

**New Jersey's Clean Energy Program
2009 Program Descriptions and Budgets**

Office of Clean Energy

**Energy Efficiency Programs,
Renewable Energy Programs, and
OCE Oversight Activities**

December 15, 2008

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I. OCE Energy Efficiency Programs

Special Studies

The proposed 2009 budget includes \$1,055,312 for potential special studies. OCE anticipates utilizing a portion of this funding for developing “green” job training programs. Any proposed funding for special studies will be submitted to the Board for approval prior to OCE entering into contracts for any such studies.

The New Jersey League of Municipalities has implemented a program called Sustainable NJ which provides support and incentives for municipalities to become more sustainable and energy efficient. OCE proposes utilizing a portion of the Special Studies budget to provide additional incentives to municipalities that will support the League’s Sustainable NJ efforts. These incentives will be in addition to the incentives provided through the Clean Energy Community Partners program delivered by Honeywell and other program incentives currently available to municipalities.

DEP Cool Cities Program

The Cool Cities Program is managed by the New Jersey Department of Environmental Protection (DEP) pursuant to a Memorandum of Agreement between the Board and DEP. Program details are set out in Attachment A.

State of New Jersey Statewide Energy Efficiency Projects

Pursuant to the FY09 State appropriation legislation, \$10 million will be transferred from the CEP Trust Fund to a Treasury account to be used for energy efficiency upgrades in State facilities.

II. OCE Renewable Energy Programs

CleanPower Choice Program

Program Description

The CleanPower Choice Program offers retail electric customers the option of selecting an energy product or products with higher levels of renewable energy than is required by the RPS. The option is available to all retail electric customers in the State via a sign up option on utility bills. The products offered by Clean Power Marketers (CPM) are 100% renewable energy but customers may select any percentage of their usage to be supplied by this 100 % renewable energy product. The program provides additional incentives for the development of renewable energy facilities throughout the region.

A detailed description of the proposed program is available on the Board's web site.

Target Market/Eligibility

The program targets all retail electric customers of the State's four investor owned electric utilities. Clean power sales in the voluntary program must be renewable energy that is not otherwise used to meet a suppliers RPS requirements and includes full disclosure of the power supply mix utilized by the suppliers participating in the program.

Program Offerings and Customer Incentives

The voluntary program allows customers to select a product with 100% renewable energy content in varying percentages of the customer's usage at a potentially higher cost than basic generation services would provide.

Program Delivery

The program is overseen by the Office of Clean Energy with administrative support, policy advice, and outreach coordination provided by the Renewable Energy Market Manager. Implementation is achieved through a collaborative utility-clean power marketer program hosted by the four investor owned electric utilities. The 'host' utilities provide a delivery platform to enable enrollment and billing, with oversight by the Office of Clean Energy. The program is offered as an add-on subscription of clean power supplied by a qualified third-party clean power marketer without interruption to customer's basic electric service. The Office of Clean Energy plays a lead role in jointly marketing the program to customers in cooperation with electric and gas utilities and clean power marketers.

Program Budget

Detailed budgets for this program are included in the compliance filings submitted by the utilities and the RE Market Manager.

Program Goals and Minimum Requirements for Program Management

Specific 2009 goals and performance indicators for the Clean Power Choice Program will be developed by Honeywell and included in its 2009 program and budget filing.

Offshore Wind Program

At its October 3, 2008 agenda meeting, the Board approved, pursuant to its Offshore Wind Solicitation, a grant award of \$4 million to Garden State Offshore Energy (GSOE) to install an aggregate of up to 350 megawatts of offshore wind generation. By Order dated November 21, 2008, Docket No. EO08110971, the Board authorized Staff to develop and issue an application for a proposed Offshore Wind (OSW) Rebate program that would provide rebates for the installation of meteorological towers subject to the Board's consideration and approval of the proposed OSW Rebate program as part of the 2009 NJCEP Budget. The OCE RE budget includes \$12 million for the GSOE grant and/or OSW wind rebates paid pursuant to the OSW Rebate program, subject to approval by the Board.

Renewable Energy Program: Grid Connected

The OCE is in the process of developing a competitive solicitation for review and approval by the Board to award incentives for the development of grid connected renewable energy systems. The solicitation's objective is to facilitate the development of renewable wind and biopower energy projects in New Jersey. The selected proposal(s) will demonstrate the superior ability of the proposed project team to construct a wind or biopower project, and the need for grant funds to document feasibility, secure permits, process feedstocks, demonstrate innovative financing, supplement other revenue streams, or overcome other barriers to private investment in renewable electricity generation.

