

New Jersey's Board of Public Utilities and New Jersey's Clean Energy Program 2008 Annual Report



President's Letter

New Jersey's Clean Energy Program experienced another year of growth and change in 2008. Through the leadership of Governor Jon S. Corzine and the tireless efforts of the Board of Public Utilities Commissioners and staff and our partners, the Clean Energy Program gave New Jersey's residents, business owners, and local government officials tools to reduce overall energy use and increase the use of clean, renewable sources of energy. With the launch of Governor Corzine's Energy Master Plan in October 2008, we have established goals to provide the state and our residents with cleaner energy and a safer environment.

In 2008, over \$112 million was spent directly on incentives paid to customers or on measures installed in customers' homes. We saved New Jersey homeowners and businesses 335,001 megawatt hours (MWh), 489,724 dekatherms (Dth), and created 242,090 MWh of renewable energy, which avoided 418,463 tons of CO2 emissions, saving these homeowners and businesses over \$8.15 million per year for the life of the equipment with a lifetime of savings of almost \$1 billion. In addition, in 2008 NJCEP has committed over \$155 million in incentives for energy efficiency and renewable energy projects to be constructed in 2009 or 2010. These projects will save homeowners 70,462 MWh, 1,789,074 Dth, create 72,974 MWh of renewable energy and 90,800 MWh of clean distributive energy.

Since the inception of the Clean Energy Program in 2001, the program has resulted in lifetime energy savings of over 22.6 million MWh of electricity and 70 million Dekatherms of natural gas. The program has reduced electric demand by 560 MW, eliminating the need to construct and operate several small to mid-sized power plants and saved New Jersey ratepayers the cost it would have taken to build them.

I am so proud of the many successes of New Jersey's Clean Energy Program, and I look forward to continued success in 2009. On behalf of all of the BPU Commissioners, I thank all New Jerseyans who have invested in clean, renewable energy through this Program. Together, we are changing New Jersey's energy future.

Jeanne M. Fox
President
New Jersey Board of Public Utilities

Board of Public Utilities Commissioners
Jeanne M. Fox – President
Frederick F. Butler – Commissioner
Joseph L. Fiordaliso – Commissioner
Nicholas Asselta – Commissioner
Elizabeth Randall – Commissioner

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Overview of New Jersey's Clean Energy Program™



Join the thousands of New Jersey homeowners, businesses, and municipalities that have taken advantage of the programs, services, and incentives offered by *New Jersey's Clean Energy Program*. These programs provide opportunities for you to save energy, money, and help to protect our climate and shoreline. You'll also be contributing to New Jersey's goal of 20% by 2020—reducing greenhouse gases, reducing energy use, and increasing use of renewable energy by 30%.

Find out more at NJCleanEnergy.com or call 1-866-NJSMART.

Residential Energy Efficiency & Assistance Programs

Home Performance with ENERGY STAR®

Contractors certified by the Building Performance Institute (BPI) work with homeowners to identify sources of wasted energy and help make money-saving improvements. This program also offers great financial incentives to help homeowners pay for recommended work.

New Jersey ENERGY STAR Homes

New Jersey ENERGY STAR Homes are built to be at least 15-35% more energy efficient than standard homes. New Jersey ENERGY STAR Homes cost less to operate and lessen the impact of power generation on the environment.

ENERGY STAR Qualified Products

Public education and incentives are available to promote home energy efficiency through ENERGY STAR products which include lighting, appliances, home heating and cooling equipment, and more.

New Jersey Comfort Partners

Free energy-saving and energy education program for qualified low-income customers. We partner with you to save energy, money, and make your home energy efficient. Certified BPI contractors install energy-saving measures. You are taught new ways to conserve energy and we help you create an Action Plan to support your efforts.

Home Energy Analysis

A free, online energy audit to help residential customers understand their home energy use and take steps to save energy and save money. The analysis is linked to incentives and ENERGY STAR rebates.

COOLAdvantage and WARMAdvantage Programs

Cash rebates are available for energy-efficient heating and cooling equipment such as central air conditioners, heat pumps, furnaces, boilers or water heaters.

Renewable Energy Programs



Renewable Energy Incentive Program

Financial incentives are available to reduce the upfront installation costs for solar, small wind, and sustainable biomass residential and commercial systems.

Renewable Energy Certificates

Invest in renewable energy. Individuals and businesses can buy and sell Renewable Energy Certificates (RECs), effectively investing in clean, renewable energy.

CleanPower Choice Program™

A voluntary program that gives retail electricity customers the option to sign up for clean power directly through their local electric utility.

Community Partners Initiative

The Community Partners Initiative offers communities a forum to participate in statewide clean energy campaigns to educate and help enroll residents, businesses, and municipalities in *New Jersey's Clean Energy Program* and take advantage of valuable technical assistance and financial incentives.



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New Jersey Board of Public Utilities

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Commercial & Industrial Clean Energy Programs

New Jersey SmartStart Buildings®

Provides technical assistance, design support, and financial incentives for new construction, retrofits, and equipment replacement including high-efficiency lighting, HVAC equipment, water heating, motors and variable frequency drives for businesses, schools, and government-owned buildings.

Pay for Performance

Existing commercial, industrial, institutional, and multifamily buildings with an average peak demand over 200 kilowatts (kW) are eligible to participate. This whole-building approach starts with an Energy Reduction Plan developed by an Energy Expert selected from our network of Partners. Combined Heat and Power (CHP) projects are now eligible for additional incentives as part of Pay for Performance.

Local Government Energy Audit

Municipal and local government-owned facilities including offices, courtrooms, town halls, police and fire stations, sanitation buildings, transportation structures, schools and community centers are eligible. Participants select from a list of prequalified firms and receive an investment grade audit. The program subsidizes up to 100% of the audit's cost.

TEACH

Teaching Energy Awareness with Children's Help (TEACH) includes a building evaluation of district-wide energy use and cost benchmarking as well as an education component that equips teachers with a wide range of lessons and energy monitoring instruments.

Direct Install

Smaller buildings with peak demand under 200 kW are eligible for financial incentives up to 80% of the cost for qualified energy efficiency retrofits recommended, and are installed by a participating contractor.

General Overview

New Jersey's Clean Energy Program, administered through the Office of Clean Energy, is a signature initiative of the New Jersey Board of Public Utilities (BPU). It promotes increased energy efficiency and the use of clean, renewable sources of energy including solar, wind, geothermal, and sustainable biomass. The result for New Jersey is a stronger economy, less pollution, lower costs, and reduced demand for electricity.

The program offers financial incentives, programs, and services for residential, commercial, and municipal customers. It provides education, information and financial incentives for energy efficiency measures and renewable energy systems. New Jersey's Clean Energy Program is a statewide program, which has targeted \$235 million in funds collected from utility customers in 2008 towards technologies that save electricity and natural gas and increase the amount of electricity generated from clean, renewable resources and distributed forms of generation.

New Jersey has instituted a number of successful initiatives that help to reduce the State's peak energy demand, conserve finite resources and transform the marketplace for the next generation of electricity and natural gas supply technologies. Incentives are available to offset the initial cost of energy efficient and renewable energy technologies for all ratepayers in New Jersey. Programs are comprehensive and complementary, and focus on providing technical and financial assistance to homeowners, businesses, schools and government organizations. The programs are also designed to offer full project development assistance from information on best practices to rebate payments and financing tools.

In October 2008, Governor Jon S. Corzine issued the New Jersey Energy Master Plan (EMP). The Energy Master Plan proposes a road map to guide the State toward a responsible energy future with adequate, reliable energy supplies that are both environmentally responsible and competitively priced. The Energy Master Plan sets the following goals to be achieved by the year 2020:

1. Reduce projected energy consumption by at least 20%, including through advanced energy appliance standards and building energy codes.
2. Reduce peak demand by 5,700 MW, including 1,500 MWh of combined heat and power; and
3. Generate 30% of the State's electricity from renewable resources, including 3,000 MW of offshore wind and 2,100 MWh of solar.

The energy savings and renewable energy delivered through New Jersey's Clean Energy Program will contribute significantly to the achievement of these goals.

New Jersey's Renewable Energy Portfolio Standards (RPS) require that a certain percentage of all electricity sold in NJ be from a renewable resource. That percentage increases significantly over time, from 5.5% in 2008 to 20% in 2020. In 2008 the Board took several steps to assist in a transition to a market-based approach to the development

of renewable energy systems including an order directing the State's electric utilities to submit filings that provide for the long-term purchase of Solar Renewable Energy Certificates (SRECs) or other market-based approaches.

In 2008, the program provided \$112 million in direct financial incentives to residential customers, businesses, schools and municipalities that installed energy efficient and renewable energy technologies, including solar photovoltaic systems. The result for New Jersey is a stronger economy, climate benefits, energy savings, and reduced demand for electricity.

A Stronger Economy

When New Jersey's businesses and residential customers save money by reducing their electric and natural gas bills, the entire State benefits. Residential customers have more dollars available to spend on other things while business customers enjoy lower operating expenses, improved profitability and gain a competitive edge. In addition, dollars spent on energy efficiency decrease the number of dollars flowing to out-of-state businesses, since New Jersey has no local sources of fossil fuels.

