

LGEA Presentation

Round Valley Recreational Area

January 29, 2025



New Jersey's
Clean Energy Program

Lighting the way to New Jersey's Clean Energy Future

INTRODUCTIONS

- *NJDEP - RVRA*
 - Deidre Supple
 - Jeffrey MacMullen
 - Stephen Myers
 - Laura Petrangeli
 - Ryan Gergely
- *NJBPU*
 - Sarah Bluhm Gibson
 - Yulia Grinberg
- *NJ Clean Energy Program*
 - Sarah Walters – LGEA Project Manager
 - Moussa Traore – LGEA Technical Manager
 - Juno Romanick – LGEA Project Auditor
 - Daniel Krasowsky – LGEA Account Manager
- *Utility Energy Efficiency Programs*
 - Tiffany Lewis – JCP&L
 - Andrew Doss – JCP&L

AGENDA

- The audit process overview
- Energy use & existing conditions
- Review of **E**nergy **C**onservation **M**easures (ECMs) identified & other recommendations
- Energy Savings Improvement Program (ESIP)
- Energy Efficiency Incentive Programs
- Questions regarding the draft audit report
- Next steps for Round Valley Recreational Area

LGEA PROCESS

- Application Approval
- Initial Call
- Facility Interviews
- Audit
- Benchmarking & Analysis
- Draft Reports
- LGEA Presentation
- Final Reports



SITE VISIT & UTILITY ANALYSIS

Overview of Systems, Baseline & Existing Conditions:

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

Utility Consumption and Costs:

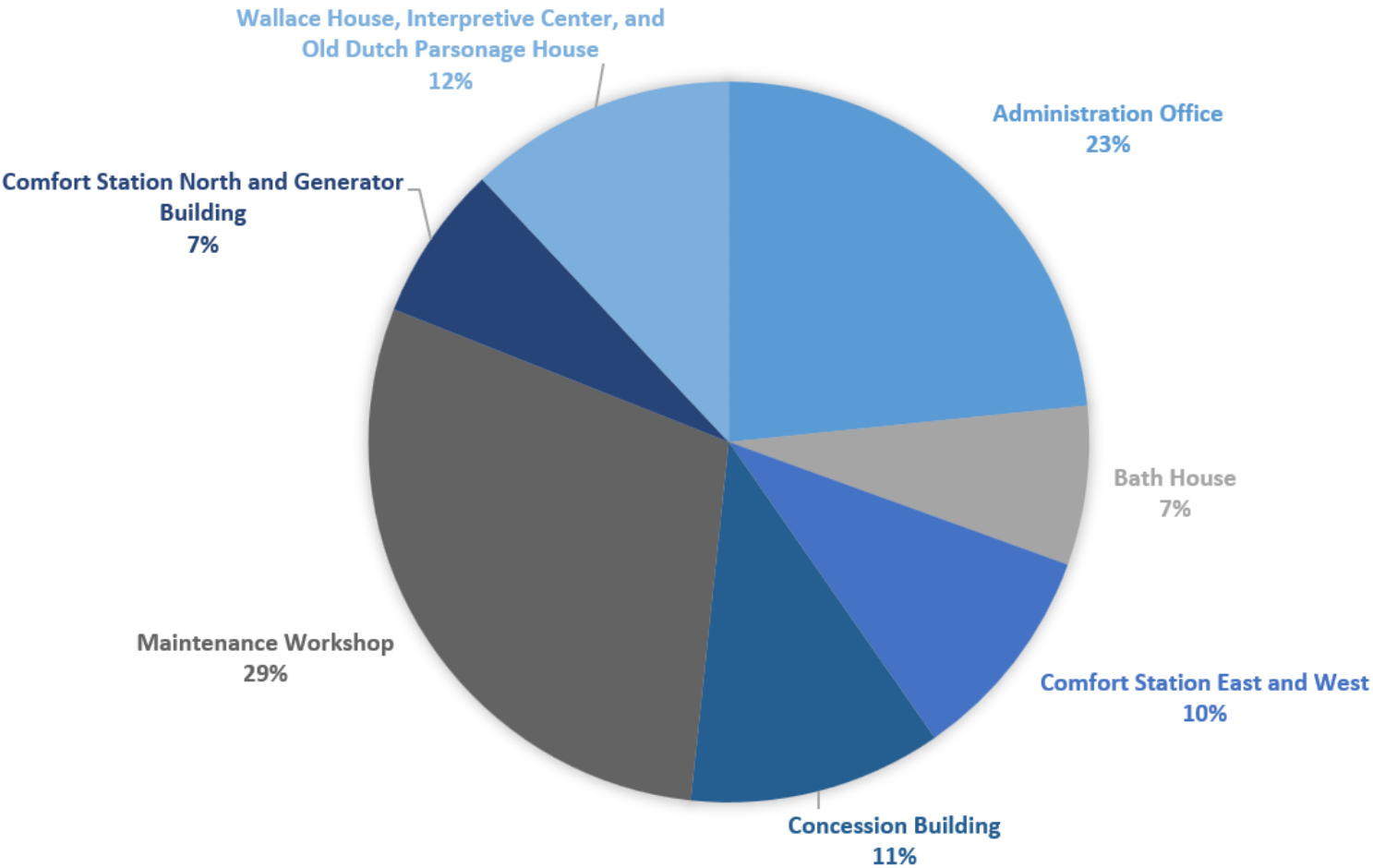
- Electric
- Natural Gas
- Propane
- Water

Sites Visited/Analyzed

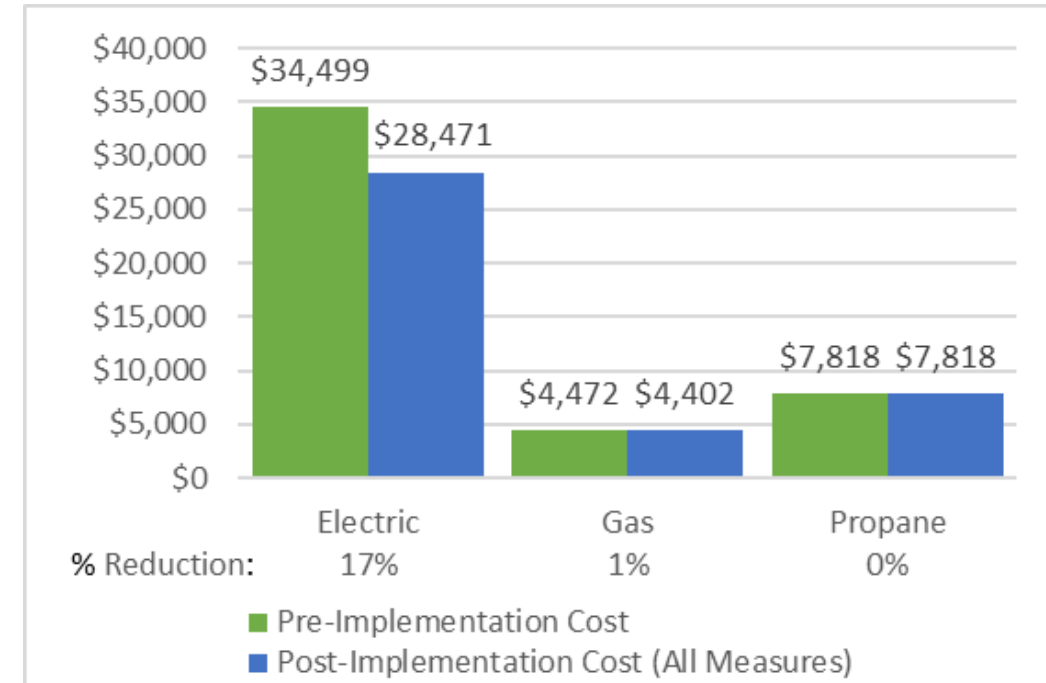
- Maintenance Workshop
- Comfort Station North and Generator Building
- Administration Office
- Concession Building
- Bath House
- Interpretive Center, Wallace and Old Dutch Parsonage Historic Sites