Proposals that provide renewable wind and biopower energy generation using emerging, commercially available technologies that maximize energy production during peak demand periods with the greatest feasibility will be given preference. Proposals that provide clean energy generation that address load pocket or congestion problems within the electricity distribution system serving New Jersey will be given preference. Other evaluation criteria that will be considered based on the information from the project proposal, are those that encourage increased energy security, reliability and maximized environmental benefits to New Jersey ratepayers. This program replaces the Renewable Energy Development initiative which was approved but not implemented in 2008.

Renewable Energy Program: Customer Sited

The Board has engaged Clean Power Markets (CPM) to assist in issuing and tracking SRECs. The contract with CPM was extended through June of 2009 to assist with the transition to PJM GATS which will issue all RECs and SRECs post transition. The OCE component of the Renewable Energy Program: Customer Sited budget includes \$500,000 to continue this contract through June of 2009.

Edison Innovation Clean Energy Fund

The Edison Innovation Clean Energy Fund will offer assistance in the form of grants to support New Jersey renewable energy and energy efficiency technology research and development activities. The program will be administered by the New Jersey Commission on Science and Technology (CST) pursuant to a Memorandum of Understanding between CST and the Board dated September 17, 2008. Program details are set out in Attachment B.

III. EDA Programs

Renewable Energy Project Grants and Financing Program

(Including commitments made in its predecessor programs the Renewable Energy Advanced Power Program and the GRID Supply Program)

The Renewable Energy Project Grants and Financing Program was discontinued in 2007. However, the Board issued incentive commitments to a number of projects prior to discontinuing the program. The 2009 budget for this program is to pay these commitments if and when the projects are completed and demonstrate that all program requirements have been met.

Renewable Energy Business Venture Assistance

(Including commitments made in its predecessor programs: the Renewable Energy Economic Development Program)

The Renewable Energy Business Venture Financing Program was discontinued in 2007. However, the Board issued incentive commitments to a number of projects prior to discontinuing the program. The 2009 budget for this program is to pay these commitments if and when the projects are completed and demonstrate that all program requirements have been met.

Edison Innovation Clean Energy Manufacturing Fund

The Edison Innovation Clean Energy Manufacturing Fund will provide incentives for innovative clean energy technologies, including both energy efficiency and renewable energy manufacturing businesses intended to stimulate the clean energy industry in New Jersey. The program will be administered by the New Jersey Economic Development Authority pursuant to a Memorandum of Understanding between EDA and the Board. Program details are set out in Attachment C.

IV. OCE Oversight Activities

The 2009 OCE Oversight budget approved by the Board includes three components:

1. Administration and Overhead;
2. Evaluation and Related Research; and,
3. Marketing and Communications.

This document provides a description regarding how these funds will be expended and a budget for each.

Administration and Overhead

The Administration and Overhead component of the OCE Oversight budget includes four components as follows:

- OCE Staff and Overhead
- Program Coordinator Services
- Appliance Standards Rules
- Memberships-Dues

The Office of Clean Energy (OCE) was charged by the Board with the responsibility for administering New Jersey's Clean Energy Program. As the administrator of New Jersey's Clean Energy Program, the OCE is responsible for various program related matters including:

1. Developing recommendations to the Board regarding programs to be funded, budgets for those programs and various matters related to the administration and implementation of the programs.
2. Drafting Board Orders memorializing Board decisions and tracking compliance with such Orders.
3. Development of policies and procedures for payments to the fiscal agent and payments made by the fiscal agent for program related services.
 - a. Coordinating with Treasury with regard to the financial management of the programs and reporting.
 - b. Review of payments requests to insure consistency with policies and procedures and any contractual arrangements.
4. Coordinating the activities of the Clean Energy Council including soliciting input regarding programs, budgets and program administrative matters.
5. Overseeing the activities of the Program Coordinator and the various program managers including the Market Managers, utilities, EDA, DEP, CST, the OCE itself with regard to renewable energy and education and outreach efforts and potentially others.
6. Developing reporting guidelines and providing the Board with regular updates regarding program activities.