New Jersey's Clean Energy Program also relies heavily on local businesses to deliver energy efficiency and renewable energy to customers. Purchasing from local energy resources has an economic multiplier effect, which strengthens New Jersey's overall economy. By creating a market for Clean Energy, new jobs are created to support Clean Energy implementation, services, and planning.

Climate Benefits

By both reducing energy use and promoting renewable sources of energy generation, New Jersey's Clean Energy Program reduces the need to generate electricity and burn natural gas, eliminating pollution that otherwise would have resulted. The benefits of these initiatives continue for the life of the measures installed, which average about 15 years. Thus, New Jersey's Clean Energy Program benefits the State's residents and businesses through substantial environmental and public health improvements, lower energy bills and a stronger economy. The total reductions in carbon dioxide emissions resulting from New Jersey's Clean Energy Program in 2008 are equivalent to taking over 68,000 cars off the road for an entire year. These emission reductions will reduce the State's contribution to greenhouse gases, smog and acid rain and help protect New Jersey's shoreline and highlands.

Energy Savings

Through its Customer On-Site Renewable Energy (CORE) Program, New Jersey for ENERGY STAR, and other programs – The Clean Energy Program offers direct incentives to customers to help offset the cost of purchasing high efficiency or renewable energy equipment. These customers then benefit further by reducing their energy usage and costs. Ratepayers who do not directly participate in the programs still share in the benefits through lower overall energy costs, climate change solutions, and public health improvements. Electricity prices in New Jersey, as in other places, historically tend to spike during times of peak demand, which is during the heat of the summer at around 4:00 p.m. when both businesses and homeowners run their air conditioners at its

maximum power. Overall, 2008 initiatives reduced peak electric demand by over 93 MW. Natural gas initiatives, in addition to saving energy from natural gas usage, also focused the NJCEP on reducing usage during times of peak gas demand. The peak usage for natural gas tends to be during cold-weather months.

Program Governance - New Jersey Board of Public Utilities

The Board of Public Utilities is the regulatory authority for New Jersey's Clean Energy Program. It has a statutory mandate to ensure safe, adequate, and proper utility services at reasonable rates for customers in New Jersey. Accordingly, the BPU sets policies and goals for the Office of Clean Energy and New Jersey's Clean Energy Program. In addition, the BPU regulates critical services such as natural gas, electricity, water, and telecommunications and cable television.

The BPU addresses issues of consumer protection, energy policy, restructuring of energy and telecommunications services, and the structuring of utility rates to encourage energy conservation and competitive pricing in the industry. The Board of Public Utilities also has responsibility for monitoring utility service quality and responding to consumer complaints.

Program Funding

New Jersey's Clean Energy Program was created under the Electric Discount and Energy Competition Act (EDECA) with the objective of transforming the energy marketplace in New Jersey to support energy efficiency and renewable energy technologies. The program is funded through the Societal Benefits Charge (SBC) included in the rates of natural gas and electric utility customers. The funds are collected by the utilities for the New Jersey Clean Energy Trust Fund held by the New Jersey Department of the Treasury.

The 2008 funding level for the Clean Energy Program was \$235 million. Budgets include both new funding collected in 2008 and unspent funds from previous years. In 2008 the Board completed its third comprehensive resource analysis as required by the Electric Discount and Energy Competition Act. The Board set funding levels for the years 2009 through 2012 and approved programs and budgets for 2009. The Board approved the following funding levels for next four years: 2009: \$245 million; 2010: \$269 million; 2011: \$319.5 million; and, 2012: \$379.25 million.

Program Management

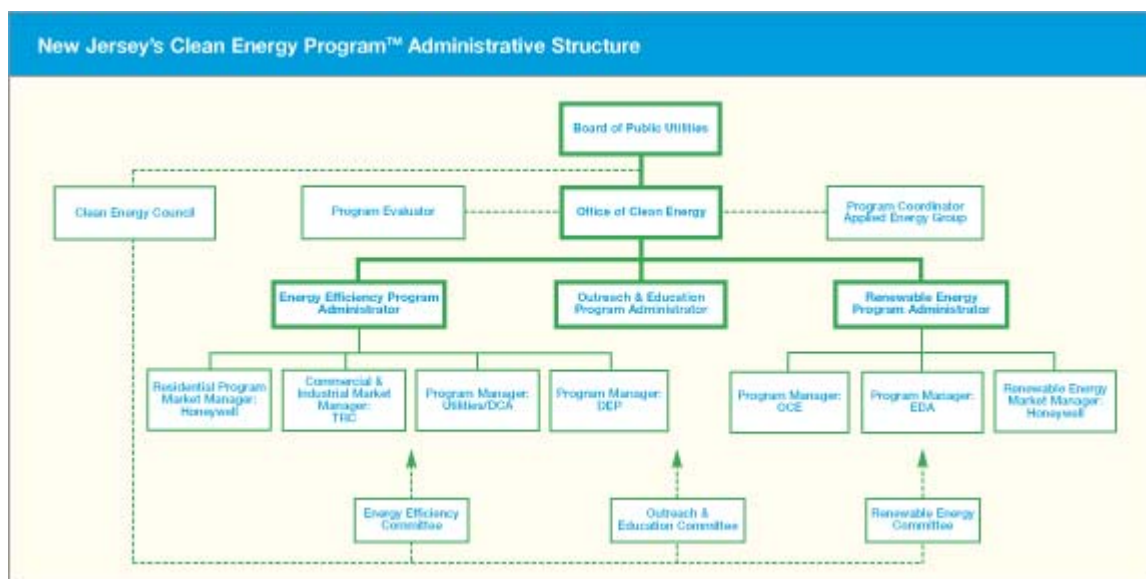
In 2004 the BPU announced its intention to transition the management of the programs from the utilities and the Office of Clean Energy to third-party contractors or Market Managers. The BPU also announced its intention to hire a Program Coordinator to assist with the administration of the programs.

In October 2006, Honeywell International Inc. was engaged by the BPU as the Residential Energy Efficiency and Renewable Energy Market Manager and, TRC Energy Services was engaged as the Commercial and Industrial Energy Efficiency Market Manager. The transition of the programs from the utilities and the Office of Clean Energy to Honeywell and TRC was completed in April of 2007. In July of 2007 the BPU engaged Applied Energy Group as the Program Coordinator. The State's seven electric and natural gas utilities continue to manage the low-income Comfort Partners program, the New Jersey Department of Environmental Protection manages the Cool Cities program and the New Jersey Economic Development Authority managed several renewable energy programs in 2008.

Stakeholder Participation

In 2003, the BPU established a Clean Energy Council (CEC) initially comprised of a cross section of government and industry representatives, energy experts, public interest groups, and academicians to engage stakeholders in the New Jersey's Clean Energy Program's development and to provide input and advice to the BPU on its administration. The Council provides input to the BPU regarding the design, budgets, objectives, goals, administration, and evaluation of New Jersey's Clean Energy Program™. In 2006 the BPU opened the Clean Energy Council to any member of the public who desires to provide input on related issues. The Council conducts meetings as open public meetings.

The Council is organized into three committees; Renewable Energy, Energy Efficiency, and Marketing and Communications, which meet regularly and are open to all interested parties.



Overall Program Objectives and Progress to Date

New Jersey's Clean Energy Program has established a set of objectives and measures to track progress in reducing energy use and increasing the use of renewable energy in New Jersey. The following overall objectives were established in consultation with the Clean Energy Council, further refined by BPU staff, and adopted by the BPU as part of the BPU's 2005-2008 and Beyond Strategic Plan:

Objective 1: By December 31, 2008, six and one half percent of the electricity used by New Jersey residents and businesses will be provided by Class I and/or Class II renewable energy resources, of which a minimum of four percent will be from Class I renewable energy resources including 120,000 MWh (90 MW) from solar.

Description: New Jersey's Renewable Portfolio Standards ensure investment in renewable energy technologies located in the PJM power pool by requiring that a minimum percentage of Class I renewable energy resources is included in the electricity supply that serves New Jersey residents and businesses. Class I resources include electric energy produced from solar technologies, photovoltaic technologies, wind energy, fuel cells with renewable fuels, geothermal technologies, wave or tidal action, and methane gas from landfills or a biomass facility, provided that the biomass is cultivated and harvested in a sustainable manner.

Results: The RPS rules established a Reporting Year compliance period which begins on June 1, in one calendar year and ends May 31, of the following year. The 2008 Reporting Year, which ended May 31, 2008, required that 5.5057% of a supplier's electricity be generated from renewable resources including 2.924% from Class I resources and 0.0817% from solar. The Class I renewable energy and Solar RPS requirements were met either by RECs and Alternative Compliance Payments (ACP) or SRECs and Solar Alternative Compliance Payments respectively, by the September 1, 2008 deadline, which is the 3 month true up period for Reporting Year 2008.

Over 80 million megawatt hours of retail electricity was sold and delivered by BPU regulated electric distribution companies in Reporting Year 2008. As a result, suppliers and providers of retail electricity were obligated to procure a total of 2,340,042 Class I RECs or their equivalents in ACPs. Regulated entities were responsible for retiring a total of 2,341,702 NJ Class I RECs and paid \$10,000 for 200 ACP payments of \$50 each to ensure compliance with the RPS.

