



New Jersey's Clean Energy Program

Opportunities for Commercial, Industrial and Institutional Buildings

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Making the Business Case for Sustainability



NJCleanEnergy.com/ssb

Overall Program Management

NJ Board of Public Utilities Office of Clean Energy

“Renewables & Residential”
Market Manager:
Honeywell Utility Solutions

Outreach Subcontractor:
Conservation Services Group
(732-218-3400)

“Commercial & Industrial”
Market Manager:
TRC Energy Services

Outreach Subcontractor:
EAM Associates
(732-267-1174)



NJ Clean Energy Program Background

- Introduced in 2001 as part of the NJ Clean Energy Act
- Funded from “Societal Benefits Charge” on utility bill
- Provides energy efficiency project opportunities for:
 - Residential
 - Renewables
 - Commercial & Industrial



Program Goals

- **Save** energy and lower operating costs
- **Protect** environment and lower emissions
- **Change** the business mindset:
 - Think high efficiency first
 - Encourage early retirement of equipment
 - Increase effective operations and maintenance
 - Promote renewable energy alternatives



Commercial & Industrial Portfolio

- NJ SmartStart Buildings (prescriptive applications)
- Local Government Energy Audit
- Direct Install
- Pay for Performance
- Combined Heat & Power/Fuel Cells
- Benchmarking





NJ SmartStart Buildings

- Includes New Construction, Gut-Rehabilitation, and Retrofit Projects
- Most Popular - Equipment Replacement Projects
 - Prescriptive
 - Custom Electric and Gas





Pre-approved Technologies

incentives capped at \$500,000 per utility account per year

- **Electric Chillers**
(\$8 to \$170 / ton)
- **Electric Unitary HVAC Systems**
(\$40 to \$92 / ton)
- **Ground Source Heat Pumps**
(\$450 to \$750 / ton)
- **Gas Heating:** (\$300 minimum per furnace or boiler, and \$50 min per domestic water heater)
- **NEMA Premium Motors**
from 1HP to 200HP
(\$40 to \$700 per motor)
- **Variable Frequency Drives**
(\$60 to \$155 / HP)
- **Refrigeration Doors, Covers & Controls**
(\$50 to \$100 each)
- **Lighting**
(\$10 to \$200 per fixture)
- **Lighting Controls**
(\$20 to \$75 per unit)
- **Occupancy Controlled Thermostats** for hospitality & institutional facilities (\$75 each)





Prescriptive Application Procedure

Send Application to TRC

- Include worksheet (if applicable) and:
- Copies of latest utility bills
 - W-9 tax form
 - Equipment manufacturer data sheets

Receive TRC's Approval Letter

Prior to removal of existing equipment or installation of new equipment

Install within approved timeframe

- 12 months from approval date for existing buildings
- 18 months from approval date for new construction

Submit Proof of Purchase & Tax Clearance

- Incentive will be lesser of:
- Approved incentive amount
 - Actual equipment cost
- Allow 60 days for delivery of incentive after submission of all required paperwork.



Custom Projects

Opportunities for other than pre-qualified technologies, for example:

- Occupancy controlled ventilation systems
- High efficiency transformers

First year savings must be at least 75,000 kWh or 1,500 therms of natural gas over the established “base-line”.

If project qualifies, incentive will be the lowest of:

- \$0.16 per kWh (or \$1.60 per therm of gas) of estimated annual savings
- 50% of total project installed cost
- Buy down to a one year pay-back



Local Government Energy Audit

The Audit is available for:

- NJ Local Governments
- 501(c)(3) Non-profit Agencies
- NJ State Colleges and Universities

Covering a wide range of building types, including:

- Offices
- Town Halls
- Police and Fire Stations
- Courtrooms
- Community Centers
- School Buildings





Local Government Energy Audit

- Participants select from a list of pre-qualified auditing firms who follow strict parameters to analyze the buildings and prepare the audit report
- The program **subsidizes 100%** of the audit cost, subject to an annual \$100,000 incentive cap per entity
- Audit generates a list of recommended, cost-effective energy efficiency measures and facility upgrades to reduce operating expenses
- Many of the recommended measures are eligible for additional incentives offered by New Jersey's Clean Energy Program





Local Government Energy Audit

Audit must be performed by one of five preselected engineering firms:

- Camp Dresser and McKee, Inc.
- Clough Harbour and Associates, LLP
- Concord Engineering Group Inc.
- Dome-Tech Group
- Steven Winter Associates, Inc.

Firms were selected by NJ Department of Treasury

Rates for services posted on DOT site



Direct Install

- A turn-key, retrofit program designed to address the replacement of lighting, HVAC and other outdated operational equipment in small to medium size facilities with a peak electric demand not exceeding 150 kW in the preceding 12 months
- Provides incentives of up to 70% of the installed cost
- Incentives are paid directly to the contractor
 - customer pays remaining 30%
 - \$75,000 project cap
 - \$250,000 annual entity cap



Direct Install Features

- Minimal customer investment
- Generous incentives and fast paybacks
- Participating contractors provide support
- Measures include lighting, occupancy sensors, pipe insulation, motors, variable speed drives, refrigeration, HVAC and low flow water devices





Direct Install Contractors

- Contractors assigned by region
- Assist with applications/agreements
- Guide participants through program steps
- Perform free energy assessments
- Install cost-effective measures
- Process all necessary paperwork

The list of authorized contractors is posted on NJCleanEnergy.com/DI





Direct Install Examples



Jamesburg

Municipal Building (10,000 sq. ft.)