7. Development of protocols for measuring energy savings and renewable energy generation.
8. Overseeing evaluation and related research activities.
9. Development of program goals, performance indicators and minimum requirements for program management.
10. Monitoring program activity and reviewing evaluation results and recommending modifications to programs and budgets as required.
11. Developing requests for proposals to engage program managers, evaluation contractors and other contractors that assist with the administration of the programs, evaluating proposals received, and selecting contractors.
12. Facilitate resolution of issues related to program management and customer complaints.

The OCE Staff and Overhead component of the budget includes the provision of the services described above.

In 2007 Applied Energy Group (AEG) was engaged by the Board to serve as the Program Coordinator. The OCE Oversight budget includes funding for the costs associated with this contract.

AEG provides a number of services in its role as Program Coordinator including the following:

1. AEG developed and maintains an IMS system for tracking and reporting all program activities
2. Preparation of monthly, quarterly and annual reports
3. Hosting the NJCEP website and supporting the maintenance of the website
4. Financial management including invoice processing
5. Quality assurance including field inspections and file reviews to ensure all program policies and procedures are adhered to
6. Marketing and communications coordination to ensure consistency across all marketing activities
7. Evaluation support; AEG supports the evaluation efforts managed by CEEEP
8. Hosting the statewide 800 number and provision of call center services
9. Dispute resolution
10. Regulatory support; AEG assists in the drafting of Board orders and other regulatory documents related to the NJCEP

The Appliance Standards Rules budget supports the development and maintenance of a national database of qualifying appliances.

The membership/dues budget includes funding for annual memberships for the Northeast Energy Efficiency Partnerships (NEEP), the Consortium for Energy Efficiency (CEE), the National Association of State Energy Offices (NASEO), the National Association of Regulatory Utility Commissioners (NARUC), the Clean Energy States Alliance (CESA), the American Council on Renewable Energy (ACORE), the US Green Buildings Counsel, and for participating in NEEP's regional EMV Forum.

Evaluation and Related Research

Rutgers University's Center for Energy, Economic and Environmental Policy (CEEPP) has been engaged by the Office of Clean Energy (OCE) to manage evaluation and related research activities. CEEPP will develop evaluation and related research plans, solicit input on the plans from the OCE, the Clean Energy Council, program managers and others and will implement such plans upon approval by the OCE.

Once plans are approved, CEEPP will either perform the evaluation and research activities or will develop the technical components of requests for proposals (RFPs) to engage outside contractors to perform the evaluations. RFPs will be issued by either Treasury or CEEPP and CEEPP will work with Treasury regarding the review of proposals and will manage the day-to-day activities of contractors hired to perform evaluations. CEEPP will coordinate with the OCE and the Clean Energy Council to implement recommendations that result from the evaluations and related research.

2009 Evaluation and Related Research: Planned Activities

The Evaluation and Related Research budget includes funding for a number of evaluation related activities planned for 2009 including the following:

- Rutgers Center for Energy, Economic and Environmental Policy: evaluation support. This is a continuation of an existing contract to provide overall evaluation management.
- Impact Evaluation: The Board engaged KEMA to perform an Impact Evaluation which commenced in May 2007 and is expected to be completed in early 2009.
- Funding Reconciliation: The Board engaged MBC to perform a funding reconciliation for the years 2001 through 2005 which was completed in 2008. OCE is in the process of engaging an accounting firm to update the reconciliation for the years 2006 and 2007.
- O&M Scoping Study: The budget includes funding for a C&I Scoping Study which would determine the feasibility and viability of a potential new program focused on the energy efficient operation of existing commercial buildings.
- Online Academy: The budget includes funding for a proposed Online Academy Pilot project which would provide educational offerings to all participants in New Jersey's Clean Energy Program including design professionals, building owners, contractors and CEP program representatives. The New Jersey Institute of Technology (NJIT) will develop the Online Academy and perform the O&M scoping study.
- Other Studies/Job Training Pilot: This budget includes funding for the Anemometer Program (see details below) and includes funding for a job training pilot. OCE anticipates partnering with community colleges to offer classes on energy auditing and other skills that can help develop a "Green" workforce.
- Program Evaluation: The budget includes funding for 2009 evaluation activities which may include process evaluation or market assessment studies.
- Northeast Energy Efficiency Partnerships (NEEP) Scoping Study. NEEP was engaged by the Board to prepare a study of programs that could be implemented to meet the EMP goals.

