\$0.00	\$17,672.46	4.9	34,806
<b>Domestic Water Heating Upgrade</b>		<b>18,399</b>	<b>0.0</b>	<b>20.9</b>	<b>0.0</b>	<b>20.9</b>	<b>\$3,150.52</b>	<b>\$164.91</b>	<b>\$0.00</b>	<b>\$164.91</b>	<b>0.1</b>	<b>20,979</b>
ECM 15	Install Low-Flow DHW Devices	18,399	0.0	20.9	0.0	20.9	\$3,150.52	\$164.91	\$0.00	\$164.91	0.1	20,979
<b>Food Service Equipment &amp; Refrigeration Measures</b>		<b>11,721</b>	<b>0.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>\$1,525.79</b>	<b>\$8,397.61</b>	<b>\$375.00</b>	<b>\$8,022.61</b>	<b>5.3</b>	<b>11,803</b>
ECM 16	Refrigerator/Freezer Case Electrically Commutated Motors	3,289	0.4	0.0	0.0	0.0	\$428.13	\$1,819.80	\$0.00	\$1,819.80	4.3	3,312
ECM 17	Refrigeration Controls	8,432	0.1	0.0	0.0	0.0	\$1,097.66	\$6,577.81	\$375.00	\$6,202.81	5.7	8,491
<b>Plug Load Equipment Control - Vending Machine</b>		<b>21,619</b>	<b>2.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>\$3,348.99</b>	<b>\$4,830.00</b>	<b>\$0.00</b>	<b>\$4,830.00</b>	<b>1.4</b>	<b>21,770</b>
ECM 18	Vending Machine Control	21,619	2.5	0.0	0.0	0.0	\$3,348.99	\$4,830.00	\$0.00	\$4,830.00	1.4	21,770
<b>TOTALS</b>		<b>1,503,117</b>	<b>370.6</b>	<b>55.7</b>	<b>13.0</b>	<b>68.7</b>	<b>\$228,304.62</b>	<b>\$1,011,537.46</b>	<b>\$130,053.00</b>	<b>\$881,484.46</b>	<b>3.9</b>	<b>1,522,277</b>

\* - All incentives presented in this table are based on NJ Smart Start Building equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

\*\* - Simple Payback Period is based on net measure costs (i.e. after incentives).

# County Jail



#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Lifetime Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO <sub>2</sub> e Emissions Reduction (lbs)
<b>Lighting Upgrades</b>		<b>546,086</b>	<b>101.2</b>	<b>-106</b>	<b>\$69,941</b>	<b>\$1,049,121</b>	<b>\$250,341</b>	<b>\$42,164</b>	<b>\$208,177</b>	<b>3.0</b>	<b>537,439</b>
ECM 1	Install LED Fixtures	205,349	32.5	-34	\$26,361	\$395,410	\$157,164	\$25,900	\$131,264	5.0	202,752
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	193,806	45.0	-41	\$24,785	\$371,771	\$56,081	\$8,644	\$47,437	1.9	190,329
ECM 3	Retrofit Fixtures with LED Lamps	146,930	23.8	-31	\$18,796	\$281,940	\$37,096	\$7,620	\$29,476	1.6	144,359
<b>Lighting Control Measures</b>		<b>17,882</b>	<b>4.6</b>	<b>-4</b>	<b>\$2,287</b>	<b>\$18,295</b>	<b>\$24,840</b>	<b>\$2,660</b>	<b>\$22,180</b>	<b>9.7</b>	<b>17,561</b>
ECM 4	Install Occupancy Sensor Lighting Controls	17,882	4.6	-4	\$2,287	\$18,295	\$24,840	\$2,660	\$22,180	9.7	17,561
<b>Motor Upgrades</b>		<b>5,485</b>	<b>2.0</b>	<b>0</b>	<b>\$714</b>	<b>\$10,710</b>	<b>\$40,918</b>	<b>\$0</b>	<b>\$40,918</b>	<b>57.3</b>	<b>5,523</b>
ECM 5	Premium Efficiency Motors	5,485	2.0	0	\$714	\$10,710	\$40,918	\$0	\$40,918	57.3	5,523
<b>Variable Frequency Drive (VFD) Measures</b>		<b>97,898</b>	<b>33.8</b>	<b>0</b>	<b>\$12,744</b>	<b>\$191,155</b>	<b>\$130,735</b>	<b>\$8,000</b>	<b>\$122,735</b>	<b>9.6</b>	<b>98,583</b>
	Install VFDs on Constant Volume (CV) Fans	66,114	29.0	0	\$8,606	\$129,093	\$114,730	\$8,000	\$106,730	12.4	66,576
ECM 6	Install VFDs on Heating Water Pumps	31,784	4.8	0	\$4,137	\$62,062	\$16,005	\$0	\$16,005	3.9	32,007
<b>Electric Unitary HVAC Measures</b>		<b>75,879</b>	<b>24.1</b>	<b>0</b>	<b>\$9,877</b>	<b>\$148,161</b>	<b>\$206,400</b>	<b>\$11,296</b>	<b>\$195,104</b>	<b>19.8</b>	<b>76,410</b>
	Install High Efficiency Air Conditioning Units	75,879	24.1	0	\$9,877	\$148,161	\$206,400	\$11,296	\$195,104	19.8	76,410
<b>Gas Heating (HVAC/Process) Replacement</b>		<b>0</b>	<b>0.0</b>	<b>830</b>	<b>\$8,915</b>	<b>\$178,309</b>	<b>\$183,353</b>	<b>\$21,120</b>	<b>\$162,233</b>	<b>18.2</b>	<b>97,149</b>
	Install High Efficiency Hot Water Boilers	0	0.0	830	\$8,915	\$178,309	\$183,353	\$21,120	\$162,233	18.2	97,149
<b>HVAC System Improvements</b>		<b>7,342</b>	<b>0.0</b>	<b>204</b>	<b>\$3,151</b>	<b>\$47,264</b>	<b>\$12,235</b>	<b>\$0</b>	<b>\$12,235</b>	<b>3.9</b>	<b>31,314</b>
ECM 7	Implement Demand Control Ventilation (DCV)	7,342	0.0	204	\$3,151	\$47,264	\$12,235	\$0	\$12,235	3.9	31,314
<b>Food Service &amp; Refrigeration Measures</b>		<b>16,839</b>	<b>1.1</b>	<b>0</b>	<b>\$2,192</b>	<b>\$27,315</b>	<b>\$9,548</b>	<b>\$375</b>	<b>\$9,173</b>	<b>4.2</b>	<b>16,957</b>
ECM 8	Refrigerator/Freezer Case Electrically Commutated Motors	3,289	0.4	0	\$428	\$6,422	\$1,820	\$0	\$1,820	4.3	3,312
ECM 9	Refrigeration Controls	8,432	0.1	0	\$1,098	\$17,563	\$6,578	\$375	\$6,203	5.7	8,491
ECM 10	Vending Machine Control	5,118	0.6	0	\$666	\$3,331	\$1,150	\$0	\$1,150	1.7	5,153
<b>TOTALS</b>		<b>767,411</b>	<b>166.9</b>	<b>924</b>	<b>\$109,822</b>	<b>\$1,670,330</b>	<b>\$858,371</b>	<b>\$85,615</b>	<b>\$772,756</b>	<b>7.0</b>	<b>880,936</b>

\* - All incentives presented in this table are based on NJ SmartStart equipment incentives and assume proposed equipment meets minimum performance criteria for that product.

\*\* - Simple Payback Period is based on net measure costs (i.e. after incentives).