UTILITY BREAKOUT


Percent of Total Annual Energy Costs



Pre & Post Implementation Cost



BENCHMARKING



ENERGY STAR® Statement of Energy Performance

LEARN MORE AT energystar.gov

15

ENERGY STAR® Score¹

Round Valley - Administration Office

Primary Property Type: Office
Gross Floor Area (ft²): 2,900
Built: 1973

For Year Ending: May 31, 2024
Date Generated: November 03, 2024

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 | | | |
|---|--|--|--|
| Property Address Round Valley - Administration Office 1220 Stanton-Lebanon Road Lebanon, New Jersey 08833 | Property Owner State of New Jersey 428 East State Street Trenton, NJ 08625 (609) 940-4129 | Primary Contact New Jersey Board of Public Utilities State Energy Services 44 South Clinton Ave Trenton, NJ 08625 6096339666 BPU.EnergyServices@bpu.nj.gov | |
| Property ID: 35939737 | | | |

| Energy Consumption and Energy Use Intensity (EUI) | | | |
|---|--|-------------------|---|
| Site EUI 73 kBtu/ft² | Annual Energy by Fuel Electric - Grid (kBtu) | 211,570 (100%) | Annual Emissions Total (Location-Based) GHG Emissions (Metric Tons CO2e/year) 19 |
| Source EUI 204.3 kBtu/ft² | National Median Comparison National Median Site EUI (kBtu/ft²) 44.6 National Median Source EUI (kBtu/ft²) 124.9 % Diff from National Median Source EUI 64% | | Green Power Green Power - Onsite (kWh) N/A Green Power - Offsite (kWh) 0 Percent of RECs Retained N/A |

Signature & Stamp of Verifying Professional

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

LP Signature: _____ Date: _____

Licensed Professional

() - _____

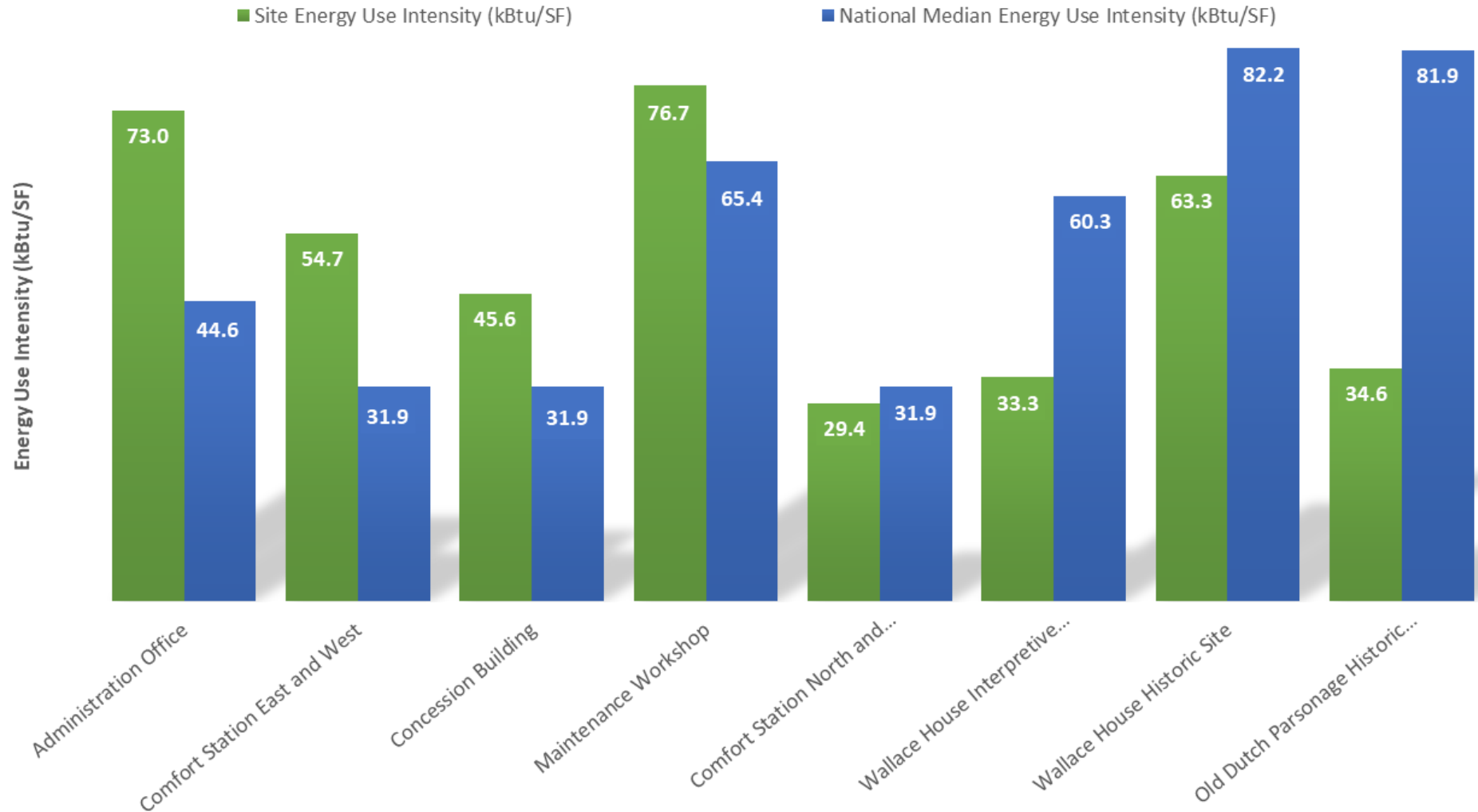
Professional Engineer or Registered Architect Stamp (if applicable)

| Site Name | ENERGY STAR® Score |
|-----------------|--------------------|
| All Other Sites | N/A |

| Site EUI | Annual Energy by Fuel | |
|----------------|--|----------------|
| 73 kBtu/ft² | Electric - Grid (kBtu) | 211,570 (100%) |
| Source EUI | National Median Comparison | |
| 204.3 kBtu/ft² | National Median Site EUI (kBtu/ft²) | 44.6 |
| | National Median Source EUI (kBtu/ft²) | 124.9 |
| | % Diff from National Median Source EUI | 64% |

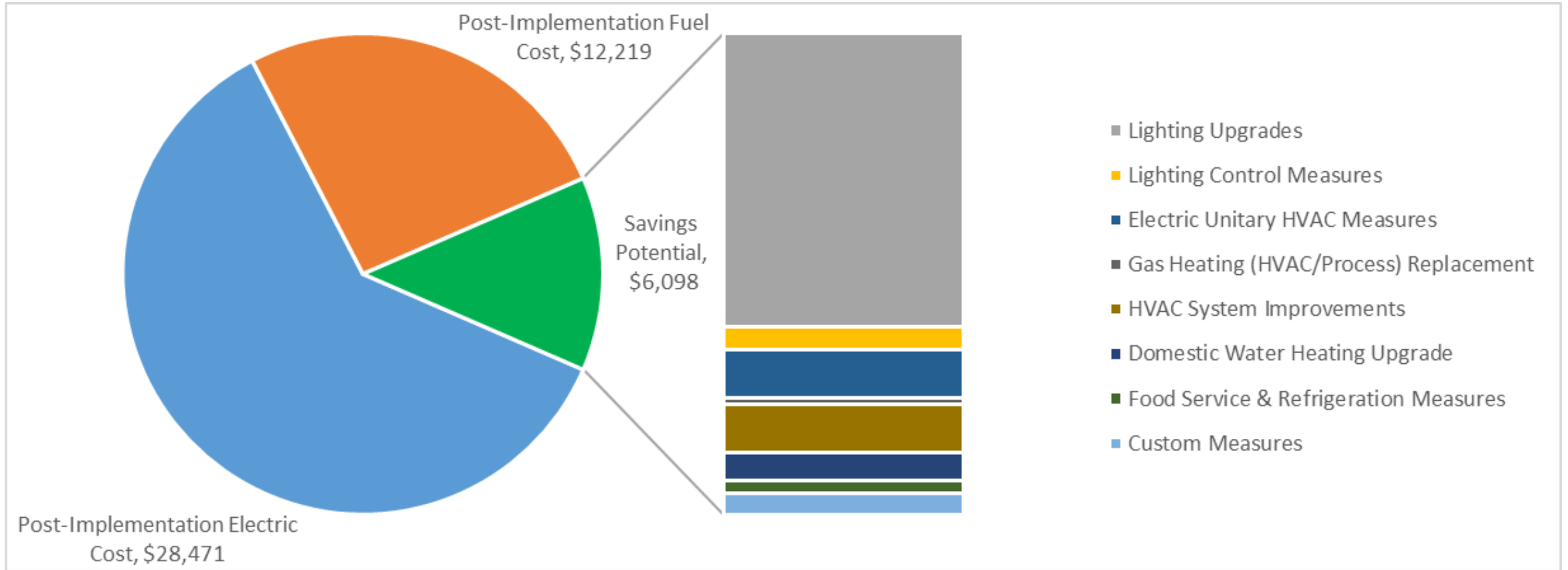
ENERGY STAR® scores are percentile ranking from 1 (least efficient) to 100 (most efficient). It compares your building's energy performance to similar buildings nationwide.