Market assessments are intended to gather information regarding the state of the energy efficiency and renewable energy marketplaces in NJ to help inform program designs and incentive levels. The market assessments are intended to gather information on various aspects

of the marketplace including how markets have changed since the programs were first implemented in 2001, the incremental cost of standard versus high efficiency/renewable energy equipment, the impacts of the programs on transforming markets and a review of standard building practices. Protocols are used to estimate the savings from energy efficiency measures and generation from renewable energy facilities. Impact evaluations measure actual savings or generation and are used to update protocols.

CEEEP will develop a 2009 Evaluation and Related Research Plan, circulate a draft plan for input from the OCE, the Clean Energy Council, program managers and others and submit a final plan to OCE for approval.

New Jersey Regional Anemometer Program

In 2008 the Board awarded a grant to The Richard Stockton College of New Jersey, The College of New Jersey, and Ocean County Community College, to manage the “New Jersey Regional Anemometer Program” (NJRAP). The purpose of the NJRAP program is to enlist the assistance of NJ colleges and universities in building New Jersey’s capacity for providing wind resource assessment services through:

1. The purchase and provision of anemometers (wind measuring instrumentation) and related services through colleges and universities without anemometers, or
2. The service, maintenance, and redeployment of anemometers through colleges and universities with existing anemometers.

In 2008 the Board approved a budget of \$68,000 for this program and, as noted above, awarded two year grants to the three schools. OCE is proposing to continue this program through 2009 at the same funding level previously approved by the Board which is a maximum of \$68,000 over 2008 and 2009. Money for this project will come from the NJCEP “Other Studies/Job Training Pilot” Evaluation and Related Research line item within the OCE Administration Budget.

Marketing and Communications

For the past several years the Board engaged Grafica to deliver a statewide umbrella marketing campaign. The campaign was designed to brand the New Jersey Clean Energy Program name and to advertise the generic benefits of energy efficiency and renewable energy. OCE believes that those campaigns have been effective and are no longer required in 2009.

In 2009 all of the marketing will be delivered by the Market Managers, Honeywell and TRC. The Market Managers will pick up some of the functions previously performed by Grafica as well as deliver the marketing related to “selling” their programs. The overall marketing budgets will be reduced substantially from 2008 levels.

While the generic marketing campaigns previously delivered by Grafica will be discontinued in 2009, several marketing activities will continue as follows:

1. NJCEP Conference: Grafica previously managed activities related to the annual New Jersey Clean Energy Program Conference. OCE is proposing that TRC manage activities related to the 2009 conference. TRC’s proposed activities are included in its 2009 compliance filing.

2. Website: AEG, as the Program Coordinator, hosts and maintains the New Jersey Clean Energy Program website. Grafica previously provided creative services related to the design of the website pages, content management system and programming. OCE is coordinating with Treasury to extend the contract with Grafica to continue providing these services in the first half of 2009.

The following describes the specific components of the proposed OCE Marketing and communications budget:

- Business Outreach: The budget is for expenses incurred in 2008 that will be paid in 2009 in support of the 2009 New Jersey Clean Energy Conference and Leadership Awards.
- Energy Savings Campaigns: The budget is for expenses incurred in 2008 that will be paid in 2009 for previously committed marketing campaigns.
- Web Site: This budget is for website projects and maintenance as discussed above.
- Annual Report: This budget is for expenses incurred in 2008 that will be paid in 2009 for projects related to issuance of the 2007 annual report.
- Research: Market research is performed bi-annually on residential and business segments. The budget is for expenses related to the ongoing market research/business customer survey planned for 2009.
- Outreach and Education/Community Partner Grants: The budget is for payments to Outreach and Education grants previously approved by the Board.