# Mosquito Commission Office Building



#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Lifetime Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO <sub>2</sub> e Emissions Reduction (lbs)
<b>Lighting Upgrades</b>		<b>13,138</b>	<b>6.5</b>	<b>-4</b>	<b>\$2,382</b>	<b>\$35,735</b>	<b>\$11,173</b>	<b>\$1,707</b>	<b>\$9,466</b>	<b>4.0</b>	<b>12,498</b>
ECM 1	Install LED Fixtures	2,442	0.5	0	\$453	\$6,801	\$3,793	\$400	\$3,393	7.5	2,459
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	9,228	5.1	-4	\$1,664	\$24,964	\$6,323	\$1,025	\$5,298	3.2	8,662
ECM 3	Retrofit Fixtures with LED Lamps	1,468	0.9	-1	\$265	\$3,970	\$1,057	\$282	\$775	2.9	1,378
<b>Lighting Control Measures</b>		<b>2,093</b>	<b>1.2</b>	<b>-1</b>	<b>\$377</b>	<b>\$3,019</b>	<b>\$3,626</b>	<b>\$385</b>	<b>\$3,241</b>	<b>8.6</b>	<b>1,964</b>
ECM 4	Install Occupancy Sensor Lighting Controls	2,093	1.2	-1	\$377	\$3,019	\$3,626	\$385	\$3,241	8.6	1,964
<b>TOTALS</b>		<b>15,231</b>	<b>7.6</b>	<b>-5</b>	<b>\$2,760</b>	<b>\$38,755</b>	<b>\$14,799</b>	<b>\$2,092</b>	<b>\$12,707</b>	<b>4.6</b>	<b>14,462</b>

\* - All incentives presented in this table are based on NJ SmartStart equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

\*\* - Simple Payback Period is based on net measure costs (i.e. after incentives).

# Prosecutor's Modular Office



#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Lifetime Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO <sub>2</sub> e Emissions Reduction (lbs)
<b>Lighting Upgrades</b>		<b>7,031</b>	<b>2.1</b>	<b>0</b>	<b>\$1,331</b>	<b>\$19,963</b>	<b>\$2,420</b>	<b>\$374</b>	<b>\$2,046</b>	<b>1.5</b>	<b>7,080</b>
ECM 1	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	6,258	1.7	0	\$1,185	\$17,770	\$2,132	\$310	\$1,822	1.5	6,302
ECM 2	Retrofit Fixtures with LED Lamps	773	0.3	0	\$146	\$2,194	\$288	\$64	\$224	1.5	778
<b>Lighting Control Measures</b>		<b>1,107</b>	<b>0.3</b>	<b>0</b>	<b>\$210</b>	<b>\$1,677</b>	<b>\$2,160</b>	<b>\$280</b>	<b>\$1,880</b>	<b>9.0</b>	<b>1,115</b>
ECM 3	Install Occupancy Sensor Lighting Controls	1,107	0.3	0	\$210	\$1,677	\$2,160	\$280	\$1,880	9.0	1,115
<b>Electric Unitary HVAC Measures</b>		<b>4,439</b>	<b>0.9</b>	<b>0</b>	<b>\$840</b>	<b>\$12,604</b>	<b>\$17,650</b>	<b>\$598</b>	<b>\$17,052</b>	<b>20.3</b>	<b>4,470</b>
	Install High Efficiency Heat Pumps	4,439	0.9	0	\$840	\$12,604	\$17,650	\$598	\$17,052	20.3	4,470
<b>TOTALS</b>		<b>12,577</b>	<b>3.3</b>	<b>0</b>	<b>\$2,381</b>	<b>\$34,245</b>	<b>\$22,230</b>	<b>\$1,252</b>	<b>\$20,978</b>	<b>8.8</b>	<b>12,665</b>

\* - All incentives presented in this table are based on NJ SmartStart equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

\*\* - Simple Payback Period is based on net measure costs (i.e. after incentives).

# Public Works Garage



#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Lifetime Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO <sub>2</sub> e Emissions Reduction (lbs)
<b>Lighting Upgrades</b>		<b>29,490</b>	<b>8.9</b>	<b>-8</b>	<b>\$5,487</b>	<b>\$82,311</b>	<b>\$23,092</b>	<b>\$3,098</b>	<b>\$19,994</b>	<b>3.6</b>	<b>28,446</b>
ECM 1	Install LED Fixtures	14,812	3.2	-2	\$2,786	\$41,796	\$16,484	\$1,800	\$14,684	5.3	14,651
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	4,867	1.9	-2	\$895	\$13,418	\$3,266	\$503	\$2,763	3.1	4,562
ECM 3	Retrofit Fixtures with LED Lamps	9,811	3.8	-4	\$1,806	\$27,097	\$3,343	\$795	\$2,548	1.4	9,233
<b>Lighting Control Measures</b>		<b>1,241</b>	<b>0.5</b>	<b>-1</b>	<b>\$228</b>	<b>\$1,825</b>	<b>\$4,050</b>	<b>\$490</b>	<b>\$3,560</b>	<b>15.6</b>	<b>1,163</b>
	Install Occupancy Sensor Lighting Controls	1,241	0.5	-1	\$228	\$1,825	\$4,050	\$490	\$3,560	15.6	1,163
<b>Electric Unitary HVAC Measures</b>		<b>1,840</b>	<b>1.3</b>	<b>0</b>	<b>\$349</b>	<b>\$5,233</b>	<b>\$8,166</b>	<b>\$0</b>	<b>\$8,166</b>	<b>23.4</b>	<b>1,853</b>
	Install High Efficiency Air Conditioning Units	1,840	1.3	0	\$349	\$5,233	\$8,166	\$0	\$8,166	23.4	1,853
<b>Gas Heating (HVAC/Process) Replacement</b>		<b>0</b>	<b>0.0</b>	<b>26</b>	<b>\$354</b>	<b>\$7,084</b>	<b>\$6,185</b>	<b>\$800</b>	<b>\$5,385</b>	<b>15.2</b>	<b>4,256</b>
ECM 4	Install High Efficiency Furnaces	0	0.0	26	\$354	\$7,084	\$6,185	\$800	\$5,385	15.2	4,256
<b>Food Service &amp; Refrigeration Measures</b>		<b>1,954</b>	<b>0.2</b>	<b>0</b>	<b>\$371</b>	<b>\$1,853</b>	<b>\$460</b>	<b>\$0</b>	<b>\$460</b>	<b>1.2</b>	<b>1,968</b>
ECM 5	Vending Machine Control	1,954	0.2	0	\$371	\$1,853	\$460	\$0	\$460	1.2	1,968
<b>TOTALS</b>		<b>34,526</b>	<b>10.9</b>	<b>18</b>	<b>\$6,789</b>	<b>\$98,306</b>	<b>\$41,953</b>	<b>\$4,388</b>	<b>\$37,565</b>	<b>5.5</b>	<b>37,686</b>

\* - All incentives presented in this table are based on NJ SmartStart equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

\*\* - Simple Payback Period is based on net measure costs (i.e. after incentives).