- T-12 to T-8 lighting fixtures
- Two 10 year old HVAC units
- Occupancy sensors,
- Air-side economizers
- programmable thermostats

Total Project Cost = \$38,541

Direct Install Incentive = \$23,125 (60%)

Customer Share of Cost = \$15,416 (40%)

Annual Savings

- 12,036 kWh, and 1,538 therms natural gas
- \$3,925

Payback Period – 3.9 years



Heritage House

Church Owned Building

Lighting & HVAC Retrofit:

- T-12 to T-8 lighting & occupancy sensors
- Two 15-year old AC units
- One 30-year old gas boiler

Total Project Cost = \$41,623

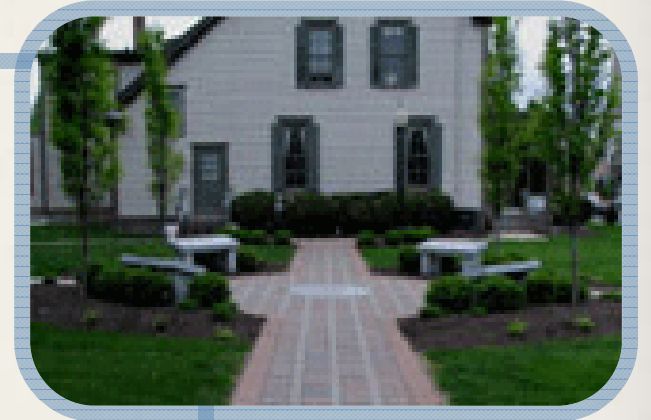
Direct Install Incentive = \$24,974 (60%)

Customer Share of Cost = \$16,649 (40%)

Annual Savings:

- 17,050 kWh and 161 therms of natural gas
- \$5,442 utility bills

Payback Period = 3.1 years





Pay for Performance

- Comprehensive, whole-building approach to saving energy in existing or new facilities
- Goal is to reduce facility energy consumption by 15% or more (or 4% for eligible high-energy intensity customers)
- Relies on a network of program partners who provide technical services under direct contract to customer





Pay for Performance Eligibility

- Existing Building
 - Located in New Jersey & Paying Societal Benefits Charge
 - Annual peak demand in excess of **100kW**
- New Construction
 - Located in New Jersey (within Smart Growth area)
 - 50,000 gross heated square feet of planned space

Thresholds waived for hospitals, non-profits, local government buildings, affordable multi-family housing and public universities and colleges





Pay for Performance Incentives

Incentives up to **\$2 million per project**, assuming both gas and electric improvements are made.

(\$4 million annual entity cap)

Incentives paid out in three installments at program milestones:

1. Completion of comprehensive energy audit and development of an “Energy Reduction Plan” (paid only if upgrades installed)
2. Installation completion of recommended measures
3. End of energy savings verification period

NJEDA is offering revolving loan funds for up to 80% of customer project cost (interest rates ranging from 2-4%)





Pay for Performance Partners

For a complete list of approved partners, as well as information on becoming a partner, visit...

NJCleanEnergy.com/P4P



NJCleanEnergy.com/ssb



Pay for Performance Examples

Saker ShopRite

Supermarket (91,707 square feet)

Energy Efficiency Measures:

- T-12s to T-8s, LED retail display
- Compressor upgrade, new condensers
- Radiant floor heat recovery
- Additional wall & roof insulation
- Reach-in refrigerators/freezers with LED lighting, ECM motors, and control upgrades
- High efficiency RTUs

Project Cost = \$1,201,830

Incentives = \$329,205

Annual Savings = 1,354,812 kWh, 8,790 Therms, \$186,886

Payback Period = 4.7 years





Genesis Healthcare Voorhees Center

Nursing Home (67,079 square feet)

Energy Efficiency Measures:

- T-12 to T-8 lighting
- VFD kitchen hood controls
- High efficiency space heating
- High efficiency water heating boilers

Project Cost = \$314,074

Incentives = \$72,140

Annual Savings:

- 157,612 kWh
- 20,590 therms of natural gas
- \$47,601 utility bills

Payback Period = 5.1 years





Combined Heat & Power and Fuel Cells

Incentives limited to first Megawatt (MW) of capacity
(ranging from \$0.50 - \$3.00 per Watt)

- Non-renewable fuel source
- Class 1 renewable fuel source
- Heat recovery or other mechanical recovery
- Fuel cells with or without waste heat utilization

Large scale projects (installed capacity greater than 1 MW):
EDA and BPU have developed a program with a \$3 million per
project cap, with incentives up to 30% of CHP and 45% of fuel
cell project cost.





Free Benchmarking Report

Benchmarking assessments are designed to help:

- Understand energy cost trends and consumption at each building
- With sufficient comparative data, see how building(s) compare to similar buildings using ENERGY STAR® Portfolio Manager
- Identify opportunities for improving operations, reducing costs, and getting an energy efficiency project started





Free Benchmarking Report

Includes:

- Data analysis graphs
- Explanation of how fuel is used
- For most buildings – a Portfolio Manager score
- Suggestions for improving operations and maintenance
- Guidance on NJ Clean Energy Program options
- Program application information





To Request Free Benchmarking

- Visit NJCleanEnergy.com/BENCHMARKING
- Submit the online data collection form
- Submit 12 consecutive months of energy data or a signed Fuel/Energy Release Authorization Form





For More Information

Visit NJCleanEnergy.com/SSB

Call (866) NJSMART

For the latest updates on program announcements or new incentives, subscribe to the NJ Clean Energy E-Newsletter at NJCleanEnergy.com



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