Appendix A: 2009 Program Budgets

The following tables set out detailed budgets for the programs managed by the OCE:

**Office of Clean Energy
Energy Efficiency Program Compliance Filing
Detailed Final 2009 Budgets**

Energy Efficiency Programs	Total	Administration and Program Development	Sales, Call Centers, Marketing and Website	Training	Rebates, Grants, and Other Dircet Incentives	Rebate Processing, Inspections, and Other Quality Control	Evaluation and Related Research
Special Studies	\$1,055,312				\$1,055,312		
Cool Cities	\$4,000,000	\$400,000	\$180,500		\$3,395,500		\$24,000
State of NJ Statewide EE Projects	\$10,000,000				\$10,000,000		
Total Energy Efficiency	\$15,055,312	\$400,000	\$180,500	\$0	\$14,450,812	\$0	\$24,000

**Office of Clean Energy
Renewable Energy Programs Compliance Filing
Detailed Final 2009 Budgets**

Renewable Energy Programs	Total	Administration and Program Development	Sales, Call Centers, Marketing and Website	Training	Rebates, Grants, and Other Dircet Incentives	Rebate Processing, Inspections, and Other Quality Control
Clean Power Choice	\$0					
Offshore Wind Solicitation (g)	\$12,000,000				\$12,000,000	
Renewable Energy Program: Grid Connected (Formerly REDI)	\$10,201,605				\$10,201,605	
Renewable Energy Program: Customer Sited	\$500,000					\$500,000
Edison Innovation Clean Energy Fund	\$6,000,000	\$60,000			\$5,940,000	
SUB-TOTAL Renewables	\$28,701,605	\$60,000	\$0	\$0	\$28,141,605	\$500,000
EDA PROGRAMS						
RE Project Grants and Financing	\$2,598,033	\$50,000			\$2,548,033	
Renewable Energy Business Venture Financing/REED	\$549,376	\$50,000			\$499,376	
Edison Innovation Clean Energy Manufacturing Fund: Total	\$23,928,000	\$120,000			\$23,808,000	
SUB-TOTAL EDA Programs	\$27,075,409	\$220,000	\$0	\$0	\$26,855,409	\$0
Total RE	\$55,777,014	\$280,000	\$0	\$0	\$54,997,014	\$500,000

**Office of Clean Energy
OCE Oversight Compliance Filing
Detailed Final 2009 Budget**

	2009 Budget	Administration and Program Development	Sales, Call Centers, Marketing and Website	Evaluation and Related Research
Administration and Overhead				
OCE Staff and Overhead	\$2,503,000	\$2,503,000		
Program Coordinator	\$2,179,123	\$2,179,123		
Appliance Standards Rules	\$50,000	\$50,000		
Memberships-Dues				
<i>Northeast Energy Efficiency Partnership Sponsorship including EMV Regional Protocol Forum</i>	\$600,000	\$600,000		
<i>Clean Energy States Alliance</i>	\$80,000	\$80,000		
<i>Consortium for Energy Efficiency</i>	\$125,000	\$125,000		
<i>National Association of State Energy Officials and ACORE</i>	\$15,000	\$15,000		
<i>National Association of Regulatory Utility Commissioners</i>	\$5,000	\$5,000		
<i>Other Sponsorships</i>	\$25,000	\$25,000		
Sub-Total: Administration and Overhead	\$5,582,123	\$5,582,123	\$0	\$0
Evaluation and Related Research				
<i>Rutgers-CEEEP</i>	\$500,000			\$500,000
<i>Impact Evaluation</i>	\$230,000			\$230,000
<i>Funding Reconciliation</i>	\$50,000			\$50,000
<i>O&M Scoping Study/Online Academy</i>	\$450,000			\$450,000
<i>Other Studies/Job Training Pilot</i>	\$400,000			\$400,000
<i>Program Evaluation</i>	\$1,100,000			\$1,100,000
<i>Northeast Energy Efficiency Partnership Scoping Study</i>	\$37,000			\$37,000
Sub-Total: Evaluation and Related Research	\$2,767,000	\$0	\$0	\$2,767,000
Marketing and Communications				
<i>Business Outreach/Conference</i>	\$100,000		\$100,000	
<i>Energy Savings Campaigns</i>	\$590,000		\$590,000	
<i>Web Site</i>	\$300,000		\$300,000	
<i>Annual report, marketing administration</i>	\$10,000		\$10,000	
<i>Research</i>	\$100,000		\$100,000	
<i>Outreach and Education/Community Partner Grants</i>	\$100,000		\$100,000	
Sub-Total: Marketing and Communications	\$1,200,000	\$0	\$1,200,000	\$0
TOTAL: Administration	\$9,549,123	\$5,582,123	\$1,200,000	\$2,767,000