Electric suppliers and providers had an obligation to procure a total of 65,384 SRECs or their equivalents in SACPs in Reporting Year 2008. Regulated entities retired 49,617 SRECs and paid a total of \$4.73 million in SACP payments for the equivalent of 15,768 MWh at \$300 each.

Through the procurement of RECs or SREC and through the payment of ACP in SACP, the electric suppliers meet Objective 1.

Objective 2: By December 31, 2008, install 300 MW of Class I renewable electric generation capacity in New Jersey, of which a minimum of 90 MW will be derived from photovoltaics.

Description: The 300 MW goal ensures the development and use of clean, renewable energy resources and generation capacity within the state and requires a minimum of 90 MW of solar photovoltaics. New Jersey is one of the first states to adopt a minimum requirement for solar electricity, which has made it one of the fastest growing solar markets in the nation.

Results: Including 58.7 MW installed before 2001, New Jersey had over 162.9 MW of Class I renewable energy capacity installed by December 31, 2008. New capacity installed from 2001 through 2008 includes 70 MW of solar PV total from the CORE rebate and SREC-only pilot programs as well as 8.2 MW of other Class I renewables through the CORE rebate program. And nearly 26 MW have been provided funding through the Grid Supply or Renewable Energy Advanced Power (REAP) programs. With 70 MW of solar installed, we are slightly behind in reaching our goal of 90 MW installed by December 31, 2008. However, a significant amount of newly installed capacity is known to exist within both the CORE and SREC-only pipelines such that achievement of the 90 MW goal is expected before the end of Energy Year 2009. With only 34 MW of non-solar Class I renewables installed in New Jersey, we are well short of the goal of 210 MW of non-solar Class I Renewables installed by December 31, 2008. To assist in overcoming the slower growth in New Jersey based wind and biomass, the Board approved a Renewable Energy Grid Supply program for 2009 during its annual budgeting process completed in December 2008.

Objective 3: By December 31, 2012, 785,000 megawatt hours per year and 0.6 billion cubic feet of gas per year of energy savings will be derived from energy efficiency measures.

Description: The energy savings goal is designed to meet the near term reduction in energy usage through increased energy efficiency. This goal will help ensure that we begin to stabilize and reduce future growth in electric and natural gas usage and demand in the state to meet the State's Energy Master Plan goals through energy efficiency measures. This will ensure greater efficiency in the use of existing resources and reduce or eliminate the need to site new generation facilities while improving environmental qualities and reducing greenhouse gas emissions.

Results: Progress in meeting the energy savings goals is measured relative to the levels of funding for energy efficiency programs. For every percentage increase in funding compared to 2003 funding levels, the goal is to increase energy savings over 2003 levels by the percentage increase in funding plus 10%. The funding level for energy efficiency

in 2003 was \$93 million and increased to \$119.7 million in 2008. This is a 29% increase so the goal is to increase savings by 39%

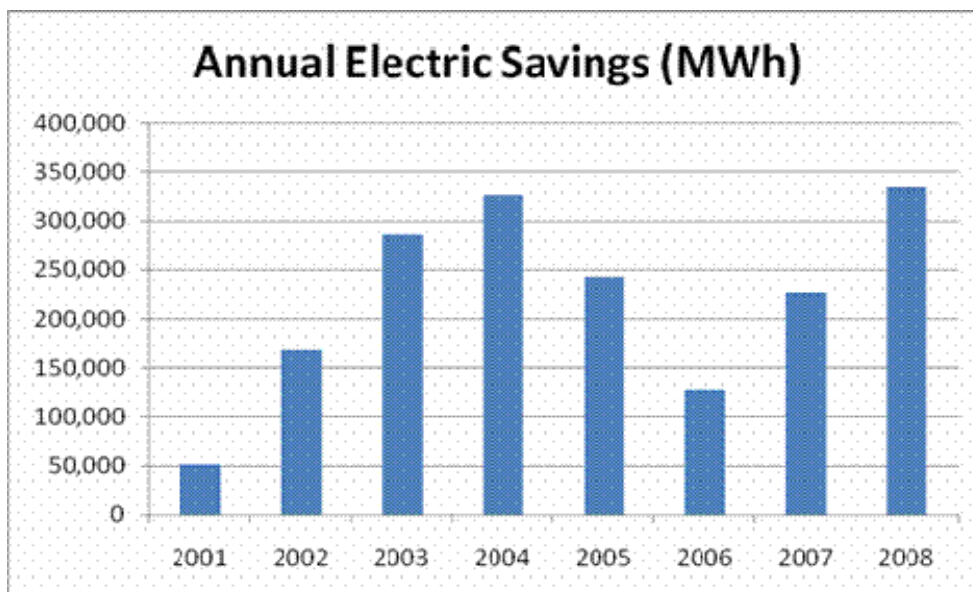
Savings from electric efficiency measures increased from 285,577 MWh in 2003 to 335,001 MWh in 2008. This represents an increase of 17% over 2003 levels which is below the goal of a 39% increase.

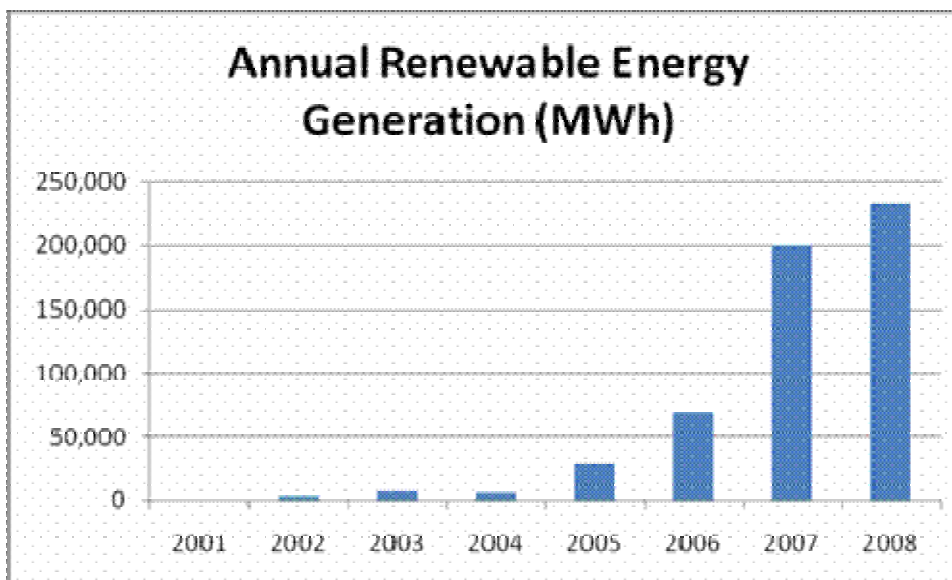
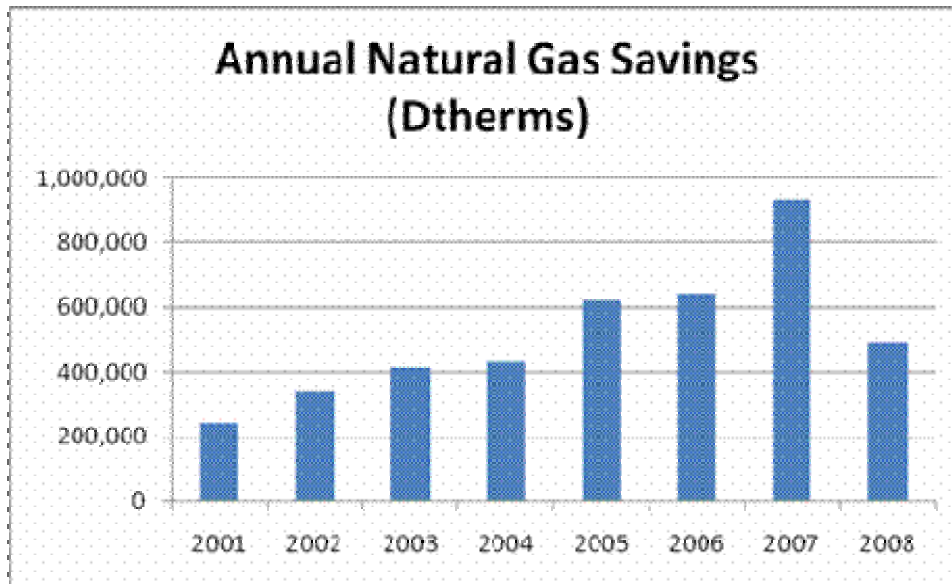
Natural gas savings increased from 410,517 Dtherms in 2003 to 489,724 Dtherms. This represents an increase of 19% over 2003 levels which is below the goal of a 39% increase.