# Emergency Services & 911 Building



#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Lifetime Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO <sub>2</sub> e Emissions Reduction (lbs)
<b>Lighting Upgrades</b>		<b>132,872</b>	<b>18.3</b>	<b>-28</b>	<b>\$19,201</b>	<b>\$288,009</b>	<b>\$26,471</b>	<b>\$4,657</b>	<b>\$21,814</b>	<b>1.1</b>	<b>130,528</b>
ECM 1	Install LED Fixtures	1,191	0.2	0	\$175	\$2,628	\$3,864	\$400	\$3,464	19.8	1,200
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	97,288	12.9	-21	\$14,055	\$210,832	\$15,157	\$2,481	\$12,676	0.9	95,542
ECM 3	Retrofit Fixtures with LED Lamps	34,393	5.2	-7	\$4,970	\$74,549	\$7,450	\$1,776	\$5,674	1.1	33,787
<b>Lighting Control Measures</b>		<b>23,112</b>	<b>3.1</b>	<b>-5</b>	<b>\$3,339</b>	<b>\$26,712</b>	<b>\$13,796</b>	<b>\$2,400</b>	<b>\$11,396</b>	<b>3.4</b>	<b>22,697</b>
ECM 4	Install Occupancy Sensor Lighting Controls	20,448	2.8	-4	\$2,954	\$23,633	\$11,996	\$1,490	\$10,506	3.6	20,081
ECM 5	Install High/Low Lighting Controls	2,664	0.3	-1	\$385	\$3,079	\$1,800	\$910	\$890	2.3	2,616
<b>Gas Heating (HVAC/Process) Replacement</b>		<b>0</b>	<b>0.0</b>	<b>26</b>	<b>\$319</b>	<b>\$6,384</b>	<b>\$7,250</b>	<b>\$1,600</b>	<b>\$5,650</b>	<b>17.7</b>	<b>3,069</b>
	Install High Efficiency Furnaces	0	0.0	26	\$319	\$6,384	\$7,250	\$1,600	\$5,650	17.7	3,069
<b>Domestic Water Heating Upgrade</b>		<b>3,435</b>	<b>0.0</b>	<b>0</b>	<b>\$505</b>	<b>\$5,051</b>	<b>\$22</b>	<b>\$0</b>	<b>\$22</b>	<b>0.0</b>	<b>3,459</b>
ECM 6	Install Low-Flow DHW Devices	3,435	0.0	0	\$505	\$5,051	\$22	\$0	\$22	0.0	3,459
<b>Food Service &amp; Refrigeration Measures</b>		<b>1,954</b>	<b>0.2</b>	<b>0</b>	<b>\$287</b>	<b>\$1,437</b>	<b>\$460</b>	<b>\$0</b>	<b>\$460</b>	<b>1.6</b>	<b>1,968</b>
ECM 7	Vending Machine Control	1,954	0.2	0	\$287	\$1,437	\$460	\$0	\$460	1.6	1,968
<b>TOTALS</b>		<b>161,373</b>	<b>21.6</b>	<b>-7</b>	<b>\$23,651</b>	<b>\$327,593</b>	<b>\$47,999</b>	<b>\$8,657</b>	<b>\$39,342</b>	<b>1.7</b>	<b>161,721</b>

\* - All incentives presented in this table are based on NJ SmartStart equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

\*\* - Simple Payback Period is based on net measure costs (i.e. after incentives).



# Agricultural Complex



#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Lifetime Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO <sub>2</sub> e Emissions Reduction (lbs)
<b>Lighting Upgrades</b>		<b>65,636</b>	<b>20.9</b>	<b>-9</b>	<b>\$11,935</b>	<b>\$179,020</b>	<b>\$36,200</b>	<b>\$5,115</b>	<b>\$31,085</b>	<b>2.6</b>	<b>65,079</b>
ECM 1	Install LED Fixtures	23,687	3.8	0	\$4,344	\$65,154	\$14,889	\$1,600	\$13,289	3.1	23,853
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	35,582	14.6	-7	\$6,438	\$96,569	\$17,350	\$2,645	\$14,705	2.3	34,959
ECM 3	Retrofit Fixtures with LED Lamps	6,367	2.5	-1	\$1,153	\$17,297	\$3,961	\$870	\$3,091	2.7	6,267
<b>Lighting Control Measures</b>		<b>7,162</b>	<b>2.9</b>	<b>-1</b>	<b>\$1,296</b>	<b>\$10,367</b>	<b>\$12,610</b>	<b>\$1,435</b>	<b>\$11,175</b>	<b>8.6</b>	<b>7,037</b>
ECM 4	Install Occupancy Sensor Lighting Controls	6,489	2.6	-1	\$1,174	\$9,393	\$11,610	\$1,435	\$10,175	8.7	6,376
ECM 5	Install High/Low Lighting Controls	673	0.3	0	\$122	\$974	\$1,000	\$0	\$1,000	8.2	661
<b>Electric Unitary HVAC Measures</b>		<b>13,862</b>	<b>9.3</b>	<b>0</b>	<b>\$2,542</b>	<b>\$38,130</b>	<b>\$75,830</b>	<b>\$4,718</b>	<b>\$71,112</b>	<b>28.0</b>	<b>13,959</b>
	Install High Efficiency Air Conditioning Units	13,193	9.2	0	\$2,419	\$36,288	\$71,439	\$4,550	\$66,889	27.6	13,285
	Install High Efficiency Heat Pumps	670	0.1	0	\$123	\$1,842	\$4,390	\$168	\$4,222	34.4	674
<b>Domestic Water Heating Upgrade</b>		<b>0</b>	<b>0.0</b>	<b>8</b>	<b>\$98</b>	<b>\$978</b>	<b>\$14</b>	<b>\$0</b>	<b>\$14</b>	<b>0.1</b>	<b>980</b>
ECM 6	Install Low-Flow DHW Devices	0	0.0	8	\$98	\$978	\$14	\$0	\$14	0.1	980
<b>Food Service &amp; Refrigeration Measures</b>		<b>1,612</b>	<b>0.2</b>	<b>0</b>	<b>\$296</b>	<b>\$1,478</b>	<b>\$230</b>	<b>\$0</b>	<b>\$230</b>	<b>0.8</b>	<b>1,623</b>
ECM 7	Vending Machine Control	1,612	0.2	0	\$296	\$1,478	\$230	\$0	\$230	0.8	1,623
<b>TOTALS</b>		<b>88,272</b>	<b>33.2</b>	<b>-2</b>	<b>\$16,166</b>	<b>\$229,972</b>	<b>\$124,884</b>	<b>\$11,268</b>	<b>\$113,616</b>	<b>7.0</b>	<b>88,678</b>

\* - All incentives presented in this table are based on NJ SmartStart equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

\*\* - Simple Payback Period is based on net measure costs (i.e. after incentives).



# Board of Social Services



#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Lifetime Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO <sub>2</sub> e Emissions Reduction (lbs)
<b>Lighting Upgrades</b>		<b>24,081</b>	<b>10.8</b>	<b>-5</b>	<b>\$3,880</b>	<b>\$58,201</b>	<b>\$14,679</b>	<b>\$4,020</b>	<b>\$10,659</b>	<b>2.7</b>	<b>23,659</b>
ECM 1	Retrofit Fixtures with LED Lamps	24,081	10.8	-5	\$3,880	\$58,201	\$14,679	\$4,020	\$10,659	2.7	23,659
<b>Lighting Control Measures</b>		<b>2,463</b>	<b>1.2</b>	<b>-1</b>	<b>\$397</b>	<b>\$3,175</b>	<b>\$4,990</b>	<b>\$840</b>	<b>\$4,150</b>	<b>10.5</b>	<b>2,420</b>
ECM 2	Install Occupancy Sensor Lighting Controls	2,278	1.1	0	\$367	\$2,936	\$4,590	\$595	\$3,995	10.9	2,238
ECM 3	Install High/Low Lighting Controls	185	0.1	0	\$30	\$239	\$400	\$245	\$155	5.2	182
<b>Electric Unitary HVAC Measures</b>		<b>2,098</b>	<b>1.5</b>	<b>0</b>	<b>\$342</b>	<b>\$5,129</b>	<b>\$16,582</b>	<b>\$782</b>	<b>\$15,800</b>	<b>46.2</b>	<b>2,113</b>
	Install High Efficiency Air Conditioning Units	2,098	1.5	0	\$342	\$5,129	\$16,582	\$782	\$15,800	46.2	2,113
<b>Gas Heating (HVAC/Process) Replacement</b>		<b>0</b>	<b>0.0</b>	<b>4</b>	<b>\$35</b>	<b>\$693</b>	<b>\$1,450</b>	<b>\$400</b>	<b>\$1,050</b>	<b>30.3</b>	<b>467</b>
	Install High Efficiency Furnaces	0	0.0	4	\$35	\$693	\$1,450	\$400	\$1,050	30.3	467
<b>Food Service &amp; Refrigeration Measures</b>		<b>1,954</b>	<b>0.2</b>	<b>0</b>	<b>\$318</b>	<b>\$1,592</b>	<b>\$460</b>	<b>\$0</b>	<b>\$460</b>	<b>1.4</b>	<b>1,968</b>
ECM 4	Vending Machine Control	1,954	0.2	0	\$318	\$1,592	\$460	\$0	\$460	1.4	1,968
<b>TOTALS</b>		<b>30,596</b>	<b>13.7</b>	<b>-2</b>	<b>\$4,972</b>	<b>\$68,790</b>	<b>\$38,161</b>	<b>\$6,042</b>	<b>\$32,119</b>	<b>6.5</b>	<b>30,628</b>

\* - All incentives presented in this table are based on NJ SmartStart equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

\*\* - Simple Payback Period is based on net measure costs (i.e. after incentives).