Attachment A: DEP Cool Cities Program Description

Cool Cities Initiative 2009 Compliance Plan Filing Document (CF) New Jersey Board of Public Utilities (BPU) in Partnership with the Department of Environmental Protection (DEP)

Urban Tree Planting for Reduced Energy Use and Mitigation of the Urban Heat Island Effect

1. Program Description

Trees mitigate the urban heat island effect ($\Delta = 7.2^{\circ}$ to 10.8°F surface and at least 2° to 7°F ambient air temperature) in three distinct ways:

1. Through the direct interception and absorption of solar heat IR and UV (0.25μ to $1,000\mu$) rays,
2. Evapo-transpiration of hundreds of gallons of water per tree per year forming a cooling mist, and
3. Removal of 8.4 pounds of air pollution per mature tree per year thus facilitating nighttime urban heat dispersal.

The Center for Urban Forest Research of the USDA Forest Service in Syracuse, New York has extensive data findings from fifty major northeastern cities that suggest such greening is resulting in cooler temperatures in the summer in these cities and the conservation of electricity by lowering the demand for fans and air conditioning at peak times.

The DOE estimates that 36.6% of all energy is consumed from June through September and the Goddard Institute of Space Studies reports that 18% of all electricity used in the U.S. is for cooling. The EPA reports that peak utility loads increase from 1.5% to 2% for every 1°F increase in ambient air temperature and therefore, as reported by the US Forest Service, the urban heat island effect of 2° to 7°F increases the city's demand for electricity by an average of 3% to 8%. Depending on the time of day, field measurements in cities have shown a drop of 0.7° to 2.2°F for every 10% increase in tree canopy cover, according to the peer-reviewed Journal of Arboriculture and the US Forest Service.

These issues are being addressed under the Cool Cities Initiative. The New Jersey Department of Environmental Protection (DEP) in partnership with the New Jersey Board of Public Utilities (BPU) will work with municipalities from the Urban Aid Communities and Urban Centers/Complexes lists as well as contractors to plant thousands of full-sized shade trees. The plantings will occur in tree-less, under-served urban neighborhoods with low tree cover around the state and thus create cleaner, greener communities. As a result, the New Jersey Cool Cities Initiative is listed as one of the eleven "*What is New Jersey doing about climate change*" initiatives found on Governor Jon Corzine's State of New Jersey Global Warming website.

In those neighborhoods where trees have been planted through this initiative, extensive field data is being collected for analysis with CITYgreen® software. This software quantifies energy cost

savings and projects them forward so as to allow for consideration of inevitable tree growth. The DEP is required under a signed MOA to provide the following reports: The four NJCEP quarterly reporting requirements, the 6 & 6 Report, the Convener Report, the Compliance/Protocol Report and other requested reports and updates set forth by the BPU.

2. Target Market & Customer Eligibility

The target market and customer eligibility is based on establishing relationships between the DEP and qualified municipalities. The *target market* is the residential energy customer in New Jersey's cities and towns we are planting trees in, especially the most densely populated neighborhoods that have a tree canopy cover significantly less than the national urban average of 40% as reported by the USDA Forest Service and American Forest. *Customer eligibility* is further determined by identifying cooperating municipal governments in communities served by one of the investor-owned electric utility companies that collect societal benefit funds in New Jersey. These contiguous neighborhoods constructed primarily of residential or residential with mixed-use one-, two-, and three-story structures, are selected as tree canopy enhancement here will have the greatest measurable effect on improved energy conservation under these conditions.

A cooperating municipal government is one that will consent in a Municipal Memorandum of Agreement to completing a State approved Community Forestry Management Plan under the 1996 New Jersey Shade Tree and Community Forestry Assistance Act. Under this 1996 Act, Tort Claims immunity protection for tree-related liability issues is provided for trained volunteers and public entities that have a State approved Community Forestry Management Plan for their community. The Plan delineates a prioritized five-year schedule of community tree management and care, thus increasing the likelihood that the new trees will cost-effectively reach maturity in a safe fashion and remain phyto-remediators for decades.

3. Program Offerings & Customer Incentives

This program offers residential customers in participating communities the opportunity to reduce their energy costs by allowing trees to be planted in the public right-of-way, usually located along their curb. A highly-trained forester from the DEP's Division of Parks and Forestry's Community Forestry Program determines each tree's planting location by taking into consideration all fixed features above and below ground as well as available space for trunk and crown development, among numerous other issues. Several tree species characteristics are then matched to the planting location. This helps to assure customers that, with their consent, the right tree will be planted in the right location and thus avoid most foreseeable negative impacts that in the past may have been associated with urban street trees.