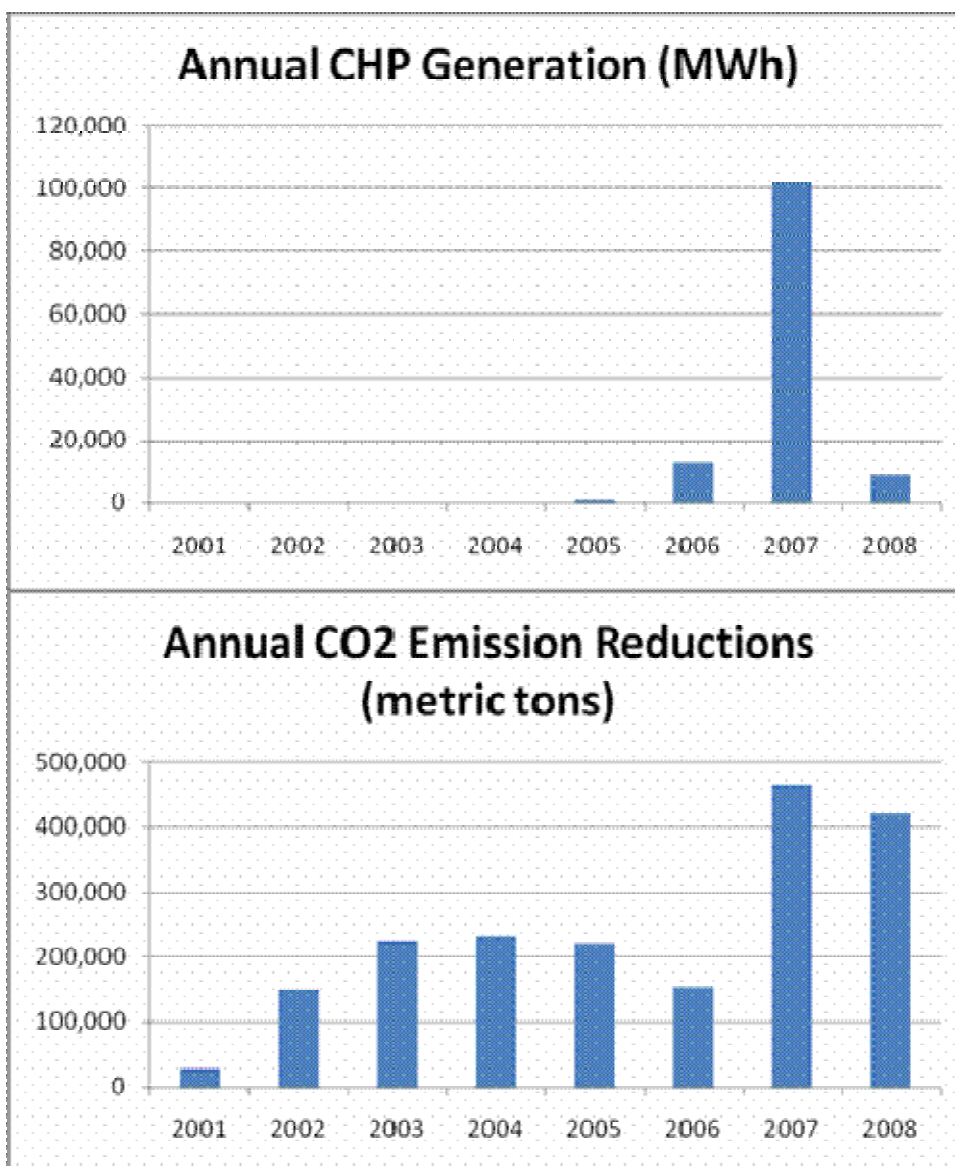
Several new programs were approved for 2008 that would have increased the energy savings. Due to delays of program implementation, these new programs, including a new whole building approach with Home Performance with Energy Star for homeowners, Direct Install for small businesses and Pay for Performance for large businesses, did not commence operation in 2008. However, these new programs will increase energy savings in 2009.

Energy Savings

The tables below show the annual electric and natural gas energy savings, renewable electric generation, and the resultant emission savings since the inception of New Jersey's Clean Energy Program 2001. The decrease in 2006 is due to the transition of the program from the utilities. The tables demonstrate the significant gains the program has achieved in influencing businesses and homeowners throughout the State to invest in energy efficiency and renewable energy.







Efficient equipment and practices put into effect in 2008 will continue to save energy for an average of 15 years. This year's results add to the energy savings achieved from 2001 to 2007. Combined, the eight year program activities resulted in lifetime energy savings of over 22.6 million MWh of electricity, 70 million Dekatherms of natural gas, 7.5 million MWh of renewable generation and 1.5 million MWh of distributed generation from combined heat and power systems. The programs have also reduced electric demand by 560 MW, eliminating the need to site and construct and operate several small to mid-sized power plants.

2008 Clean Energy Program Highlights

In 2004 the Board approved a funding level of \$745 million for the years 2005 through 2008 for the energy efficiency and renewable energy programs. This represents an

increase of over \$250 million above the funding levels approved for the first four years of the program and will result in a substantial increase in the level of benefits delivered by the programs including lowering the energy costs for the State's residents and businesses, cleaner air and an improved economy.

In 2008, \$235 million in new funding was available for the programs delivered to residential, commercial and renewable energy customers, resulting in the following achievements.

2008 NJCEP Program Participation Highlights:

- 9,019 residential customers received rebates for the purchase of **high efficiency cooling equipment** through the *Cool Advantage Program* and 15,047 residential customers received rebates for the purchase of **high efficiency heating equipment** through the *Warm Advantage Program*, which will reduce their energy usage and costs
- 4,012 new homes were built and certified to **New Jersey Energy Star Home** standards representing over 21 percent of all new homes built in New Jersey
- 7,239 **low-income homes received energy efficiency improvements** at no cost to the customer thus ensuring continued savings and greater affordability
- Rebates were paid for 1,401 **commercial energy efficiency projects** helping businesses reduce their energy costs while improving profitability
- 827 schools, businesses and residents **installed renewable energy systems** that will generate clean, emission free electricity and reduce energy costs for years to come
- 57 **solar PV installations** totaling 8 MW of capacity were completed without an NJCEP rebate through the SREC-only Pilot Program established as part of the Board's transition to market-based incentives.
- 8,982 trees were planted through the **Cool Cities** program managed by the NJ Department of Environmental Protection. Shading from these trees will reduce cooling loads in cities by reducing the "heat island" effect
- 14,456 customers participated in the **CleanPower Choice** Program contributing a few dollars per month to the purchase of clean, renewable sources of electricity
- Over 4.3 million **compact fluorescent bulbs** and 48,392 **high efficiency lighting fixtures** were sold to New Jersey consumers at discounted costs through the Energy Efficient Products Program
- Rebates were paid to 13,691 customers that purchased **Energy Star window air conditioners**, 22,761 customers that purchased **Energy Star clothes washers** and 5,380 customers that purchased **Energy Star dehumidifiers**
- 13,464 customers utilized the free on-line tool to perform an energy audit of their home

Overall, the energy savings plus the electricity generated from renewable energy and distributed generation systems installed in 2008 will save 577,091 MWh of electricity and 489,724 dekatherms (Dth) of natural gas per year, enough to meet the electric needs of

over 80,000 average homes and the natural gas needs of approximately 5,000 average gas heated homes, saving a total of \$81,388,242 annually.

Program Implementation Reports

The following section summarizes and reports on the 2008 implementation of the Renewable Energy (RE) Programs, Residential Energy Efficiency (EE) Programs, and Commercial and Industrial (C&I) EE Programs.

Renewable Energy

Renewable Energy Program Summary

New Jersey's Clean Energy Program, recognized as one of the best renewable energy programs in the nation, especially in regard to solar, continued to take great strides in 2008.

827 renewable energy systems totaling 14.7 MW of capacity were installed in 2008 across the Garden State and have received rebates through the CORE program totaling over \$52 million. An additional 57 projects totaling 8.4 MW of capacity have been installed under the SREC-only Pilot program described below. These systems have a total generating capacity of 23.1 MW of renewable energy and will avoid the generation of 27,846 MWh of traditional sources of electricity. In addition, one grid supply project was approved for 28.7 MW, which is estimated to generate 180,517 MWh. There is a total of 208,363 MWh of avoided environmental quality impacts from these combined projects. They will help protect New Jersey's environment by avoiding more than 354 million pounds of carbon dioxide emissions each year, which is the equivalent of removing 26,000 cars from the road or planting 37,000 acres of trees.

Renewable Portfolio Standards (RPS)

New Jersey's Renewable Portfolio Standard requires that electric suppliers and providers procure a percentage of their annual retail electricity sales from solar, Class I, and Class II renewable energy. The NJ RPS requirements must be met via Solar Renewable Energy Certificates (SRECs), NJ Class I certificates, and NJ Class II certificates. In 2008, the Board proposed RPS rule amendments designed to increase the value of SRECs.

Through 2008, approximately 90% of the 3000 solar systems in New Jersey had enjoyed three state sources of subsidy; rebates from the Societal Benefits Charge, a net metering tariff with their local Electric Distribution Company, and SRECs via the NJ RPS. A stakeholder proceeding was initiated by the Board in 2007 designed to explore alternative models for developing a robust solar market able to meet the state's aggressive solar goals at the least cost to ratepayers. At the same time, the Board approved an SREC-only Pilot Program to enable solar facilities to participate in the SREC market without first applying for a rebate in the CORE program.

The SREC-only pilot program offered the opportunity for facilities to immediately participate in the RPS compliance market for SRECs without a rebate and without waiting in the CORE rebate queue. As a result, in 2008, fifty seven solar projects were completed totaling 8.4 MW with total invested costs exceeding \$58 million without a solar rebate. These projects were financed in a manner similar to all energy infrastructure development. By year end, a significant pipeline of projects were in progress with completion expected in early 2009. The SREC-based financing system will help transform this market.