# Maintenance Shop



#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Lifetime Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO <sub>2</sub> e Emissions Reduction (lbs)
<b>Lighting Upgrades</b>		<b>1,925</b>	<b>1.3</b>	<b>0</b>	<b>\$354</b>	<b>\$5,309</b>	<b>\$3,774</b>	<b>\$565</b>	<b>\$3,209</b>	<b>9.1</b>	<b>1,923</b>
ECM 1	Install LED Fixtures	1,494	0.2	0	\$276	\$4,139	\$1,932	\$200	\$1,732	6.3	1,504
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	166	0.5	0	\$30	\$451	\$808	\$120	\$688	22.9	161
ECM 3	Retrofit Fixtures with LED Lamps	233	0.6	0	\$42	\$633	\$962	\$245	\$717	17.0	226
ECM 4	Install LED Exit Signs	32	0.0	0	\$6	\$87	\$72	\$0	\$72	12.5	31
<b>Lighting Control Measures</b>		<b>15</b>	<b>0.1</b>	<b>0</b>	<b>\$3</b>	<b>\$22</b>	<b>\$502</b>	<b>\$0</b>	<b>\$502</b>	<b>186.4</b>	<b>14</b>
	Install Occupancy Sensor Lighting Controls	15	0.1	0	\$3	\$22	\$502	\$0	\$502	186.4	14
<b>Gas Heating (HVAC/Process) Replacement</b>		<b>0</b>	<b>0.0</b>	<b>41</b>	<b>\$514</b>	<b>\$8,753</b>	<b>\$6,850</b>	<b>\$400</b>	<b>\$6,450</b>	<b>12.5</b>	<b>4,854</b>
ECM 5	Install High Efficiency Furnaces	0	0.0	17	\$208	\$4,155	\$2,175	\$400	\$1,775	8.5	1,961
ECM 6	Install High Efficiency Unit Heaters	0	0.0	25	\$307	\$4,598	\$4,675	\$0	\$4,675	15.3	2,893
<b>TOTALS</b>		<b>1,940</b>	<b>1.3</b>	<b>41</b>	<b>\$871</b>	<b>\$14,083</b>	<b>\$11,127</b>	<b>\$965</b>	<b>\$10,162</b>	<b>11.7</b>	<b>6,792</b>

\* - All incentives presented in this table are based on NJ SmartStart equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

\*\* - Simple Payback Period is based on net measure costs (i.e. after incentives).

# Fenwick Building



#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Lifetime Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$) *	Estimated Net Cost (\$)	Simple Payback Period (yrs) **	CO <sub>2</sub> e Emissions Reduction (lbs)
<b>Lighting Upgrades</b>		<b>21,429</b>	<b>10.4</b>	<b>-4</b>	<b>\$3,296</b>	<b>\$49,447</b>	<b>\$12,697</b>	<b>\$3,277</b>	<b>\$9,420</b>	<b>2.9</b>	<b>21,062</b>
ECM 1	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	270	0.1	0	\$42	\$623	\$118	\$20	\$98	2.4	265
ECM 2	Retrofit Fixtures with LED Lamps	21,159	10.3	-4	\$3,255	\$48,824	\$12,578	\$3,257	\$9,321	2.9	20,796
<b>Lighting Control Measures</b>		<b>2,394</b>	<b>1.0</b>	<b>-1</b>	<b>\$368</b>	<b>\$2,945</b>	<b>\$4,086</b>	<b>\$385</b>	<b>\$3,701</b>	<b>10.1</b>	<b>2,352</b>
ECM 3	Install Occupancy Sensor Lighting Controls	1,567	0.6	0	\$241	\$1,928	\$3,086	\$385	\$2,701	11.2	1,539
ECM 4	Install High/Low Lighting Controls	827	0.3	0	\$127	\$1,018	\$1,000	\$0	\$1,000	7.9	813
<b>Food Service &amp; Refrigeration Measures</b>		<b>1,954</b>	<b>0.2</b>	<b>0</b>	<b>\$306</b>	<b>\$1,528</b>	<b>\$460</b>	<b>\$0</b>	<b>\$460</b>	<b>1.5</b>	<b>1,968</b>
ECM 5	Vending Machine Control	1,954	0.2	0	\$306	\$1,528	\$460	\$0	\$460	1.5	1,968
<b>TOTALS</b>		<b>25,778</b>	<b>11.6</b>	<b>-5</b>	<b>\$3,970</b>	<b>\$53,920</b>	<b>\$17,243</b>	<b>\$3,662</b>	<b>\$13,581</b>	<b>3.4</b>	<b>25,381</b>

\* - All incentives presented in this table are based on NJ SmartStart equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

\*\* - Simple Payback Period is based on net measure costs (i.e. after incentives).