BENCHMARKING



ALL OPPORTUNITIES

Savings Potential



ALL OPPORTUNITIES

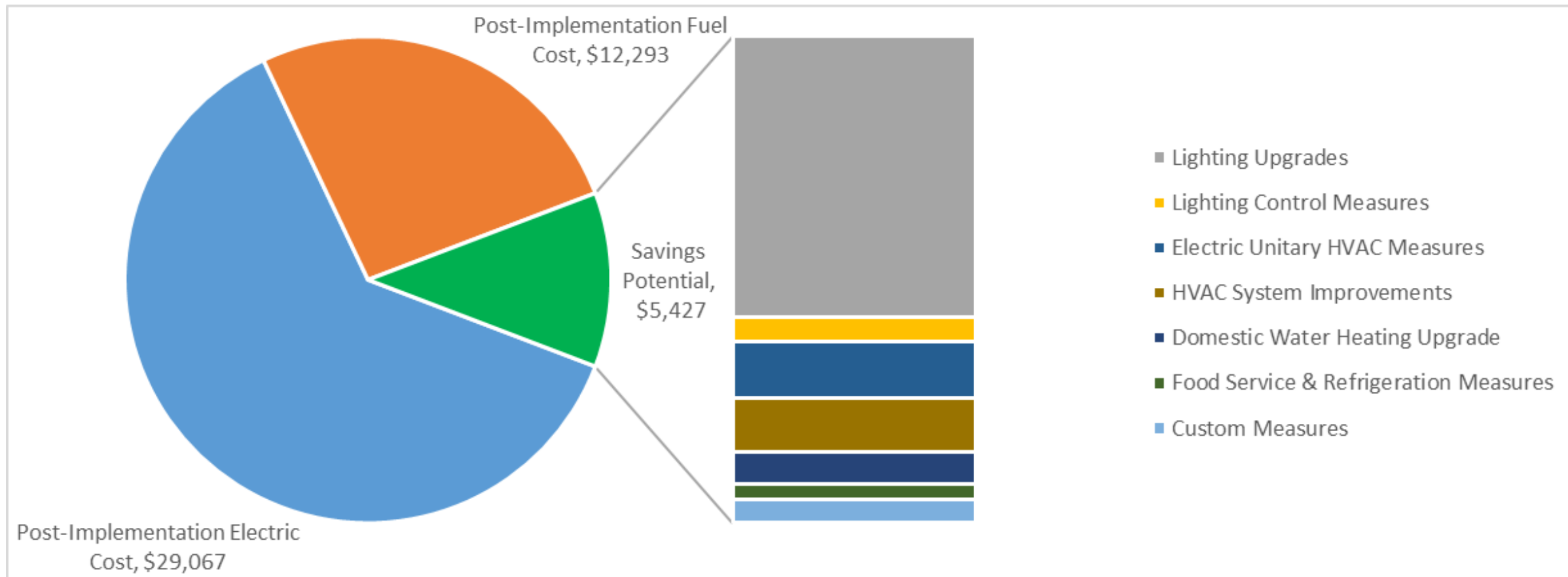
| # | Energy Conservation Measure | Annual Electric Savings (kWh) | Peak Demand Savings (kW) | Annual Fuel Savings (MMBtu) | Annual Energy Cost Savings (\$) | Estimated M&L Cost (\$) | Estimated Incentive (\$)* | Estimated Net M&L Cost (\$) | Simple Payback Period (yrs)** | CO ₂ e Emissions Reduction (lbs) |
|--|---|-------------------------------|--------------------------|-----------------------------|---------------------------------|-------------------------|---------------------------|-----------------------------|-------------------------------|---|
| Lighting Upgrades | | 19,160 | 10.7 | -0.3 | \$3,712 | \$39,640 | \$3,250 | \$36,390 | 9.8 | 19,262 |
| ECM 1 | Install LED Fixtures | 3,675 | 2.3 | 0.0 | \$851 | \$23,980 | \$1,750 | \$22,230 | 26.1 | 3,700 |
| ECM 2 | Retrofit Fluorescent Fixtures with LED Lamps and Drivers | 7,523 | 4.7 | 0.0 | \$1,369 | \$10,610 | \$960 | \$9,650 | 7.0 | 7,574 |
| ECM 3 | Retrofit Fixtures with LED Lamps | 7,962 | 3.6 | -0.3 | \$1,492 | \$5,050 | \$540 | \$4,510 | 3.0 | 7,988 |
| Lighting Control Measures | | 1,424 | 0.9 | 0.0 | \$298 | \$5,790 | \$720 | \$5,070 | 17.0 | 1,431 |
| ECM 4 | Install Occupancy Sensor Lighting Controls | 1,424 | 0.9 | 0.0 | \$298 | \$5,790 | \$720 | \$5,070 | 17.0 | 1,431 |
| Unitary HVAC Measures | | 3,560 | 1.1 | 0.0 | \$619 | \$10,700 | \$600 | \$10,100 | 16.3 | 3,585 |
| ECM 5 | Install High Efficiency Air Conditioning Units | 3,560 | 1.1 | 0.0 | \$619 | \$10,700 | \$600 | \$10,100 | 16.3 | 3,585 |
| Gas Heating (HVAC/Process) Replacement | | 0 | 0.0 | 5.0 | \$71 | \$2,600 | \$500 | \$2,100 | 29.7 | 591 |
| ECM 6 | Install High Efficiency Furnaces | 0 | 0.0 | 5.0 | \$71 | \$2,600 | \$500 | \$2,100 | 29.7 | 591 |
| HVAC System Improvements | | 3,509 | 0.0 | 0.0 | \$607 | \$430 | \$10 | \$420 | 0.7 | 3,534 |
| ECM 7 | Install Programmable Thermostats | 3,388 | 0.0 | 0.0 | \$589 | \$380 | \$0 | \$380 | 0.6 | 3,412 |
| ECM 8 | Install Pipe Insulation | 121 | 0.0 | 0.0 | \$18 | \$50 | \$10 | \$40 | 2.2 | 122 |
| Domestic Water Heating Upgrade | | 1,079 | 0.0 | 0.0 | \$362 | \$130 | \$30 | \$100 | 0.3 | 1,087 |
| ECM 9 | Install Low-Flow DHW Devices | 1,079 | 0.0 | 0.0 | \$362 | \$130 | \$30 | \$100 | 0.3 | 1,087 |
| Food Service & Refrigeration Measures | | 1,138 | 0.0 | 0.0 | \$169 | \$3,070 | \$170 | \$2,900 | 17.2 | 1,146 |
| ECM 10 | Refrigerator/Freezer Case Electrically Commutated Motors | 197 | 0.0 | 0.0 | \$29 | \$370 | \$40 | \$330 | 11.3 | 198 |
| ECM 11 | Refrigeration Controls | 941 | 0.0 | 0.0 | \$140 | \$2,700 | \$130 | \$2,570 | 18.4 | 948 |
| Custom Measures | | 1,618 | 0.0 | 0.0 | \$260 | \$2,900 | \$0 | \$2,900 | 11.2 | 1,629 |
| ECM 12 | Replace Electric Water Heater with Heat Pump Water Heater | 1,618 | 0.0 | 0.0 | \$260 | \$2,900 | \$0 | \$2,900 | 11.2 | 1,629 |
| TOTALS (ALL MEASURES) | | 31,490 | 12.7 | 4.7 | \$6,098 | \$65,260 | \$5,280 | \$59,980 | 9.8 | 32,266 |

* - All incentives presented in this table are included as placeholders for planning purposes and are based on previously run state rebate programs. Contact your utility provider for details on current programs.