In July 2008, in recognition of the need for greater SREC revenue certainty for the robust participation of the smaller solar project market segment, the Board directed the Electric Distribution Companies to develop solar financing programs. Atlantic City Electric and Jersey Central Power and Light each submitted filings in September 2008 proposing solar long-term contracting programs. This system is better than a feed in tariff system because it provides for financing solar systems at the lowest cost to the ratepayers to meet the solar RPS with fair access to all market segments. PSEG and RECO were directed to submit program filing in early 2009 with PSEG given the opportunity to file a program similar to the Board approved PSEG Solar Loan program. Following several stakeholder meetings, interested parties entered settlement discussions with the goal of presenting a final program for Board consideration in early 2009.

Staff convened public meetings with net metering and interconnection stakeholders in November 2008 to finalize rule amendments reflecting legislative changes adopted in January. From the stakeholder proceedings, proposed changes to the net metering and interconnection rules were structured into two sets with easily implemented rule changes expected to be presented to the Board in early 2009 and more complex changes requiring further stakeholder input. Staff had also prepared rule amendments designed to make the annualized period provisions of the net metering portion of the rule more accommodative to certain stakeholders with unique consumption and generation patterns. Provisions allowing stakeholders to adjust their anniversary date were prepared for the Board's consideration at the first agenda meeting in January 2009.

Offshore Wind

Five proposals were submitted in response to a grant solicitation for 350 MW in offshore renewable electricity capacity were received by the Board established deadline of March 3, 2008. The Board had authorized the release of the solicitation for funding the Offshore Wind Test Project (Solicitation) to meet the development of a test project to further the goals set out in the draft Energy Master Plan of advancing clean energy and offshore wind energy development. An Evaluation Committee consisted of representatives of US Department of Energy's National Renewable Energy Lab and US Department of Interior's Minerals Management Service and state agencies including NJ Department of Commerce, Department of Environmental Protection, and NJ Board of Public Utilities. The Evaluation Committee presented its findings to the Board on October 3, 2008.

On October 23, 2008, Governor Corzine released the Energy Master Plan (EMP) which establishes the goals and strategies to place New Jersey at the forefront of a growing clean energy economy with aggressive energy efficiency and renewable energy goals and action items. The EMP calls for a minimum of 1000 Megawatts of Off-Shore Wind capacity to be developed by 2012 and a minimum of 3000 MW of offshore wind by 2020. Also on October 23, the Board ordered a stakeholder proceeding be convened to explore how to meet the state's goals by amending the Renewable Portfolio Standards for Class I resources to incorporate an Off-Shore Wind carve out for 1000 MW by 2012 and 3000 MW by 2020.

In response to the EMP's OSW goals, the Board established a Meteorological Station Rebate Program in November 2008. The purpose of the Wind Meteorological Station Rebate Program is to support the development of offshore wind facilities needed to achieve the 1000 MW target by 2012 as specified in the Energy Master Plan. The program offered rebates up to \$4 million to eligible developers in order to encourage the installation of meteorological towers and related equipment. The Board approved three rebate applications for up to \$4 million to the following three developers:

- Fishermen's Energy, Cape May
- Bluewater Wind, Hoboken
- Garden State Offshore Energy, Hoboken

By the end of 2008, staff had engaged with stakeholders, including environmental groups, offshore wind developers, third party suppliers, utilities and Rate Counsel, in working with the U.S. Department of Interior (DOI), Minerals Management Section (MMS), to assist the DOI MMS in finalizing federal rules and guidance on leasing and permitting of activities on the outer continental shelf for OSW facilities.

Also, OCE through a public stakeholder proceeding discussed amendments to the RPS to facilitate offshore wind was on schedule for public hearings to be conducted in early 2009 with a rule proposal expected by mid-year. The stakeholder draft, including a process to develop an offshore wind (OSW) set aside in the Class I RPS and the establishment of an OSW Renewable Energy Certificate (OREC). The OREC would function in a similar manner to Solar REC (SREC) to assist in financing OSW projects.

Customer On-Site Renewable Energy (CORE) Rebate Program

This program provides rebates for the installation of renewable energy systems that serve customer loads. In 2008, 827 customers installed renewable energy systems with a capacity of 14.8 MW. These customers have or will receive rebates in excess of \$49 million, which will reduce the capital costs of these systems. Through 2008, the CORE program has provided rebates to 3,564 customers that have installed 67 MW of solar electric, wind, and biomass systems.

On April 3, 2007, the New Jersey Clean Energy Program opened registration for the new Solar Renewable Energy Credit (SREC)-Only Pilot Program. The SREC-Only Pilot Program is designed to enable New Jersey customer-generators to participate in the

SREC market without participating in the CORE rebate program. In 2008, 1,023 projects with capacity of over 8 MW were subscribed into the SREC Pilot Program.

CleanPower Choice Program

The Board launched a major new program in 2005 aimed at increasing consumer participation in the renewable energy market through a voluntary retail program known as the New Jersey **CleanPower Choice Program**SM. This program provides electric utility customers the option of selecting clean, renewable sources of energy through a sign-up option on their electric utility bills. New Jersey's **CleanPower Choice Program** is the first statewide program of its kind where multiple utilities and clean power marketers participate in a joint effort with the state to give consumers access to the regional market for renewable energy. In 2008, there were 14,456 customers enrolled in the program.

Renewable Energy Project Grants and Financing Program

This program (formerly called Renewable Energy Advanced Power (REAP) Program and the Grid Supply Program), provides grants and financing to encourage the development of New Jersey based large-scale renewable energy facilities greater than 1 MW. The solicitation is designed to provide seed grants and access to capital in order to make renewable-powered electricity cost competitive with conventional power plants. These projects require significant lead time to develop and for the Board to explore ways to assist in the upfront feasibility studies and design of these projects to advance in their development.

The following projects were under construction or operating in 2008:

- On August 8, 2008, the Board approved the Rahway Valley Sewage Authority (RVSA) request to blend 100% biogas with natural gas to provide more consistent operating conditions for their four engines. RVSA signed the EDA developed funding agreement in December. The OCE will process the \$500,000 grant and EDA will make payment from the Clean Energy Program account.
- The County of Burlington's 6.2 MW Landfill Gas to Energy Project was completed and began to produce electricity in August 2007. During 2008, the project sent 37,228 MWH of electricity to the grid.
- The Ocean Energy Corporation, Inc. (OECI) 9.6 MW landfill gas to energy project began producing electricity on June 1, 2007. OECI received their \$1.5 million grant in March 2008.
- The 7.5 MW Jersey Atlantic Wind facility, completed in 2005, produced a total of 22,698 MWH of renewable energy in 2008 with 12,073 MWH used on site and 10,625 MWH sent to the grid.
- Warren County received a grant funding agreement for a 3.8 MW landfill gas to energy project which began commercial operation in 2006.
- The Atlantic County Utility Authority's 1.6 MW landfill gas to energy project began operation in 2004. The project added a third generator in November 2007.

Renewable Energy Business Venture Assistance Program

Formerly known as the Renewable Energy Economic Development Program (REED), this program provides funding for renewable energy businesses in New Jersey. Grants were intended to promote renewable energy business development in the State.

The Renewable Energy Business Venture Assistance Program, in 2005, provided a direct loan to PJM Environmental Information Services, Inc. (PJM EIS) to finance the capital costs for the Generation Attributes Tracking System (GATS). The total loan amount was \$2,222,000 which includes \$1,600,000 for software development, hardware and related start-up costs; \$600,000 for an operating reserve fund to provide working capital for PJM EIS, and \$22,000 to pay EDA fees. In September 2008, PJM EIS made their second loan repayment of \$444,052.20 in principal and \$45,440.89 in interest. The GATS system is used by load serving entities in New Jersey to comply with their obligations to produce RECs to satisfy the State's RPS for reporting year 2008. The BPU commenced the process of transitioning the administration of the BTM tracking system to PJM-GATS which is expected to be completed in 2009.

Residential Energy Efficiency

Residential Program Summary

New Jersey's Clean Energy Program has been nationally recognized for the development of innovative energy efficiency initiatives. The New Jersey ENERGY STAR® Homes Program was recognized as an ENERGY STAR Partner of the Year for Energy Efficiency Program Delivery from the U.S. Environmental Protection Agency and U.S. Department of Energy. The program was recognized for promoting the construction of energy-efficient homes that help homeowners reduce energy use, and save money.

For the second year in a row, New Jersey's Clean Energy Program was honored with the ENERGY STAR Sustained Excellence Award as part of the Northeast ENERGY STAR Lighting and Appliance Initiative, a coalition of regional electric utility and energy efficiency program administrators in New England, New York and New Jersey. The Sustained Excellence Awards are presented to a select group of organizations that have exhibited outstanding leadership year after year. These winners have reduced greenhouse gas emissions by setting and achieving aggressive goals, employing innovative approaches and showing others what can be achieved through energy efficiency.

Residential Energy Efficiency Program Implementation

In 2008, the energy efficiency programs offered to residential customers included the Residential New Construction Program (NJ ENERGY STAR Homes), the Residential Electric and Gas HVAC Programs (*COOL*Advantage and *WARM*Advantage), the Energy Efficient Products Program, the Residential Low-Income (Comfort Partners) Program, and New Jersey Home Performance with ENERGY STAR Program.