# New Courthouse



#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Lifetime Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO <sub>2</sub> e Emissions Reduction (lbs)
<b>Lighting Upgrades</b>		<b>93,611</b>	<b>32.6</b>	<b>-20</b>	<b>\$13,508</b>	<b>\$202,617</b>	<b>\$47,955</b>	<b>\$12,245</b>	<b>\$35,710</b>	<b>2.6</b>	<b>91,952</b>
ECM 1	Install LED Fixtures	576	0.1	0	\$85	\$1,269	\$966	\$100	\$866	10.2	580
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	7,249	2.9	-2	\$1,046	\$15,688	\$4,164	\$566	\$3,598	3.4	7,119
ECM 3	Retrofit Fixtures with LED Lamps	85,785	29.6	-18	\$12,377	\$185,660	\$42,825	\$11,579	\$31,246	2.5	84,252
<b>Lighting Control Measures</b>		<b>27,151</b>	<b>9.3</b>	<b>-6</b>	<b>\$3,917</b>	<b>\$31,338</b>	<b>\$21,240</b>	<b>\$2,520</b>	<b>\$18,720</b>	<b>4.8</b>	<b>26,664</b>
ECM 4	Install Occupancy Sensor Lighting Controls	25,362	8.7	-5	\$3,659	\$29,273	\$19,440	\$2,520	\$16,920	4.6	24,907
ECM 5	Install High/Low Lighting Controls	1,789	0.6	0	\$258	\$2,065	\$1,800	\$0	\$1,800	7.0	1,757
<b>Motor Upgrades</b>		<b>1,232</b>	<b>0.4</b>	<b>0</b>	<b>\$181</b>	<b>\$2,712</b>	<b>\$15,832</b>	<b>\$0</b>	<b>\$15,832</b>	<b>87.6</b>	<b>1,241</b>
	Premium Efficiency Motors	1,232	0.4	0	\$181	\$2,712	\$15,832	\$0	\$15,832	87.6	1,241
<b>Variable Frequency Drive (VFD) Measures</b>		<b>46,586</b>	<b>6.8</b>	<b>0</b>	<b>\$6,835</b>	<b>\$102,523</b>	<b>\$28,984</b>	<b>\$900</b>	<b>\$28,084</b>	<b>4.1</b>	<b>46,912</b>
ECM 6	Install VFDs on Chilled Water Pumps	33,656	6.2	0	\$4,938	\$74,068	\$17,238	\$0	\$17,238	3.5	33,892
ECM 7	Install VFDs on Heating Water Pumps	8,580	1.0	0	\$1,259	\$18,882	\$6,552	\$0	\$6,552	5.2	8,640
ECM 8	Install VFDs on Cooling Tower Fans	4,350	-0.4	0	\$638	\$9,573	\$5,194	\$900	\$4,294	6.7	4,380
<b>Electric Unitary HVAC Measures</b>		<b>857</b>	<b>0.3</b>	<b>0</b>	<b>\$126</b>	<b>\$1,886</b>	<b>\$8,218</b>	<b>\$0</b>	<b>\$8,218</b>	<b>65.4</b>	<b>863</b>
	Install High Efficiency Air Conditioning Units	857	0.3	0	\$126	\$1,886	\$8,218	\$0	\$8,218	65.4	863
<b>Electric Chiller Replacement</b>		<b>111,780</b>	<b>49.9</b>	<b>0</b>	<b>\$16,400</b>	<b>\$327,994</b>	<b>\$136,767</b>	<b>\$7,740</b>	<b>\$129,027</b>	<b>7.9</b>	<b>112,562</b>
ECM 9	Install High Efficiency Chillers	111,780	49.9	0	\$16,400	\$327,994	\$136,767	\$7,740	\$129,027	7.9	112,562
<b>HVAC System Improvements</b>		<b>3,111</b>	<b>0.0</b>	<b>3</b>	<b>\$492</b>	<b>\$7,374</b>	<b>\$5,438</b>	<b>\$0</b>	<b>\$5,438</b>	<b>11.1</b>	<b>3,492</b>
ECM 10	Implement Demand Control Ventilation (DCV)	3,111	0.0	3	\$492	\$7,374	\$5,438	\$0	\$5,438	11.1	3,492
<b>Domestic Water Heating Upgrade</b>		<b>12,512</b>	<b>0.0</b>	<b>0</b>	<b>\$1,836</b>	<b>\$18,356</b>	<b>\$86</b>	<b>\$0</b>	<b>\$86</b>	<b>0.0</b>	<b>12,599</b>
ECM 11	Install Low-Flow DHW Devices	12,512	0.0	0	\$1,836	\$18,356	\$86	\$0	\$86	0.0	12,599
<b>Food Service &amp; Refrigeration Measures</b>		<b>3,163</b>	<b>0.4</b>	<b>0</b>	<b>\$464</b>	<b>\$2,320</b>	<b>\$690</b>	<b>\$0</b>	<b>\$690</b>	<b>1.5</b>	<b>3,185</b>
ECM 12	Vending Machine Control	3,163	0.4	0	\$464	\$2,320	\$690	\$0	\$690	1.5	3,185
<b>TOTALS</b>		<b>300,003</b>	<b>99.6</b>	<b>-22</b>	<b>\$43,757</b>	<b>\$697,120</b>	<b>\$265,210</b>	<b>\$23,405</b>	<b>\$241,805</b>	<b>5.5</b>	<b>299,470</b>

\* - All incentives presented in this table are based on NJ SmartStart equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

\*\* - Simple Payback Period is based on net measure costs (i.e. after incentives).

# Johnson Building



#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Lifetime Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$) *	Estimated Net Cost (\$)	Simple Payback Period (yrs) **	CO <sub>2</sub> e Emissions Reduction (lbs)
<b>Lighting Upgrades</b>		<b>51,526</b>	<b>11.5</b>	<b>-1</b>	<b>\$15,784</b>	<b>\$236,766</b>	<b>\$88,795</b>	<b>\$9,690</b>	<b>\$79,105</b>	<b>5.0</b>	<b>51,793</b>
ECM 1	Install LED Fixtures	47,678	8.3	0	\$14,614	\$219,212	\$85,612	\$9,200	\$76,412	5.2	48,012
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	2,473	2.6	-1	\$752	\$11,280	\$2,421	\$380	\$2,041	2.7	2,430
ECM 3	Retrofit Fixtures with LED Lamps	1,375	0.6	0	\$418	\$6,273	\$762	\$110	\$652	1.6	1,352
<b>Lighting Control Measures</b>		<b>421</b>	<b>0.4</b>	<b>0</b>	<b>\$128</b>	<b>\$1,025</b>	<b>\$1,080</b>	<b>\$140</b>	<b>\$940</b>	<b>7.3</b>	<b>414</b>
ECM 4	Install Occupancy Sensor Lighting Controls	421	0.4	0	\$128	\$1,025	\$1,080	\$140	\$940	7.3	414
<b>Electric Unitary HVAC Measures</b>		<b>600</b>	<b>0.6</b>	<b>0</b>	<b>\$184</b>	<b>\$2,759</b>	<b>\$6,533</b>	<b>\$0</b>	<b>\$6,533</b>	<b>35.5</b>	<b>604</b>
	Install High Efficiency Air Conditioning Units	600	0.6	0	\$184	\$2,759	\$6,533	\$0	\$6,533	35.5	604
<b>Gas Heating (HVAC/Process) Replacement</b>		<b>0</b>	<b>0.0</b>	<b>86</b>	<b>\$988</b>	<b>\$19,750</b>	<b>\$14,365</b>	<b>\$395</b>	<b>\$13,970</b>	<b>14.1</b>	<b>10,099</b>
	Install High Efficiency Steam Boilers	0	0.0	86	\$988	\$19,750	\$14,365	\$395	\$13,970	14.1	10,099
<b>Domestic Water Heating Upgrade</b>		<b>981</b>	<b>0.0</b>	<b>0</b>	<b>\$301</b>	<b>\$3,008</b>	<b>\$7</b>	<b>\$0</b>	<b>\$7</b>	<b>0.0</b>	<b>988</b>
ECM 5	Install Low-Flow DHW Devices	981	0.0	0	\$301	\$3,008	\$7	\$0	\$7	0.0	988
<b>TOTALS</b>		<b>53,528</b>	<b>12.5</b>	<b>85</b>	<b>\$17,385</b>	<b>\$263,307</b>	<b>\$110,780</b>	<b>\$10,225</b>	<b>\$100,555</b>	<b>5.8</b>	<b>63,898</b>

\* - All incentives presented in this table are based on NJ SmartStart equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

\*\* - Simple Payback Period is based on net measure costs (i.e. after incentives).

# County Office Building (White Building)



#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Lifetime Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO <sub>2</sub> e Emissions Reduction (lbs)
<b>Lighting Upgrades</b>		<b>8,813</b>	<b>4.5</b>	<b>0</b>	<b>\$1,601</b>	<b>\$24,021</b>	<b>\$6,241</b>	<b>\$1,578</b>	<b>\$4,663</b>	<b>2.9</b>	<b>8,875</b>
ECM 1	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	123	0.1	0	\$22	\$336	\$130	\$12	\$118	5.2	124
ECM 2	Retrofit Fixtures with LED Lamps	8,690	4.4	0	\$1,579	\$23,685	\$6,112	\$1,566	\$4,546	2.9	8,751
<b>Lighting Control Measures</b>		<b>2,219</b>	<b>1.1</b>	<b>0</b>	<b>\$403</b>	<b>\$3,226</b>	<b>\$6,200</b>	<b>\$700</b>	<b>\$5,500</b>	<b>13.6</b>	<b>2,235</b>
ECM 3	Install Occupancy Sensor Lighting Controls	2,042	1.0	0	\$371	\$2,968	\$5,400	\$700	\$4,700	12.7	2,056
	Install High/Low Lighting Controls	177	0.1	0	\$32	\$258	\$800	\$0	\$800	24.8	179
<b>Domestic Water Heating Upgrade</b>		<b>1,472</b>	<b>0.0</b>	<b>0</b>	<b>\$267</b>	<b>\$2,675</b>	<b>\$14</b>	<b>\$0</b>	<b>\$14</b>	<b>0.1</b>	<b>1,482</b>
ECM 4	Install Low-Flow DHW Devices	1,472	0.0	0	\$267	\$2,675	\$14	\$0	\$14	0.1	1,482
<b>TOTALS</b>		<b>12,504</b>	<b>5.6</b>	<b>0</b>	<b>\$2,272</b>	<b>\$29,922</b>	<b>\$12,456</b>	<b>\$2,278</b>	<b>\$10,178</b>	<b>4.5</b>	<b>12,592</b>

\* - All incentives presented in this table are based on NJ SmartStart equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

\*\* - Simple Payback Period is based on net measure costs (i.e. after incentives).