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

COST EFFECTIVE OPPORTUNITIES

Savings Potential



COST EFFECTIVE OPPORTUNITIES

| # | Energy Conservation Measure | Annual Electric Savings (kWh) | Peak Demand Savings (kW) | Annual Fuel Savings (MMBtu) | Annual Energy Cost Savings (\$) | Estimated M&L Cost (\$) | Estimated Incentive (\$)* | Estimated Net M&L Cost (\$) | Simple Payback Period (yrs)** | CO ₂ e Emissions Reduction (lbs) |
|--|---|-------------------------------|--------------------------|-----------------------------|---------------------------------|-------------------------|---------------------------|-----------------------------|-------------------------------|---|
| Lighting Upgrades | | 17,262 | 7.1 | -0.3 | \$3,137 | \$15,840 | \$1,580 | \$14,260 | 4.5 | 17,353 |
| ECM 1 | Install LED Fixtures | 1,879 | 0.0 | 0.0 | \$302 | \$1,330 | \$150 | \$1,180 | 3.9 | 1,892 |
| ECM 2 | Retrofit Fluorescent Fixtures with LED Lamps and Drivers | 7,427 | 4.4 | 0.0 | \$1,346 | \$9,990 | \$890 | \$9,100 | 6.8 | 7,479 |
| ECM 3 | Retrofit Fixtures with LED Lamps | 7,955 | 2.8 | -0.3 | \$1,489 | \$4,520 | \$540 | \$3,980 | 2.7 | 7,981 |
| Lighting Control Measures | | 1,260 | 0.8 | 0.0 | \$274 | \$4,680 | \$580 | \$4,100 | 15.0 | 1,265 |
| ECM 4 | Install Occupancy Sensor Lighting Controls | 1,260 | 0.8 | 0.0 | \$274 | \$4,680 | \$580 | \$4,100 | 15.0 | 1,265 |
| Unitary HVAC Measures | | 3,560 | 1.1 | 0.0 | \$619 | \$10,700 | \$600 | \$10,100 | 16.3 | 3,585 |
| ECM 5 | Install High Efficiency Air Conditioning Units | 3,560 | 1.1 | 0.0 | \$619 | \$10,700 | \$600 | \$10,100 | 16.3 | 3,585 |
| HVAC System Improvements | | 3,509 | 0.0 | 0.0 | \$607 | \$430 | \$10 | \$420 | 0.7 | 3,534 |
| ECM 7 | Install Programmable Thermostats | 3,388 | 0.0 | 0.0 | \$589 | \$380 | \$0 | \$380 | 0.6 | 3,412 |
| ECM 8 | Install Pipe Insulation | 121 | 0.0 | 0.0 | \$18 | \$50 | \$10 | \$40 | 2.2 | 122 |
| Domestic Water Heating Upgrade | | 1,079 | 0.0 | 0.0 | \$362 | \$130 | \$30 | \$100 | 0.3 | 1,087 |
| ECM 9 | Install Low-Flow DHW Devices | 1,079 | 0.0 | 0.0 | \$362 | \$130 | \$30 | \$100 | 0.3 | 1,087 |
| Food Service & Refrigeration Measures | | 1,138 | 0.0 | 0.0 | \$169 | \$3,070 | \$170 | \$2,900 | 17.2 | 1,146 |
| ECM 10 | Refrigerator/Freezer Case Electrically Commutated Motors | 197 | 0.0 | 0.0 | \$29 | \$370 | \$40 | \$330 | 11.3 | 198 |
| ECM 11 | Refrigeration Controls | 941 | 0.0 | 0.0 | \$140 | \$2,700 | \$130 | \$2,570 | 18.4 | 948 |
| Custom Measures | | 1,618 | 0.0 | 0.0 | \$260 | \$2,900 | \$0 | \$2,900 | 11.2 | 1,629 |
| ECM 12 | Replace Electric Water Heater with Heat Pump Water Heater | 1,618 | 0.0 | 0.0 | \$260 | \$2,900 | \$0 | \$2,900 | 11.2 | 1,629 |
| TOTALS | | 29,427 | 9.1 | -0.3 | \$5,427 | \$37,750 | \$2,970 | \$34,780 | 6.4 | 29,599 |

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

MAINTENANCE WORKSHOP

| # | Energy Conservation Measure | Cost Effective? | Annual Electric Savings (kWh) | Peak Demand Savings (kW) | Annual Fuel Savings (MMBtu) | Annual Energy Cost Savings (\$) | Estimated M&L Cost (\$) | Estimated Incentive (\$)* | Estimated Net M&L Cost (\$) | Simple Payback Period (yrs)** | CO ₂ e Emissions Reduction (lbs) |
|---|---|-----------------|-------------------------------|--------------------------|-----------------------------|---------------------------------|-------------------------|---------------------------|-----------------------------|-------------------------------|---|
| Lighting Upgrades | | | 6,752 | 1.9 | 0 | \$1,086 | \$4,360 | \$500 | \$3,860 | 3.6 | 6,799 |
| ECM 1 | Install LED Fixtures | Yes | 1,879 | 0.0 | 0 | \$302 | \$1,330 | \$150 | \$1,180 | 3.9 | 1,892 |
| ECM 2 | Retrofit Fluorescent Fixtures with LED Lamps and Drivers | Yes | 2,606 | 0.9 | 0 | \$419 | \$1,600 | \$180 | \$1,420 | 3.4 | 2,624 |
| ECM 3 | Retrofit Fixtures with LED Lamps | Yes | 2,266 | 1.0 | 0 | \$364 | \$1,430 | \$170 | \$1,260 | 3.5 | 2,282 |
| Lighting Control Measures | | | 210 | 0.1 | 0 | \$34 | \$600 | \$80 | \$520 | 15.4 | 211 |
| ECM 4 | Install Occupancy Sensor Lighting Controls | Yes | 210 | 0.1 | 0 | \$34 | \$600 | \$80 | \$520 | 15.4 | 211 |
| Custom Measures | | | 1,618 | 0.0 | 0 | \$260 | \$2,900 | \$0 | \$2,900 | 11.2 | 1,629 |
| ECM 5 | Replace Electric Water Heater with Heat Pump Water Heater | Yes | 1,618 | 0.0 | 0 | \$260 | \$2,900 | \$0 | \$2,900 | 11.2 | 1,629 |
| TOTALS (COST EFFECTIVE MEASURES) | | | 8,579 | 2.0 | 0 | \$1,379 | \$7,860 | \$580 | \$7,280 | 5.3 | 8,639 |
| TOTALS (ALL MEASURES) | | | 8,579 | 2.0 | 0 | \$1,379 | \$7,860 | \$580 | \$7,280 | 5.3 | 8,639 |

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COMFORT STATION NORTH & GENERATOR BLDG

| # | Energy Conservation Measure | Cost Effective? | Annual Electric Savings (kWh) | Peak Demand Savings (kW) | Annual Fuel Savings (MMBtu) | Annual Energy Cost Savings (\$) | Estimated M&L Cost (\$) | Estimated Incentive (\$)* | Estimated Net M&L Cost (\$) | Simple Payback Period (yrs)** | CO ₂ e Emissions Reduction (lbs) |
|---|----------------------------------|-----------------|-------------------------------|--------------------------|-----------------------------|---------------------------------|-------------------------|---------------------------|-----------------------------|-------------------------------|---|
| Lighting Upgrades | | | 878 | 0.3 | 0 | \$234 | \$390 | \$60 | \$330 | 1.4 | 884 |
| ECM 1 | Retrofit Fixtures with LED Lamps | Yes | 878 | 0.3 | 0 | \$234 | \$390 | \$60 | \$330 | 1.4 | 884 |
| TOTALS (COST EFFECTIVE MEASURES) | | | 878 | 0.3 | 0 | \$234 | \$390 | \$60 | \$330 | 1.4 | 884 |
| TOTALS (ALL MEASURES) | | | 878 | 0.3 | 0 | \$234 | \$390 | \$60 | \$330 | 1.4 | 884 |

* - All incentives presented in this table are included as placeholders for planning purposes and are based on previously run state rebate programs. Contact your utility provider for details on current programs.