New Jersey ENERGY STAR Homes Program

This program is designed through incentives to the developer to increase the efficiency of residential new construction, with the long-term goal of transforming the market to one in which all new homes are built to the national ENERGY STAR Homes standard. To be eligible, a home must meet a performance standard of 15% less energy consumption than if it had been built to the national model energy code, and the home must be located in an area designated for growth based on the State Development and Redevelopment Plan.

Since the New Jersey ENERGY STAR Homes Program was launched in 2001, it has been coupled with an extensive outreach effort that has resulted in participation by many of New Jersey's largest builders. They have committed to building all of their homes in New Jersey to the program's standards. Despite the slowdown in the real estate market, 4,012 new homes were built and certified to New Jersey ENERGY STAR Home standards in 2008. An additional 5,485 homes enrolled in the program in 2008 to be built to the New Jersey ENERGY STAR Home standard by 2010.

The New Jersey ENERGY STAR Homes built or enrolled in 2008 will result in 3,343 MWh of annual energy savings, which, when combined with the savings to be realized from those homes entered into the program in previous years, will grow to significant savings over the expected lifetime of the homes being constructed.

WARMAdvantage and COOLAdvantage Programs

These programs promote the installation and use of energy efficient residential heating and cooling equipment and are designed to transform the market to one in which quality installations of high efficiency equipment are commonplace. Rebates are available to promote the installation of qualified high efficiency HVAC equipment, including ENERGY STAR qualified central air conditioning and heating systems, and water heaters.

The U.S. Department of Energy issued new minimum energy efficiency standards for residential air conditioners and heat pumps that became effective in January 2006. The new standards increased the minimum Seasonal Energy Efficiency Ratio (SEER) for this equipment from 10 to 13. The COOLAdvantage Program was modified to reflect this change by eliminating rebates for equipment that is now required by the new standard and providing rebates only for equipment with a SEER of 14 or greater.

Gains in efficiency also result from the promotion of proper sizing and installation practices through contractor training sessions. During 2008, 1,687 HVAC technicians received NJCEP sales and technical training, and as part of this NJCEP training 128 technicians passed the test and were added to the North American Technician Excellence (NATE) certification list. Since 2001 the program trained over 13,265 technicians.

Energy Efficient Products

This Program promotes the sale and purchase of ENERGY STAR qualifying windows, lighting products, and appliances. It employs several key strategies, including:

- Educating consumers on their energy use and the advantages of energy-efficient choices

- Marketing and training support for retailers selling ENERGY STAR qualified products
- Leveraging national programs and advertising
- Using targeted rebates or other incentives to reduce cost barriers to purchasing ENERGY STAR qualified products

The ENERGY STAR Lighting Incentive Program partnered with lighting manufacturers, distributors and retailers to offer discounted bulbs and fixtures. Over 4.3 million compact fluorescent bulbs (CFLs) and 48,000 high efficiency lighting fixtures were sold in New Jersey stores in 2008. Other retailers that do not participate in the program also sell compact fluorescent bulbs so the total number of CFLs sold in New Jersey in 2008 could significantly exceed 4.3 million.

The ENERGY STAR Room Air Conditioner Rebate Program provided a \$20 rebate to 13,691 residents that purchased an ENERGY STAR qualified room air conditioner.

The ENERGY STAR Clothes Washer Rebate Program provided \$50 or \$75 rebates to 22,761 residents that purchased an ENERGY STAR qualified clothes washer.

The ENERGY STAR Dehumidifier Rebate Program provided \$25 rebates to 5,380 residents that purchased an ENERGY STAR qualified clothes washer.

Home Energy Analysis

A free home energy audit tool, Home Energy Analysis is included as part of the Residential ENERGY STAR Products Program. Home energy audits were performed on the program website by 13,464 residents in 2008. The home energy audits provide customers with a do-it-yourself tool for estimating savings that can be achieved through the installation of various energy efficiency technologies and through the purchase of ENERGY STAR qualified products.

Home Performance with ENERGY STAR Program

This program offers building contractors and owners of existing homes incentives to install building shell measures that reduce energy usage, such as insulation and ENERGY STAR windows and doors, and to install high efficiency appliances. In 2008, the program focused on recruiting, training and certifying contractors across the State which resulted in the installation of 163 projects.

Low-Income Program

This Program has improved energy affordability for New Jersey low-income households who, by definition, spend a high percentage of their income on energy. The Comfort Partners Program, delivered by the state's electric and natural gas utilities, provided energy savings, improved comfort, home safety, and health benefits for 7,239 New Jersey low-income households during 2008.

Energy savings were achieved through the installation of energy efficiency measures (including air sealing against drafts, insulation, and duct sealing), installation of high-

performance products and appliances (such as compact fluorescent lighting and ENERGY STAR refrigerators), and performance of health and safety testing to detect, reduce, or prevent the existence of dangerous combustion by-products. The measures are installed at no cost to the customer. The measures installed in homes in 2008 will save 8,778 MWh and 73,535 Dtherms per year over the life of the measures installed.

Commercial Energy Efficiency

Commercial Program Implementation

New Jersey SmartStart Buildings® Program

The Commercial and Industrial Construction Program was designed to address key market barriers to efficient construction on the part of developers, designers, engineers, and contractors in the commercial sector. It is available to schools and commercial, industrial, governmental, institutional, and agricultural customers. The program focuses on both new construction and retrofits of existing buildings.

The program offers a wide variety of incentives. Rebates for measures such as high efficiency lighting, heating and cooling equipment, and motors are offered to help offset the incremental cost of high efficiency equipment. Design incentives and support are available to cover a portion of the cost for additional energy efficiency design services, and technical support is provided to help customers evaluate energy efficiency options. In 2008, 1,172 retrofit projects, 111 new construction sites, and 118 schools received rebates through the NJ SmartStart Buildings Program. Annual energy savings from these energy-efficiency projects equal 99,663 MWh and 63,354 Dtherms.

An important component of this program supports efficient design and construction in schools. The New Jersey SmartStart Buildings Program is working to ensure that schools take into consideration the life cycle costs of energy design and equipment purchase decisions, not just up-front costs. The goal is to have designers make decisions that produce the lowest total costs over the life of the schools, where the energy savings more than offset any incremental up-front costs. In 2008, 118 schools received rebates and an additional 98 schools committed to the program.

Cool Cities Program

Managed by the NJ Department of Environmental Protection (DEP), this initiative is designed to reduce the urban heat island effect in specific neighborhoods through the planting of trees on city streets, thereby reducing cooling costs. DEP's Community Forestry Program's "Cool Cities Initiative" planted 8,982 trees in 2008 in various cities throughout the State. Besides improving the aesthetics of the urban neighborhoods, the annual energy savings from the trees planted in 2008 total 373 MWh.

Combined Heat and Power (CHP) Program

The Combined Heat and Power Program provides incentives for combined heat and power projects. CHP projects will reduce emissions, help businesses lower their electric costs, and improve electric reliability. In 2008, \$1.791 million in rebates were paid to 4

new CHP projects which will generate 9,114 MWh per year of clean, distributed electricity.

Local Government Energy Audit Program

The Local Government Energy Audit Program (LGEA) program was launched in November 2008. The program provides rebates equal to 75% of the cost of an energy audit and 100% of the cost of the audit if a certain level of recommended measures are installed. The program is designed to assist municipalities, school boards and other local government entities in identifying opportunities to reduce energy use and cost, benefiting property tax payers. Other programs provide additional incentives for installation of the energy saving measures recommended in the energy audit. This program will work in coordination with the Energy Saving Improvement Program (ESIP).

Pay for Performance (P4P) and Direct Install Programs

The Pay for Performance program will provide rebates to large commercial and industrial customers that take a comprehensive approach to reduce energy use in their facilities. The program will operate for companies with a peak load of 200 KW or larger. The program will be delivered through NJCEP P4P partners that will develop Energy Reduction Plans for the overall facility.

The Direct Install program targets smaller commercial customers with less than 200 KW peak load and will offer free energy audit incentives to cover up to 80% of the cost of measures installed.

Both of these programs were under development in 2008. The Pay for Performance program commenced operation in March 2009 and the Direct Install program is scheduled to commence operation in May of 2009.

Financial and Savings Data

2008 Program Expenditures

The total statewide budget for New Jersey's Clean Energy Program for 2008 was \$419.5 million. The budget allocated \$189.9 million to energy efficiency programs, \$217.8 million to renewable energy programs and \$11.8 million for program administration including Office of Clean Energy administrative costs, evaluation and related research, and outreach and education.