# Administrative Building



#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Lifetime Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$) *	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO <sub>2</sub> e Emissions Reduction (lbs)
<b>Lighting Upgrades</b>		<b>52,096</b>	<b>20.4</b>	<b>-7</b>	<b>\$7,759</b>	<b>\$116,392</b>	<b>\$57,162</b>	<b>\$9,462</b>	<b>\$47,700</b>	<b>6.1</b>	<b>51,674</b>
ECM 1	Install LED Fixtures	19,960	3.2	0	\$3,002	\$45,035	\$33,996	\$3,600	\$30,396	10.1	20,099
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	2,059	0.9	0	\$305	\$4,572	\$643	\$100	\$543	1.8	2,023
ECM 3	Retrofit Fixtures with LED Lamps	30,077	16.3	-6	\$4,452	\$66,784	\$22,522	\$5,762	\$16,760	3.8	29,551
<b>Lighting Control Measures</b>		<b>2,342</b>	<b>1.0</b>	<b>0</b>	<b>\$347</b>	<b>\$2,773</b>	<b>\$5,370</b>	<b>\$385</b>	<b>\$4,985</b>	<b>14.4</b>	<b>2,301</b>
ECM 4	Install Occupancy Sensor Lighting Controls	1,421	0.6	0	\$210	\$1,683	\$2,970	\$385	\$2,585	12.3	1,396
	Install High/Low Lighting Controls	921	0.4	0	\$136	\$1,090	\$2,400	\$0	\$2,400	17.6	905
<b>Motor Upgrades</b>		<b>370</b>	<b>0.1</b>	<b>0</b>	<b>\$56</b>	<b>\$835</b>	<b>\$4,181</b>	<b>\$0</b>	<b>\$4,181</b>	<b>75.1</b>	<b>372</b>
	Premium Efficiency Motors	370	0.1	0	\$56	\$835	\$4,181	\$0	\$4,181	75.1	372
<b>Variable Frequency Drive (VFD) Measures</b>		<b>8,580</b>	<b>1.9</b>	<b>0</b>	<b>\$1,291</b>	<b>\$19,359</b>	<b>\$6,552</b>	<b>\$0</b>	<b>\$6,552</b>	<b>5.1</b>	<b>8,640</b>
ECM 5	Install VFDs on Chilled Water Pumps	8,580	1.9	0	\$1,291	\$19,359	\$6,552	\$0	\$6,552	5.1	8,640
<b>Gas Heating (HVAC/Process) Replacement</b>		<b>0</b>	<b>0.0</b>	<b>150</b>	<b>\$1,716</b>	<b>\$34,312</b>	<b>\$62,962</b>	<b>\$5,291</b>	<b>\$57,672</b>	<b>33.6</b>	<b>17,544</b>
	Install High Efficiency Hot Water Boilers	0	0.0	150	\$1,716	\$34,312	\$62,962	\$5,291	\$57,672	33.6	17,544
<b>Domestic Water Heating Upgrade</b>		<b>0</b>	<b>0.0</b>	<b>13</b>	<b>\$144</b>	<b>\$1,438</b>	<b>\$22</b>	<b>\$0</b>	<b>\$22</b>	<b>0.1</b>	<b>1,471</b>
ECM 6	Install Low-Flow DHW Devices	0	0.0	13	\$144	\$1,438	\$22	\$0	\$22	0.1	1,471
<b>Food Service &amp; Refrigeration Measures</b>		<b>1,954</b>	<b>0.2</b>	<b>0</b>	<b>\$294</b>	<b>\$1,470</b>	<b>\$460</b>	<b>\$0</b>	<b>\$460</b>	<b>1.6</b>	<b>1,968</b>
ECM 7	Vending Machine Control	1,954	0.2	0	\$294	\$1,470	\$460	\$0	\$460	1.6	1,968
<b>TOTALS</b>		<b>65,342</b>	<b>23.5</b>	<b>155</b>	<b>\$11,606</b>	<b>\$176,578</b>	<b>\$136,709</b>	<b>\$15,138</b>	<b>\$121,571</b>	<b>10.5</b>	<b>83,970</b>

\* - All incentives presented in this table are based on NJ SmartStart equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

\*\* - Simple Payback Period is based on net measure costs (i.e. after incentives).

# Old Courthouse



#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Lifetime Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO <sub>2</sub> e Emissions Reduction (lbs)
<b>Lighting Upgrades</b>		<b>5,823</b>	<b>2.8</b>	<b>-1</b>	<b>\$1,152</b>	<b>\$17,276</b>	<b>\$4,601</b>	<b>\$562</b>	<b>\$4,039</b>	<b>3.5</b>	<b>5,739</b>
ECM 1	Retrofit Fixtures with LED Lamps	5,823	2.8	-1	\$1,152	\$17,276	\$4,601	\$562	\$4,039	3.5	5,739
<b>Lighting Control Measures</b>		<b>799</b>	<b>0.4</b>	<b>0</b>	<b>\$158</b>	<b>\$1,262</b>	<b>\$2,970</b>	<b>\$210</b>	<b>\$2,760</b>	<b>17.5</b>	<b>785</b>
ECM 2	Install Occupancy Sensor Lighting Controls	799	0.4	0	\$158	\$1,262	\$2,970	\$210	\$2,760	17.5	785
<b>TOTALS</b>		<b>6,622</b>	<b>3.2</b>	<b>-1</b>	<b>\$1,310</b>	<b>\$18,538</b>	<b>\$7,571</b>	<b>\$772</b>	<b>\$6,799</b>	<b>5.2</b>	<b>6,524</b>

\* - All incentives presented in this table are based on NJ SmartStart equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

\*\* - Simple Payback Period is based on net measure costs (i.e. after incentives).



# 5<sup>th</sup> Street Complex



#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Lifetime Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO <sub>2</sub> e Emissions Reduction (lbs)
<b>Lighting Upgrades</b>		<b>81,892</b>	<b>21.5</b>	<b>-13</b>	<b>\$13,487</b>	<b>\$202,305</b>	<b>\$43,363</b>	<b>\$7,915</b>	<b>\$35,448</b>	<b>2.6</b>	<b>80,895</b>
ECM 1	Install LED Fixtures	17,587	3.7	0	\$3,124	\$46,855	\$21,792	\$2,300	\$19,492	6.2	17,710
ECM 2	Retrofit Fluorescent Fixtures with LED Lamps and Drivers	259	0.1	0	\$42	\$627	\$101	\$10	\$91	2.2	255
ECM 3	Retrofit Fixtures with LED Lamps	64,046	17.7	-13	\$10,322	\$154,823	\$21,470	\$5,605	\$15,865	1.5	62,931
<b>Lighting Control Measures</b>		<b>9,907</b>	<b>2.3</b>	<b>-2</b>	<b>\$1,596</b>	<b>\$12,768</b>	<b>\$5,940</b>	<b>\$735</b>	<b>\$5,205</b>	<b>3.3</b>	<b>9,734</b>
ECM 4	Install Occupancy Sensor Lighting Controls	9,907	2.3	-2	\$1,596	\$12,768	\$5,940	\$735	\$5,205	3.3	9,734
<b>Food Service &amp; Refrigeration Measures</b>		<b>1,954</b>	<b>0.2</b>	<b>0</b>	<b>\$347</b>	<b>\$1,736</b>	<b>\$460</b>	<b>\$0</b>	<b>\$460</b>	<b>1.3</b>	<b>1,968</b>
ECM 5	Vending Machine Control	1,954	0.2	0	\$347	\$1,736	\$460	\$0	\$460	1.3	1,968
<b>TOTALS</b>		<b>93,753</b>	<b>24.0</b>	<b>-15</b>	<b>\$15,430</b>	<b>\$216,808</b>	<b>\$49,763</b>	<b>\$8,650</b>	<b>\$41,113</b>	<b>2.7</b>	<b>92,597</b>

\* - All incentives presented in this table are based on NJ SmartStart equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

\*\* - Simple Payback Period is based on net measure costs (i.e. after incentives).