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

ADMINISTRATION OFFICE

| # | Energy Conservation Measure | Cost Effective? | Annual Electric Savings (kWh) | Peak Demand Savings (kW) | Annual Fuel Savings (MMBtu) | Annual Energy Cost Savings (\$) | Estimated M&L Cost (\$) | Estimated Incentive (\$)* | Estimated Net M&L Cost (\$) | Simple Payback Period (yrs)** | CO ₂ e Emissions Reduction (lbs) |
|---|--|-----------------|-------------------------------|--------------------------|-----------------------------|---------------------------------|-------------------------|---------------------------|-----------------------------|-------------------------------|---|
| Lighting Upgrades | | | 5,552 | 1.7 | 0 | \$965 | \$3,870 | \$330 | \$3,540 | 3.7 | 5,591 |
| ECM 1 | Retrofit Fluorescent Fixtures with LED Lamps and Drivers | Yes | 3,722 | 1.6 | 0 | \$647 | \$3,640 | \$310 | \$3,330 | 5.1 | 3,748 |
| ECM 2 | Retrofit Fixtures with LED Lamps | Yes | 1,830 | 0.0 | 0 | \$318 | \$230 | \$20 | \$210 | 0.7 | 1,843 |
| Lighting Control Measures | | | 506 | 0.2 | 0 | \$88 | \$1,140 | \$140 | \$1,000 | 11.4 | 510 |
| ECM 3 | Install Occupancy Sensor Lighting Controls | Yes | 506 | 0.2 | 0 | \$88 | \$1,140 | \$140 | \$1,000 | 11.4 | 510 |
| Unitary HVAC Measures | | | 3,560 | 1.1 | 0 | \$619 | \$10,700 | \$600 | \$10,100 | 16.3 | 3,585 |
| ECM 4 | Install High Efficiency Air Conditioning Units | Yes | 3,560 | 1.1 | 0 | \$619 | \$10,700 | \$600 | \$10,100 | 16.3 | 3,585 |
| HVAC System Improvements | | | 3,388 | 0.0 | 0 | \$589 | \$380 | \$0 | \$380 | 0.6 | 3,412 |
| ECM 5 | Install Programmable Thermostats | Yes | 3,388 | 0.0 | 0 | \$589 | \$380 | \$0 | \$380 | 0.6 | 3,412 |
| Domestic Water Heating Upgrade | | | 106 | 0.0 | 0 | \$18 | \$10 | \$0 | \$10 | 0.5 | 107 |
| ECM 6 | Install Low-Flow DHW Devices | Yes | 106 | 0.0 | 0 | \$18 | \$10 | \$0 | \$10 | 0.5 | 107 |
| TOTALS (COST EFFECTIVE MEASURES) | | | 13,113 | 3.0 | 0 | \$2,279 | \$16,100 | \$1,070 | \$15,030 | 6.6 | 13,205 |
| TOTALS (ALL MEASURES) | | | 13,113 | 3.0 | 0 | \$2,279 | \$16,100 | \$1,070 | \$15,030 | 6.6 | 13,205 |

* - All incentives presented in this table are included as placeholders for planning purposes and are based on previously run state rebate programs. Contact your utility provider for details on current programs.

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

COMFORT STATION EAST & WEST



| # | Energy Conservation Measure | Cost Effective? | Annual Electric Savings (kWh) | Peak Demand Savings (kW) | Annual Fuel Savings (MMBtu) | Annual Energy Cost Savings (\$) | Estimated M&L Cost (\$) | Estimated Incentive (\$)* | Estimated Net M&L Cost (\$) | Simple Payback Period (yrs)** | CO ₂ e Emissions Reduction (lbs) |
|---|--|-----------------|-------------------------------|--------------------------|-----------------------------|---------------------------------|-------------------------|---------------------------|-----------------------------|-------------------------------|---|
| Lighting Upgrades | | | 1,531 | 0.3 | 0 | \$243 | \$580 | \$120 | \$460 | 1.9 | 1,541 |
| ECM 1 | Retrofit Fixtures with LED Lamps | Yes | 1,531 | 0.3 | 0 | \$243 | \$580 | \$120 | \$460 | 1.9 | 1,541 |
| Lighting Control Measures | | | 160 | 0.0 | 0 | \$25 | \$300 | \$40 | \$260 | 10.3 | 161 |
| ECM 2 | Install Occupancy Sensor Lighting Controls | Yes | 160 | 0.0 | 0 | \$25 | \$300 | \$40 | \$260 | 10.3 | 161 |
| TOTALS (COST EFFECTIVE MEASURES) | | | 1,690 | 0.4 | 0 | \$268 | \$880 | \$160 | \$720 | 2.7 | 1,702 |
| TOTALS (ALL MEASURES) | | | 1,690 | 0.4 | 0 | \$268 | \$880 | \$160 | \$720 | 2.7 | 1,702 |

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CONCESSION BUILDING

| # | Energy Conservation Measure | Cost Effective? | Annual Electric Savings (kWh) | Peak Demand Savings (kW) | Annual Fuel Savings (MMBtu) | Annual Energy Cost Savings (\$) | Estimated M&L Cost (\$) | Estimated Incentive (\$)* | Estimated Net M&L Cost (\$) | Simple Payback Period (yrs)** | CO ₂ e Emissions Reduction (lbs) |
|--|--|-----------------|-------------------------------|--------------------------|-----------------------------|---------------------------------|-------------------------|---------------------------|-----------------------------|-------------------------------|---|
| Lighting Upgrades | | | 1,401 | 0.8 | 0 | \$208 | \$6,040 | \$430 | \$5,610 | 27.0 | 1,411 |
| ECM 1 | Install LED Fixtures | No | 574 | 0.3 | 0 | \$85 | \$4,250 | \$300 | \$3,950 | 46.3 | 578 |
| ECM 2 | Retrofit Fluorescent Fixtures with LED Lamps and Drivers | Yes | 594 | 0.5 | 0 | \$88 | \$1,530 | \$120 | \$1,410 | 16.0 | 598 |
| ECM 3 | Retrofit Fixtures with LED Lamps | Yes | 233 | 0.0 | 0 | \$35 | \$260 | \$10 | \$250 | 7.2 | 235 |
| Lighting Control Measures | | | 164 | 0.1 | 0 | \$24 | \$1,110 | \$140 | \$970 | 39.8 | 166 |
| ECM 4 | Install Occupancy Sensor Lighting Controls | No | 164 | 0.1 | 0 | \$24 | \$1,110 | \$140 | \$970 | 39.8 | 166 |
| HVAC System Improvements | | | 121 | 0.0 | 0 | \$18 | \$50 | \$10 | \$40 | 2.2 | 122 |
| ECM 5 | Install Pipe Insulation | Yes | 121 | 0.0 | 0 | \$18 | \$50 | \$10 | \$40 | 2.2 | 122 |
| Domestic Water Heating Upgrade | | | 98 | 0.0 | 0 | \$15 | \$40 | \$0 | \$40 | 2.7 | 99 |
| ECM 6 | Install Low-Flow DHW Devices | Yes | 98 | 0.0 | 0 | \$15 | \$40 | \$0 | \$40 | 2.7 | 99 |
| Food Service & Refrigeration Measures | | | 1,138 | 0.0 | 0 | \$169 | \$3,070 | \$170 | \$2,900 | 17.2 | 1,146 |
| ECM 7 | Refrigerator/Freezer Case Electrically Commutated Motors | Yes | 197 | 0.0 | 0 | \$29 | \$370 | \$40 | \$330 | 11.3 | 198 |
| ECM 8 | Refrigeration Controls | Yes | 941 | 0.0 | 0 | \$140 | \$2,700 | \$130 | \$2,570 | 18.4 | 948 |
| TOTALS (COST EFFECTIVE MEASURES) | | | 2,184 | 0.5 | 0 | \$324 | \$4,950 | \$310 | \$4,640 | 14.3 | 2,200 |
| TOTALS (ALL MEASURES) | | | 2,923 | 0.9 | 0 | \$434 | \$10,310 | \$750 | \$9,560 | 22.0 | 2,943 |