Actual spending for all programs was \$147.5 million or 35 % of the budget which includes \$82.5 million spent on energy efficiency, \$56.9 million on renewable energy programs, and \$8.2 million on administration including marketing and program evaluation. In addition, commitments were made to projects for incentives that will be paid when the projects are completed in the next year or two, which totaled an additional \$47 million for energy efficiency projects and \$108 million for renewable energy projects. Actual expenditures plus commitments total \$302.9 million or 72% of the budget. The table below provides a comparison of budgets to expenditures for each budget category:

New Jersey's Clean Energy Program Expenses for Reporting Year 2008

2008 Expenditures	Budget	Actual Expenses	Committed Expenses	Total Expenses
	(\$000)	(\$000)	(\$000)	(\$000)
Energy Efficiency Programs	\$189,928	\$82,452	\$47,204	\$129,656
Renewable Energy Programs	\$217,763	\$56,930	\$108,221	\$165,151
OCE Program Oversight	\$11,800	\$8,168	\$0	\$8,168
TOTAL	\$419,491	\$147,550	\$155,425	\$302,975

The tables below provide a comparison of the budgets to expenditures on a program-by-program basis:

Summary of 2008 Energy Efficiency Program expenditures:

New Jersey's Clean Energy Program 2008 Energy Efficiency Expenses

Statewide Summary - Energy Efficiency Reporting Period: YTD - 4th Quarter 2008 (All numbers = \$000's)	NJBPU Approved Budget	Actual Expenditures	Committed Expenditures
RESIDENTIAL PROGRAMS			
Residential HVAC - Electric & Gas	\$18,476	\$11,387	
Residential New Construction	\$37,141	\$11,282	\$18,815
Energy Efficient Products	\$20,142	\$14,516	
Home Performance with ENERGY STAR	\$9,829	\$5,002	
Residential Low Income			
Comfort Partners	\$26,373	\$20,682	
DCA Weatherization	\$1,859	-\$27	
Weather Rehab & Asset Preservation (WRAP)	\$300	\$0	
Community Based Efficiency Initiative	\$345	\$0	
Sub-Total: Residential Programs	\$114,465	\$62,844	\$18,815
COMMERCIAL & INDUSTRIAL PROGRAMS			
Commercial/Industrial Construction			
C&I New Construction	\$4,503	\$1,544	\$2,997
C&I Retrofit	\$22,596	\$11,710	\$13,425
New School Construction & Retrofit	\$3,727	\$1,085	\$1,234
Combined Heat and Power (CHP)	\$15,914	\$2,119	\$9,067
Municipal/Local Government Energy Audit	\$2,324	\$46	
Direct Install	\$3,000	\$0	
Pay-for Performance	\$5,000	\$52	
Teaching Energy Awareness with Children's Help (TEACH)	\$400	\$4	
Sub-Total: C&I Programs	\$57,464	\$16,560	\$26,723
OTHER PROGRAMS			
Special Studies	\$1,000	\$0	
Cool Cities	\$7,950	\$3,043	\$1,667
Utility Program Transition Costs	\$49	\$5	
Clean Energy Technology Fund	\$9,000	\$0	
Sub-Total: Other Programs	\$17,999	\$3,048	\$1,667
TOTAL Energy Efficiency Programs	\$189,928	\$82,452	\$47,204

Summary of 2008 Renewable Energy Program expenditures:

New Jersey's Clean Energy Program 2008 Renewable Energy Expenses

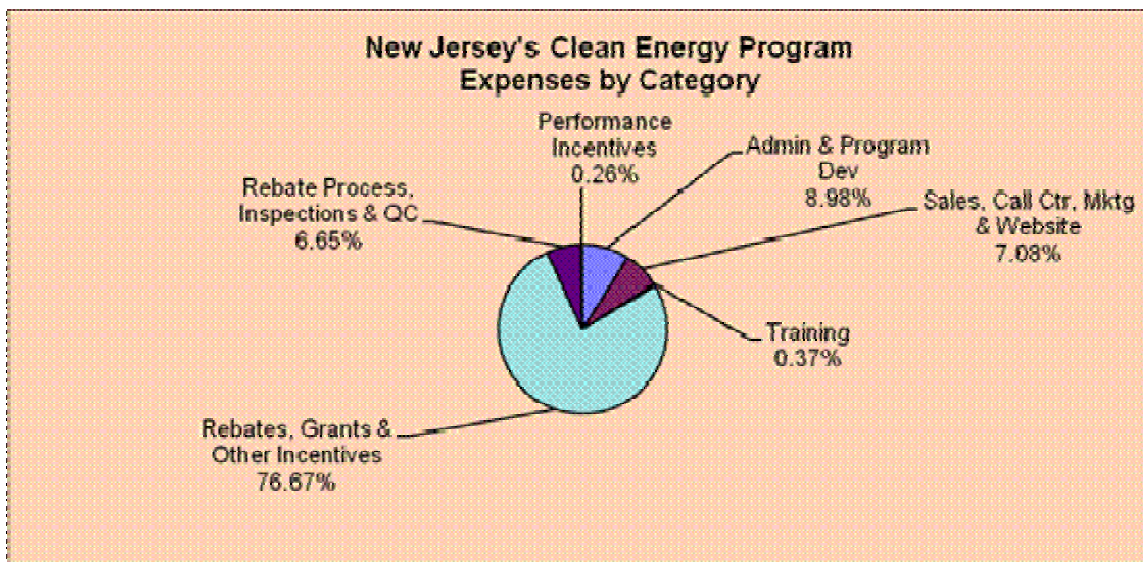
Statewide Summary - Renewable Energy Reporting Period: YTD - 4th Quarter 2008 (All numbers = 000's)	NJBPU Approved Budget	Actual Expenditures	Committed Expenditures
RENEWABLE PROGRAMS			
Customer On-Site Renewable Energy (CORE)	\$195,049	\$51,587	\$102,711
CleanPower Choice	\$982	\$834	
RE Certificates/SREC	\$1,659	\$876	
DEP Ecological Baseline Study	\$2,000	\$2,000	
Renewable Energy Development Initiative	\$4,163	\$0	
Offshore Wind Solicitation	\$1,900	\$0	
Sub-Total: Renewable Programs	\$205,753	\$55,297	\$102,711
EDA PROGRAMS			
RE Project Grants and Financing	\$4,072	\$1,536	\$4,010
Renewable Energy Business Venture Financing/REED	\$1,938	\$62	\$1,500
Clean Energy Technology Fund	\$3,000	\$0	\$0
Clean Energy Manufacturing Fund	\$3,000	\$36	\$0
Sub-Total: EDA Programs	\$12,010	\$1,634	\$5,510
TOTAL Renewable Energy Programs	\$217,763	\$56,930	\$108,221

Summary of 2008 Expenditures for Program Administrative Costs:

New Jersey's Clean Energy Program 2008 OCE Oversight Expenses

Statewide Summary - OCE Program Oversight Reporting Period: YTD - 4th Quarter 2008 (All numbers = 000's)	NJBPU Approved Budget	Actual Expenditures
Administration and Overhead	\$4,945	\$3,171
Evaluation and Related Research	\$2,485	\$748
Marketing and Communications	\$4,370	\$4,250
TOTAL OCE Program Oversight Expenses	\$11,800	\$8,168

Over 76% of the funds expended were spent directly on incentives paid to customers or on measures installed in customer's homes. The following table shows expenditures broken out by each of the major cost categories.



Program Savings and Benefits

In 2008, New Jersey's Clean Energy Program spent \$147.5 million to provide New Jersey homes and businesses with incentives to install energy efficient and renewable energy technologies that generated 335,001 MWh of annual electricity savings, 489,724 Dtherms of natural gas savings, 232,976 MWh of electricity generated from clean, renewable sources of energy, and 9,114 MWh of distributed generation from combined heat and power systems. The amount of electricity saved is enough to provide the annual requirements of approximately 80,000 homes in New Jersey. The programs also reduced demand on the electric system by 94 MW. Further, in 2008, \$155 million in commitments were made for projects to be completed in the next two years that will produce additional annual savings of 70,462 MWh, 1,785,074 Dekatherms, 72,974 MWh of renewable generation and 90,800 MWh of distributed generation.

The table below shows the average cost of savings for New Jersey's Clean Energy Program. Gas energy efficiency savings are converted to a kWh equivalent value in the table below. The cost of energy saved is significantly below the cost that would have been incurred to generate or purchase an equivalent amount of electricity or natural gas:

Program Cost per kWh Saved in 2008

Program Cost	Lifetime Savings/Generation from Measures Installed in 2008	Average Cost of Savings per kWh	Average Retail Price per kWh
\$147,550,000	\$9,312,162,649	\$0.016	\$0.130

In addition to purchasing energy savings at a cost lower than the cost to purchase an equivalent supply of electricity or natural gas, these programs produce clear environmental and public health benefits through reduced emissions for electricity that did not need to be generated and natural gas that was not burned. Customers that install energy efficiency or renewable energy measures benefit even more by lowering their annual energy costs.

The table below documents that New Jersey's Clean Energy Program produces significant energy bill reductions for the State's consumers. Over the years, New Jersey's Clean Energy Program – from the energy conservation programs in the mid-'80s to the mandatory Demand-Side Management (DSM) programs – through the Standard Offer programs have saved New Jersey residents and businesses over 46,000,000 MWh in avoided electricity use and over \$2.4 billion in avoided energy costs. Growth in savings from natural gas energy efficiency programs has also been substantial.

The savings identified in the chart below accrue to NJ residences and businesses that installed energy efficiency or renewable energy measures in 2008. The energy savings produced by these measures also produce savings on infrastructure costs, reduce congestion on transmission and distribution lines and increase reliability. The customer bill reductions do not include the avoided environmental costs from reductions in air emissions, wastewater discharges and waste generated.