# Camp Crockett, Vo-Tech Pump Station, Water Tower



#	Energy Conservation Measure	Annual Electric Savings (kWh)	Peak Demand Savings (kW)	Annual Fuel Savings (MMBtu)	Annual Energy Cost Savings (\$)	Lifetime Energy Cost Savings (\$)	Estimated Install Cost (\$)	Estimated Incentive (\$)*	Estimated Net Cost (\$)	Simple Payback Period (yrs)**	CO <sub>2</sub> e Emissions Reduction (lbs)
<b>Lighting Upgrades</b>		<b>2,478</b>	<b>0.4</b>	<b>0</b>	<b>\$472</b>	<b>\$7,082</b>	<b>\$2,586</b>	<b>\$260</b>	<b>\$2,326</b>	<b>4.9</b>	<b>2,495</b>
ECM 1	Install LED Fixtures	2,478	0.4	0	\$472	\$7,082	\$2,586	\$260	\$2,326	4.9	2,495
<b>TOTALS</b>		<b>2,478</b>	<b>0.4</b>	<b>0</b>	<b>\$472</b>	<b>\$7,082</b>	<b>\$2,586</b>	<b>\$260</b>	<b>\$2,326</b>	<b>4.9</b>	<b>2,495</b>

\* - All incentives presented in this table are based on NJ SmartStart equipment incentives and assume proposed equipment meets minimum performance criteria for that program.

\*\* - Simple Payback Period is based on net measure costs (i.e. after incentives).

# Solar Energy Generation Potential



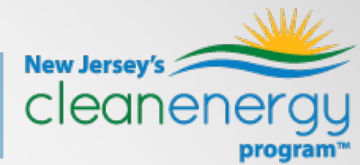
	Emergency Services/911 Building	County Jail	Agricultural Complex	Board of Social Services	New Courthouse	5 <sup>th</sup> Street Complex
<i>Potential:</i>	<b>MEDIUM</b>	<b>HIGH</b>	<b>MEDIUM</b>	<b>MEDIUM</b>	<b>HIGH</b>	<b>HIGH</b>
<i>System Potential: (kW)</i>	93	425	44	55	225	172
<i>Electric Generation: (kWh per year)</i>	69,997	506,332	33,107	65,525	268,059	204,916
<i>Displaced Cost: (per year)</i>	\$10,290	\$65,910	\$6,070	\$10,680	\$39,330	\$36,400

For more information on the SREC Registration Program (SRP) please visit:

<http://www.njcleanenergy.com/renewable-energy/programs/solar-renewable-energy-certificates-srec/new-jersey-solar-renewable-energy>

# Energy Efficient Best Practices

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- Reduce Air Leakage
- Close Doors and Windows
- Develop a Lighting Maintenance Schedule
- Ensure Lighting Controls Are Operating Properly
- Use Fans to Reduce Cooling Load
- Use Window Treatments/Coverings
- Clean and/or Replace HVAC filters
- Check and Seal Duct Leakage
- Perform Proper Boiler Maintenance
- Perform Proper Water Heater Maintenance
- Plug Load Controls
- Water Conservation

*See individual reports for specific EE practices by building*

# Clean Energy Program Portfolio



## ELIGIBLE SECTORS

Commercial, Industrial, Government, Non-Profit,  
Institutional and Multifamily

## INCENTIVE PROGRAMS

### Equipment Rebates:

- SmartStart
- CTEEP  
(Customer Tailored Energy Efficiency Pilot)
- Direct Install
- Large Energy Users

### Whole Buildings:

- Pay for Performance

### Energy Generation:

- Combined Heat and Power (CHP)

## OTHER PROGRAMS

### Renewable Energy Generation:

- SREC Registration Program (SRP)

\* eligible programs are highlighted in yellow

# Recommended NJCEP Incentives per Building



Salem County	Pay For Performance	Direct Install	SmartStart	CTEEP
Mosquito Commission Office Building		X	X	X
Prosecutors Modular Office		X	X	X
Public Works Garage		X	X	X
Emergency Services/911 Building		X	X	X
Jail	X		X	X
Agricultural Complex		X	X	X
Salem County Board of Social Services		X	X	X
Maintenance Shop		X	X	X
Fenwick Building		X	X	X
New Courthouse	X		X	X

# Recommended NJCEP Incentives per Building



Salem County	Direct Install	SmartStart	CTEEP
Johnson Building	X	X	X
County Office Building aka White Building	X	X	X
Administrative Building	X	X	X
Old Courthouse	X	X	X
5th Street Complex	X	X	X
Camp Crockett, Vo-Tech Pump, Water Tower	X	X	X

# Pay for Performance: Overview



- Comprehensive, whole-building approach to saving energy in existing or new facilities
- Qualification based on energy consumption, energy savings and measure types
- Customer chooses from network of pre-approved ***Participating Partners***
- Incentives paid in three installments at milestones
  - Incentives up to \$2MM per project (\$4MM entity cap/year)
    - \$1 million for electric measures
    - \$1 million for gas measures
  - Incentives up to 50% of total project cost

[www.NJCleanEnergy/P4P](http://www.NJCleanEnergy/P4P)



# Pay for Performance: Process



Submittal and  
Approval of  
Application

Development  
and Approval of  
Energy  
Reduction Plan  
(ERP)

Installation of  
Recommended  
Measures

Submittal and  
Approval of  
As-Built ERP and  
Cx Report

Post  
Construction  
Verification of  
Savings

Incentive #1  
*fixed between  
\$3,750-\$25,000*

Incentive #2  
*up to 25%  
project cost*

Incentive #3  
*up to 25%  
project cost*

1 year

# Pay for Performance: Details



Incentive #1: Energy Reduction Plan			
Incentive Amount:		\$0.15	per sq ft
Minimum Incentive:		\$3,750	
Maximum Incentive:		\$25,000	or 50% of facility annual energy cost
Incentive #2: Installation of Recommended Measures			
Minimum Performance Target:		15%	
Electric Incentives	Base Incentive based on 15% savings:	\$0.09	per projected kWh saved
	For each % over 15% add:	\$0.005	
	Maximum Incentive:	\$0.11	
Gas Incentives	Base Incentive based on 15 % savings:	\$0.90	per projected Therm saved
	For each % over 15% add:	\$0.05	
	Maximum Incentive:	\$1.25	
Incentive Cap:		25%	of total project cost
Incentive #3: Post-Construction Benchmarking Report			
Minimum Performance Target:		15%	
Electric Incentives	Base Incentive based on 15% savings:	\$0.09	per projected kWh saved
	For each % over 15% add:	\$0.005	
	Maximum Incentive:	\$0.11	
Gas Incentives	Base Incentive based on 15% savings:	\$0.90	per projected Therm saved
	For each % over 15% add:	\$0.05	
	Maximum Incentive:	\$1.25	
Incentive Cap:		25%	of total project cost