* - All incentives presented in this table are included as placeholders for planning purposes and are based on previously run state rebate programs. Contact your utility provider for details on current programs.

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

BATH HOUSE

| # | Energy Conservation Measure | Cost Effective? | Annual Electric Savings (kWh) | Peak Demand Savings (kW) | Annual Fuel Savings (MMBtu) | Annual Energy Cost Savings (\$) | Estimated M&L Cost (\$) | Estimated Incentive (\$)* | Estimated Net M&L Cost (\$) | Simple Payback Period (yrs)** | CO ₂ e Emissions Reduction (lbs) |
|---|--|-----------------|-------------------------------|--------------------------|-----------------------------|---------------------------------|-------------------------|---------------------------|-----------------------------|-------------------------------|---|
| Lighting Upgrades | | | 1,734 | 4.2 | 0 | \$658 | \$22,150 | \$1,580 | \$20,570 | 31.2 | 1,746 |
| ECM 1 | Install LED Fixtures | No | 1,221 | 2.0 | 0 | \$464 | \$18,400 | \$1,300 | \$17,100 | 36.9 | 1,230 |
| ECM 2 | Retrofit Fluorescent Fixtures with LED Lamps and Drivers | Yes | 505 | 1.3 | 0 | \$192 | \$3,220 | \$280 | \$2,940 | 15.3 | 509 |
| ECM 3 | Retrofit Fixtures with LED Lamps | No | 7 | 0.9 | 0 | \$3 | \$530 | \$0 | \$530 | 201.1 | 7 |
| Lighting Control Measures | | | 245 | 0.4 | 0 | \$93 | \$1,980 | \$240 | \$1,740 | 18.7 | 247 |
| ECM 4 | Install Occupancy Sensor Lighting Controls | Yes | 245 | 0.4 | 0 | \$93 | \$1,980 | \$240 | \$1,740 | 18.7 | 247 |
| Domestic Water Heating Upgrade | | | 850 | 0.0 | 0 | \$323 | \$70 | \$30 | \$40 | 0.1 | 856 |
| ECM 5 | Install Low-Flow DHW Devices | Yes | 850 | 0.0 | 0 | \$323 | \$70 | \$30 | \$40 | 0.1 | 856 |
| TOTALS (COST EFFECTIVE MEASURES) | | | 1,601 | 1.7 | 0 | \$608 | \$5,270 | \$550 | \$4,720 | 7.8 | 1,612 |
| TOTALS (ALL MEASURES) | | | 2,829 | 4.6 | 0 | \$1,075 | \$24,200 | \$1,850 | \$22,350 | 20.8 | 2,849 |

* - All incentives presented in this table are included as placeholders for planning purposes and are based on previously run state rebate programs. Contact your utility provider for details on current programs.

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

INTERPRETIVE CENTER, WALLACE AND OLD DUTCH PARSONAGE HISTORIC SITES

| # | Energy Conservation Measure | Cost Effective? | Annual Electric Savings (kWh) | Peak Demand Savings (kW) | Annual Fuel Savings (MMBtu) | Annual Energy Cost Savings (\$) | Estimated M&L Cost (\$) | Estimated Incentive (\$) * | Estimated Net M&L Cost (\$) | Simple Payback Period (yrs)** | CO ₂ e Emissions Reduction (lbs) |
|---|--|-----------------|-------------------------------|--------------------------|-----------------------------|---------------------------------|-------------------------|----------------------------|-----------------------------|-------------------------------|---|
| Lighting Upgrades | | | 1,313 | 1.5 | 0 | \$318 | \$2,250 | \$230 | \$2,020 | 6.3 | 1,290 |
| ECM 1 | Retrofit Fluorescent Fixtures with LED Lamps and Drivers | No | 96 | 0.4 | 0 | \$23 | \$620 | \$70 | \$550 | 23.6 | 94 |
| ECM 2 | Retrofit Fixtures with LED Lamps | Yes | 1,217 | 1.1 | 0 | \$295 | \$1,630 | \$160 | \$1,470 | 5.0 | 1,196 |
| Lighting Control Measures | | | 139 | 0.1 | 0 | \$34 | \$660 | \$80 | \$580 | 17.2 | 137 |
| ECM 3 | Install Occupancy Sensor Lighting Controls | Yes | 139 | 0.1 | 0 | \$34 | \$660 | \$80 | \$580 | 17.2 | 137 |
| Gas Heating (HVAC/Process) Replacement | | | 0 | 0.0 | 5 | \$71 | \$2,600 | \$500 | \$2,100 | 29.7 | 591 |
| ECM 4 | Install High Efficiency Furnaces | No | 0 | 0.0 | 5 | \$71 | \$2,600 | \$500 | \$2,100 | 29.7 | 591 |
| Domestic Water Heating Upgrade | | | 25 | 0.0 | 0 | \$6 | \$10 | \$0 | \$10 | 1.7 | 25 |
| ECM 5 | Install Low-Flow DHW Devices | Yes | 25 | 0.0 | 0 | \$6 | \$10 | \$0 | \$10 | 1.7 | 25 |
| TOTALS (COST EFFECTIVE MEASURES) | | | 1,380 | 1.2 | 0 | \$335 | \$2,300 | \$240 | \$2,060 | 6.2 | 1,357 |
| TOTALS (ALL MEASURES) | | | 1,477 | 1.5 | 5 | \$429 | \$5,520 | \$810 | \$4,710 | 11.0 | 2,042 |

* - All incentives presented in this table are included as placeholders for planning purposes and are based on previously run state rebate programs. Contact your utility provider for details on current programs.

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

ENERGY EFFICIENT BEST PRACTICES



- 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 Best Practices by building