<i>The Overall Customer Bill Reductions Resulting from the NJ Clean Energy Program</i>			
	Annual Energy Savings - Generation for 2008 Measures	Lifetime Energy Savings - Generation for 2008 Measures	Cumulative Lifetime Energy Savings - Generation for 2001 through 2008
Electricity (kWh)	577,091,000	6,800,080,000	31,527,833,000
Natural Gas (therms)	4,897,240	85,712,260	703,847,550
	Annual Bill Reductions to NJ Energy Customers	Lifetime Bill Reductions to NJ Energy Customers	Cumulative Bill reductions to NJ Energy Customers
Electricity (kWh) @ \$0.13 kWh	\$75,021,830	\$884,010,400	\$4,098,618,290
Natural Gas (therms) @ \$1.30/therm	\$6,366,412	\$111,425,938	\$915,001,815
Total Customer Bill Reductions	\$81,388,242	\$995,436,338	\$5,013,620,105

Savings includes renewable energy generation and distributed generation

Summary of energy savings that resulted from the energy efficiency programs implemented in 2008:

Savings from 2008 Energy Efficiency Programs			
	Actual	Committed	Total
<i>Annual Savings from Measures Installed or Committed to in 2008</i>			
kwh	335,001,000	70,462,000	405,462,000
kw	40,665	43,811	84,476
Therms	4,897,240	17,850,740	22,747,980
<i>Lifetime Savings from Measures Installed or Committed to in 2008</i>			
kwh	3,160,279,000	1,100,935,000	4,261,212,000
Therms	85,712,226	221,371,410	307,083,670
<i>Cumulative Lifetime Savings from Measures Installed or Committed to (2001-2008)</i>			
kwh	22,618,483,000	NA	22,618,483,000
Therms	633,297,590	NA	633,297,590

Summary of renewable energy generation that resulted from the renewable energy programs implemented in 2008:

Electric Generation from 2008 Renewable Energy Programs			
	Actual	Committed	Total
<i>Annual Renewable Electric Generation from Measures Installed or Committed to in 2008</i>			
kwh	232,976,000	72,974,000	305,950,000
kw	51,905	55,052	106,957
<i>Lifetime Savings from Measures Installed or Committed to in 2008</i>			
kwh	3,530,437,000	1,459,488,000	4,989,925,000
<i>Cumulative Lifetime Savings from Measures Installed or Committed to (2001-2008)</i>			
kwh	7,450,224,000	NA	7,450,224,000

Summary of generation that resulted from combined heat and power systems installed or committed to in 2008:

Electric Generation from 2008 Combined Heat and Power (CHP) Program			
	Actual	Committed	Total
<i>Annual Electric Generation from CHP systems Installed or Committed to in 2008</i>			
kwh	9,114,000	90,800,000	99,914,000
kw	1,276	11,365	12,641
<i>Lifetime Savings from CHP systems Installed or Committed to in 2008</i>			
kwh	109,364,000	3,705,353,000	3,814,717,000
<i>Cumulative Lifetime Savings from CHP systems Installed or Committed to (2005-2008)</i>			
kwh	1,459,126,000	NA	1,459,126,000

Environmental Benefits

New Jersey's Clean Energy Program is Reducing Pollution

By reducing energy use or promoting renewable sources of energy generation, New Jersey's Clean Energy Program reduces the need to generate electricity and burn natural gas and eliminates the pollution that would have been caused by such electric generation or natural gas usage. The benefits of these programs continue for the life of the measures installed, which on average is about 15 years. Thus, the public receives substantial environmental and public health benefits from programs that also lower energy bills and benefit the economy. The total reductions in carbon dioxide emissions resulting from New Jersey's Clean Energy Program in 2008 are equivalent to taking over 68,000 cars off the road for an entire year. These emission reductions will reduce our State's contribution to greenhouse gasses, smog, and acid rain.

The following table summarizes the annual and lifetime emission reductions that result from the installation of energy efficiency and renewable energy measures installed in 2008:

Emission Reductions

	CO2	NOX	SO2	HG (LBS)
Annual Emission Reductions (Metric Tons) from Measures Installed in 2008	418,463	743	1,678	44,528
Lifetime Emission Reductions (Metric Tons) from Measures Installed in 2008	5,042,788	8,843	19,758	301,096
Cumulative Lifetime Emission Reductions (Metric Tons) 2001 - 2008	22,952,422	38,724	83,749	2,220,108

Annual and lifetime emission reductions are for measures installed in 2008

Program Evaluation

The two primary purposes for conducting evaluation and research regarding energy efficiency and renewable energy programs are:

- 1) to reliably document program effects, and
- 2) to improve program designs and operations to be more cost effective at obtaining energy savings and/or renewable energy generation.

Evaluation and research activities are intended to provide a continuous feedback loop to policymakers, program administrators, and program managers regarding the operations of the programs. The ultimate goal of evaluation and research activities is to improve the programs. Reports on program evaluation and other information are available on the program website, njcleanenergy.com.

Program Alliances

The success of New Jersey's Clean Energy Program is due in part to the many organizations, institutions, and alliances we work in partnership with to advance our clean energy initiatives. In addition to the organizations and institutions represented in the Clean Energy Council and Committees, NJCEP works in partnership with a wide variety of state, regional, and national organizations that provide valuable input on clean energy standards, best practices, policies, and opportunities for collaboration and outreach to key constituencies.

Affordable Comfort (ACI)
Alliance to Save Energy (ASE)
American Association of Healthcare Administrative Management
American Council for an Energy-Efficient Economy (ACEEE)
American Council of Engineering Companies of NJ
American Institute of Architects – (NJ AIA) NJ and Regional Chapters
American Society of Certified Engineering Technicians
American Society of Heating, Refrigerating and Air-Conditioning Engineers
American Society of Plumbing Engineers
Appliance Standards Awareness Project (ASAP)
Association for Facilities Engineering
Association of Energy Engineers
Association of Independent Colleges and Universities in NJ
Builders & Remodelers Assn. of Northern NJ
Builders League of South Jersey
Building Owners and Managers Association of NJ
Building Performance Institute (BPI)
Business Council for Sustainable Energy
Clean Energy States Alliance (CESA)
Community Builders Association of NJ
Community College Business Officers
Consortium for Energy Efficiency (CEE)
Council of Chief State School Officers
Delaware Valley Green Building Council
Double D
Eastern Heating & Cooling Council (EHCC)
Eastern Heating and Cooling Council
Energy Federation, Inc. (EFI)
Equipment Managers Council of America
Executives Association of NJ
Global Learning Inc.
Green Market Fundraising
GreenFaith
Healthcare Engineers of Southern NJ
Healthcare Facilities Management Society of NJ
Healthcare Financial Management Association

HelpLightNJ
Hospital Engineering Society of Greater NY
Housing & Community Development Network of NJ
Illuminating Engineering Society
Institute of Electrical and Electronics Engineers
International Facility Management Association
Isles
Lincoln Park
Mechanical Contractors Association of NJ
Mid-Atlantic Distributed Resources Initiative (MADRI)
National Association of Industrial and Office Properties
National Association of Regulatory Utility Commissions (NARUC) Energy and
Environmental Resource Committee
National Association of State Energy Officials (NASEO)
National Association of Women Business Owners
National Conference of State Legislatures (NCSL) Renewable Energy Project
National Council on Electric Policy (NCEP) Distributive Energy Resources
National Supermarkets Association
New Jersey Citizen Action
New Jersey Fuel Merchant Association
New Jersey Higher Education Partnership for Sustainability (NJHEPS)
New Jersey Institute of Technology
New Jersey Association of School Administrators
New Jersey Association of School Business Officials
New Jersey Builders Association
New Jersey Business and Industry Association
New Jersey Chapter Eastern Region Association of Higher Education Facilities Officer
New Jersey Council of County Colleges
New Jersey Future
New Jersey Hospital Association
New Jersey Hotel Motel Association
New Jersey League of Municipalities
New Jersey Restaurant Association
New Jersey Retail Merchants Association
New Jersey Society of Professional Engineers
North American Technician Excellence (NATE)
Northeast Energy Efficiency Partnership (NEEP)
One Change/Project Porchlight
Refrigeration Service Engineers Society
Regional Greenhouse Gas Initiative (RGGI)
School Boards Association
Shore Builders Assn. of Central New Jersey
Southern New Jersey Development Council
Sustainable Jersey
TechniArt
The Rutgers' Hydrogen Learning Center

US Department of Energy (USDOE), Clean Energy/Air Quality Integration Pilot
US Department of Energy's Million Solar Roofs (MSR) Initiative
US Department of Energy's Wind Powering America (WPA) Program
US Environmental Protection Agency (USEPA) ENERGY STAR Program
US Green Building Council - New Jersey Chapter (USGBC-NJ)
USEPA Clean Energy - Environment State Partnership

Contacts

**For more information about
New Jersey's Clean Energy Program, visit:**
www.NJCleanEnergy.com or www.nj.gov/bpu

For additional information, please contact:

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1-800-624-0241

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1-866-NJSMART

PROGRAM COORDINATOR
c/o Applied Energy Group
317 George Street, Suite 400
New Brunswick, NJ 08901
1-866-NJSMART

You may also write to the individual Market Managers:

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145 Route 46 West
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1-866-NJSMART

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