# Direct Install: Overview

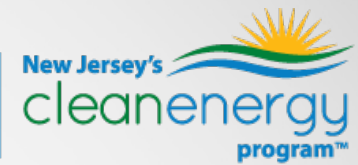
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- Turn-key retrofit program to replace outdated and inefficient equipment, including lighting, HVAC, refrigeration, etc.
- Open to Small to Mid-Sized Commercial and Industrial facilities with an average electric demand  $\leq 200$  kW
- Provides incentives of up to 70% of the installed cost
- Incentives are paid directly to the contractor
  - Customer only pays remaining 30% of installed cost
  - \$125,000 project/building cap
  - \$250,000 per entity cap (up to \$500,000 if using ESIP)
- Participating contractors provide support and process all paperwork
- Fast turnaround time: Average length of time for job completion (4-6 months)

# Direct Install:

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## Participating Contractor

**Tri-State Light & Energy, Inc.**

Alan Rhode

610-789-1900 x226

[asr@tsle.com](mailto:asr@tsle.com)

# Direct Install: Financing Option

The State of NJ pays:

- 70% of all qualified upgrades
- Up to \$125,000

South Jersey Gas will finance:

- Remaining 30%
- 0% financing
- For 3 years
- Up to \$53,571

# SmartStart: Overview

- Two types of incentives for high efficiency equipment installation:
  - Prescriptive
  - Custom
- Project Categories:
  - New Construction
  - Renovation
  - Remodeling
  - Equipment Replacement
- Project pre-approval required for lighting and custom measures
- Incentives up to \$500,000 per electric account & \$500,000 per natural gas account
- Specific incentives and individual applications for Lighting, HVAC, VFDs, Refrigeration, Controls and more!

[www.NJCleanEnergy/SSB](http://www.NJCleanEnergy/SSB)

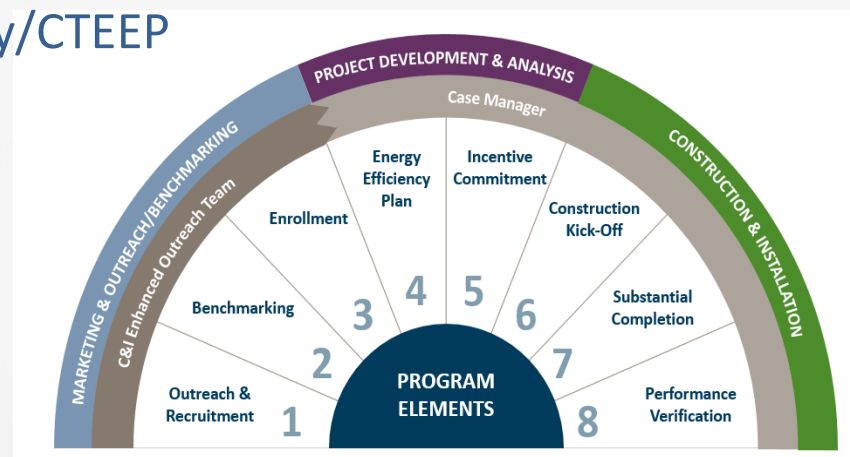
# CTEEP: Overview



## Customer Tailored Energy Efficiency Pilot (CTEEP)

- Provide customers with **on-site assistance** to discuss project opportunities and program incentives.
- A **single application** submission streamlines multiple prescriptive and custom measures.
- Provide **technical assistance incentives** to help offset soft costs associated with developing and planning an energy efficiency project.
- Incentives up to \$250,000 entity cap.

[www.NJCleanEnergy/CTEEP](http://www.NJCleanEnergy/CTEEP)



# SmartStart, CTEEP & P4P:



## Financing Option

- 0% Financing
- Up to \$130,000 for 10 years
- SJG can help guide you through the process

Contact:

Bruce Grossman – Program Manager

South Jersey Gas

#1 South Jersey Plaza

Folsom, NJ 08037

Phone: 609-561-9000, ext. 4271





# CHP: OVERVIEW

## Combined Heat and Power (CHP)

- Enhanced alternative to emergency generators
- On-site power generation with recovery and productive use of waste heat
- System provides building heating and cooling
- Resiliency with Return on Investment
- Technology-neutral incentives
- 30/50/20 Incentive payment
  - 30% when equipment purchased
  - 50% when system installed
  - 20% upon acceptance and confirmation that the project is achieving the required performance

# CHP: OVERVIEW



Eligible Technologies	Size (Installed Rated Capacity) <sup>1</sup>	Incentive (\$/kW)	% of Total Cost Cap per Project <sup>3</sup>	\$ Cap per Project <sup>3</sup>
Powered by non-renewable or renewable fuel source <sup>4</sup>	≤500 kW	\$2,000	30-40% <sup>2</sup>	\$2 million
Gas Internal Combustion Engine	>500 kW - 1 MW	\$1,000		
Gas Combustion Turbine	> 1 MW - 3 MW	\$550	30%	\$3 million
Microturbine	>3 MW	\$350		
Fuel Cells with Heat Recovery				
Waste Heat to Power*	<1 MW	\$1,000	30%	\$2 million
	> 1MW	\$500		\$3 million

\*Waste Heat to Power: Powered by non-renewable fuel source, heat recovery or other mechanical recovery from existing equipment utilizing new electric generation equipment (e.g. steam turbine).

# Recommended NJCEP Incentives per Building



Salem County	Pay For Performance	Direct Install	SmartStart	CTEEP
Mosquito Commission Office Building		X	X	X
Prosecutors Modular Office		X	X	X
Public Works Garage		X	X	X
Emergency Services/911 Building		X	X	X
Jail	X		X	X
Agricultural Complex		X	X	X
Salem County Board of Social Services		X	X	X
Maintenance Shop		X	X	X
Fenwick Building		X	X	X
New Courthouse	X		X	X

# Recommended NJCEP Incentives per Building



Salem County	Direct Install	SmartStart	CTEEP
Johnson Building	X	X	X
County Office Building aka White Building	X	X	X
Administrative Building	X	X	X
Old Courthouse	X	X	X
5th Street Complex	X	X	X
Camp Crockett, Vo-Tech Pump, Water Tower	X	X	X

## Energy Savings Improvement Program (ESIP)

- Provides alternative financing for energy savings projects at public institutions. Value of energy savings leveraged to pay for cost of EE projects over a 15 year contract. Does not count as debt/require voter approval.
- Requires an audit as 1<sup>st</sup> step (LGEA satisfies requirement)
- ESIP participation question on LGEA application
- Program administered directly by BPU

## ESIP Process

## New Jersey's Clean Energy Program Interaction

Initial Energy Audit completed  
for entity building(s)

Local Government Energy Audit  
(LGEA) may be used to meet  
this requirement

Entity issues ESIP RFP (previously  
approved by BPU) and selects ESCO  
or DIY approach

Investment Grade Energy Audit completed  
and Energy Savings Plan (ESP)  
developed

P4P Energy Reduction Plan (ERP),  
Direct Install, or SmartStart application  
recommended submittal time frame

Third party review of ESP

Review and approval of ESP  
by Board of Public Utilities (BPU)

Entity adopts ESP,  
determines guarantee



# FOR MORE INFORMATION

## ESIP

**Mike Thulen**

ESIP Coordinator

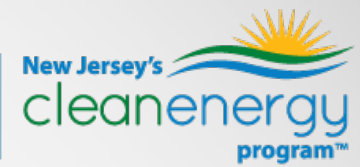
Office: 609-777-3338

Cell: 732-330-2419

[ESIP@bpu.nj.gov](mailto:ESIP@bpu.nj.gov)

# Questions

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# FOR MORE INFORMATION

**Visit** [NJCleanEnergy.com](http://NJCleanEnergy.com)

**Call** (866) NJSMART

**Gary Finger**

Regional Outreach Manager

856.780.8553

[gfinger@trcsolutions.com](mailto:gfinger@trcsolutions.com)