WATER BEST PRACTICES

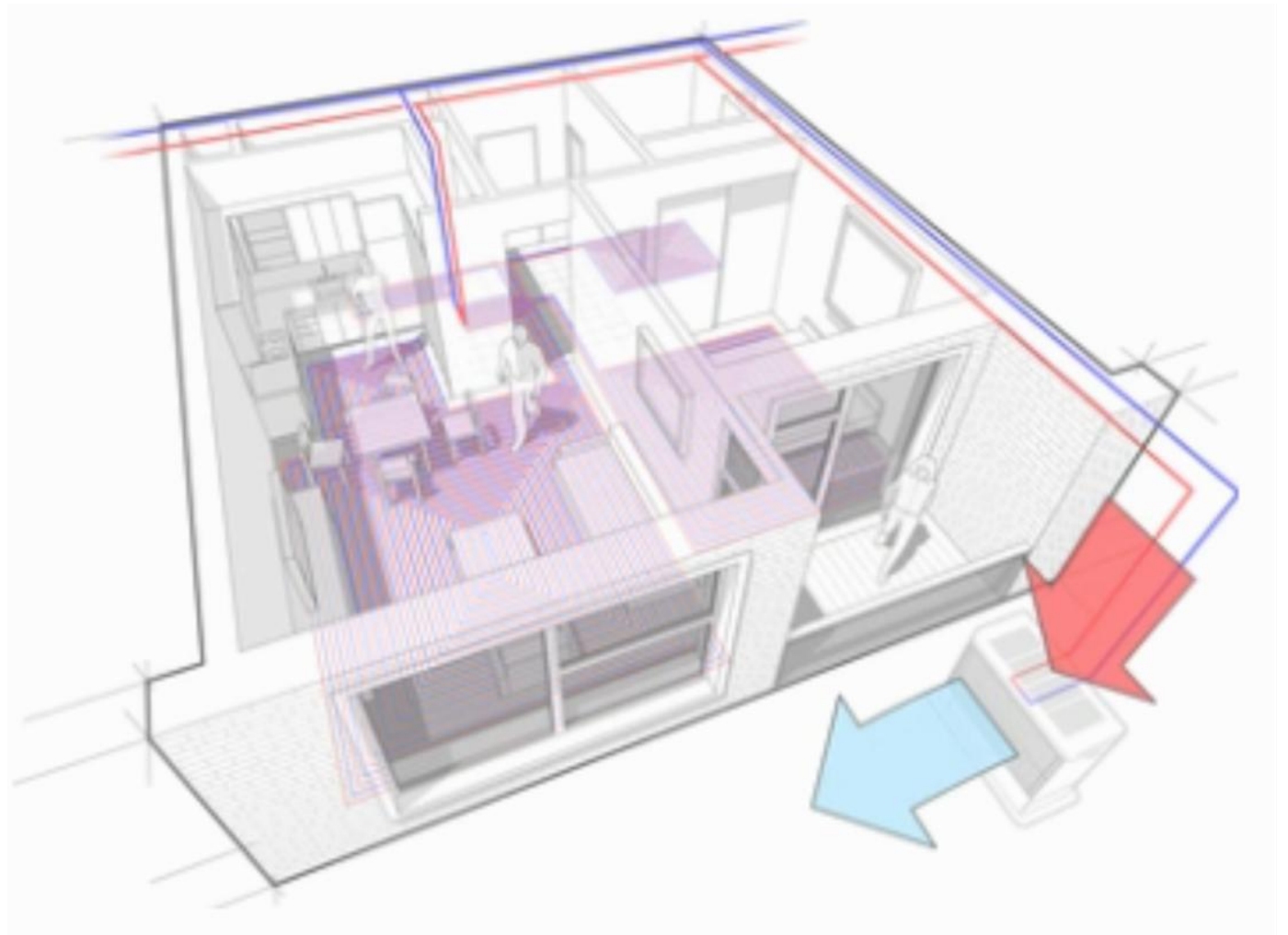


- Leak Detection and Repair
- Toilets and Urinals
- Faucets and Showerheads
- Commercial Kitchen Equipment
- Laundry Equipment
- Cooling Towers
- Steam Boiler System
- Pools and Spas
- Laboratory and Medical Equipment
- Water Metering and Submetering
- Vehicle Washing
- Single Pass Cooling System
- Landscaping and Irrigation
- On-Site Alternative Water Sources

See individual reports for specific Water Best Practices by building

MEASURES FOR FUTURE CONSIDERATION

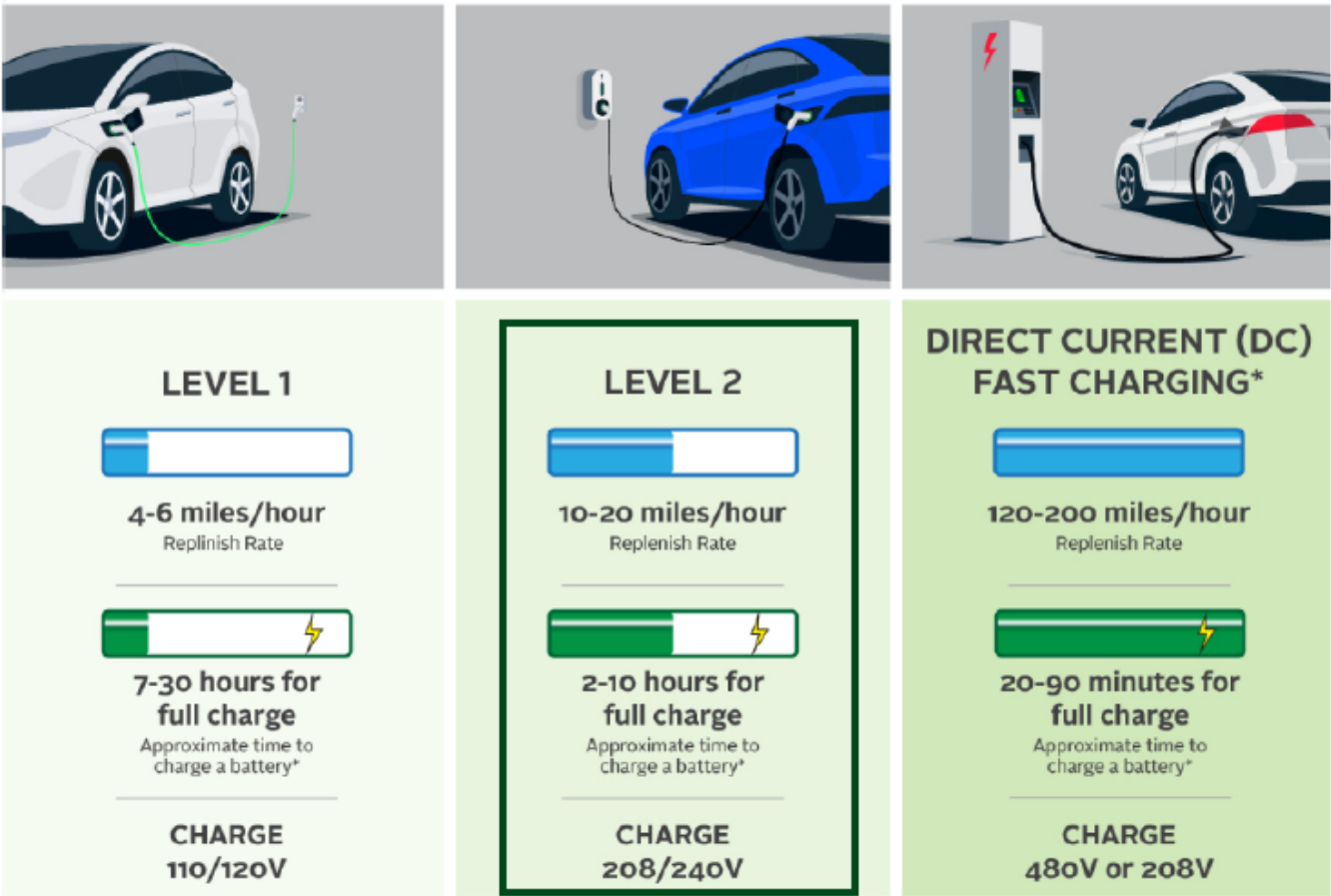
- Upgrade to a Heat Pump System
- VRF Systems



EV CHARGING STATION POTENTIAL

NJCleanEnergy.com/EV

Know your EV Charging Stations



*dependent on the size of the battery

| | Round Valley Recreational Area |
|------------|--------------------------------|
| Potential: | Existing / Medium |



FINANCING MECHANISM: ESIP

NJCleanEnergy.com/ESIP

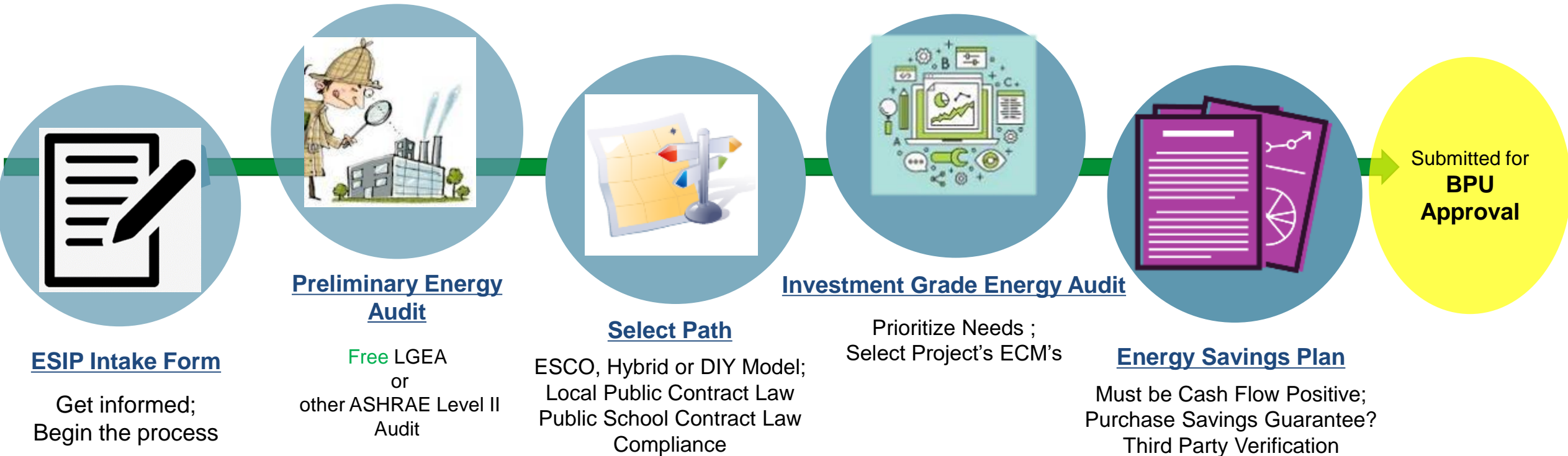
ENERGY SAVINGS IMPROVEMENT PROGRAM (ESIP)

- Energy Performance Contracting = NJ ESIP Program
- A creative tool and financing mechanism that allows public entities to make energy efficiency improvements without impacting their budgets
- Administered by the NJBPU
- Project is paid for with the value of its own energy savings
- 2 Options: Lease Purchase Loan or Bond
- 15 or 20 year pay back term
- NJBPU Approved Incentive Programs
 - Utility or NJCEP
- Can be combined with Federal/State Grants
- No upfront capital expenses
- No referendum or impact to tax payers



ENERGY SAVINGS IMPROVEMENT PROGRAM

NJCleanEnergy.com/ESIP



ENERGY SAVINGS IMPROVEMENT PROGRAM

NJCleanEnergy.com/ESIP

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STATE FACILITIES INITIATIVE (SFI)

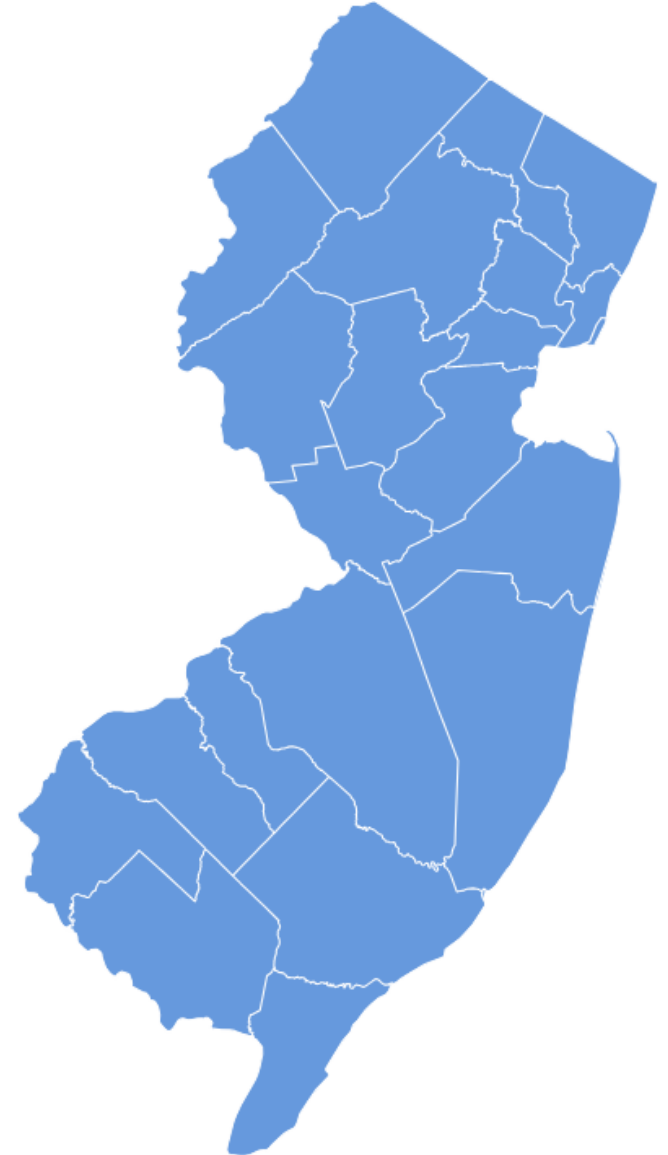
The State Facilities Initiative (SFI)

This program is for State-owned facilities.

The program identifies and implements Energy Efficiency projects in State-owned facilities or State-sponsored projects with the objective of producing energy and cost savings. The funding provided to the SFI is directly in line with EMP Goals 3.3.5 and 4.1.1.

EMP Goal 3.3.5 seeks to “[i]mprove energy efficiency in, and retrofit state buildings to, a high performance standard.”

EMP Goal 4.1.1 addresses electrifying State facilities.



C&I ENERGY EFFICIENCY PROGRAMS

NJCleanEnergy.com

LOCAL
GOVERNMENT
CUSTOMERS

COMMERCIAL &
INSTITUTIONAL
CUSTOMERS

LARGE
ENERGY
CUSTOMERS

EXISTING BUILDINGS

MEASUREMENT & AUDITS

FREE Energy Audits



RETROFITS

Prescriptive &
Custom Rebates

Direct Install

Engineered Solutions

And more from
your local utility!



Incentives up
to \$4 million
for eligible projects



NEW CONSTRUCTION

Prescriptive & Custom
Rebates for New
Construction and
Gut Rehabs

Pay for Performance
incentives for
buildings over
50,000 sq. ft.



DISTRIBUTED ENERGY RESOURCES

Combined Heat & Power
and Fuel Cell Installation
Incentives

Microgrid Development

Battery Storage

Muni EV Fleets



Key:

Programs run by investor-owned utility companies



Programs run by NJCEP



UTILITY RUN ENERGY EFFICIENCY PROGRAMS*

NJCleanEnergy.com/Transition

PRESCRIPTIVE & CUSTOM REBATES:

- Individual high efficiency equipment rebates for renovation, remodeling, and equipment replacement
- Flexibility to do a little or a lot
- No size requirement

DIRECT INSTALL:

- Turn-key retrofit program to replace outdated and inefficient equipment including, lighting, HVAC, refrigeration, etc.
- The facility must have an average electric peak demand <200kW in the previous year to qualify

ENERGY MANAGEMENT :

- Includes the Building Tune-up (BT), Retro-commissioning (RCx), and Strategic Energy Management (SEM) subprograms. These subprograms offer a comprehensive mix of custom energy-savings measures such as basic HVAC tune-ups, building systems tune-ups, controls' calibration, diagnostic testing, and installation of measures to enhance your building's energy performance and savings.

ENGINEERED SOLUTIONS:

- Comprehensive, whole-building approach to saving energy
- The facility must have an average electric peak demand >200kW in the previous year to qualify



**Other programs may be available to you. Check with your Utility Provider to see a full list of offering and what you may be qualified for.*

UTILITY RUN ENERGY EFFICIENCY PROGRAMS

JCP&L

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THANK YOU