4. Program Delivery Methods

When the program is delivered by contractor plantings, there are several sequential steps in the process. The first step is data analysis. Upon completed consideration of population density and USDA Forest Service percent urban tree canopy cover data, a list of possibly eligible communities is determined. Initial contact is usually made by the DEP, as the next step, then through the mayor's office, the shade tree groups, and the department of public works or similar municipal government entities. As soon as appropriate neighborhoods are identified and

confirmed, the underground superstructure is determined through the NJ One-Call to confirm possible safe planting locations which are tallied.

The next step is extensive public outreach. A full-color, informative door hanger is placed at every residence in the neighborhood. One side is in English and the other in Spanish. Property owners and other residents are invited to a public meeting to familiarize the involved neighborhood with this dynamic program and the positive impact it will ultimately have on them. Many questions are answered by the Community Forestry staff at these open public meetings.

Next, a highly trained forester from the DEP's Division of Parks and Forestry's Community Forestry Program determines each tree's planting location by taking into consideration all fixed features above and below ground as well as available space for trunk and crown development among numerous other issues. The trees to be planted are selected and procured from New Jersey nurseries to the fullest extent possible within the constraints of scheduling and availability of appropriate stock. The approved species vary in their characteristic mature statures, shapes, and seasonal behaviors. So that conflicts with overhead electric lines can be avoided, or at least minimized, trees with narrow crowns or that are relatively small in stature (15 to 30 feet at maturity) are included in the list of tree species choices. The actual tree planting locations are marked (in water-based white paint designed for this application) throughout the neighborhood and sequentially numbered both on the street and on our spreadsheets.

A set of full-color door hangers are distributed only to those addresses that actually have been marked for a tree. The door hangers are in English on one side and in Spanish on the other. Property owners are given a period of time to call the DEP if they do not want a tree planted. The DEP will not cut concrete and will not plant a tree if the adjacent property owner, for any reason, does not want it there, provided they call us and tell us by the deadline on the door hangers. Those "extra" trees are then designated for planting along the neighborhood's edge or in another community on our list if necessary.

Then the contractor cuts-out and removes the concrete sidewalk if a curb-lawn is not present or is too narrow. Each concrete removal area is filled with mulch to reduce any possible safety hazard as it may take a few weeks before the actual hole is dug and the assigned tree is planted.

Every effort is made to hold a special Cool Cities Kick-off Event in each community. This is usually in coordination with a street tree planting event around a school or community center involving neighborhood or student volunteers and professional staff. Dignitaries and community notables are usually on hand for speeches and to answer questions for the press and other media. This photo opportunity also serves to inform the public of the value of trees in energy savings and the critical role that the BPU is playing in partnership with the DEP in making our urban centers more livable by reducing energy costs and improving the quality of life.

The municipality then proceeds to complete their State-approved Community Forestry Management Plan if one is not already in place, and the municipality is encouraged to send volunteers and employees for community forestry training provided by the DEP staff around New Jersey. The DEP's Community Forestry Program is also the administrator of a federally funded grant (Green Communities Challenge Grant) which offers \$3,000 (with a \$1,500 match

from the community in cash or in-kind services with volunteer hours valued at \$18.55 per hour) to offset the cost of hiring a consulting forester who will work with the municipality in the development of their Community Forestry Management Plan.

Additionally, the purpose of the Cool Cities initiative is to promote energy conservation through the planting of trees. Trees mitigate the urban heat island effect thus reducing air temperatures and the need for electricity to run air conditioners and fans. The New Jersey DEP-Community Forestry Program is seeking to continue a Community Based Tree Planting effort within the Cool Cities Initiative. This CBTP effort will be utilized in the suggested cities of Camden, Newark, Atlantic City and Plainfield, on publicly-owned or controlled properties. Each of these communities listed suffers from the Urban Heat Island Effect (UHIE) and may have levels of ozone that are unhealthy. The surface temperatures for example in Camden are 5-8° C higher than in the surrounding suburbs. All four cities have less than 25% tree cover. The opportunity and ability for local residents to combat these problems has been limited.

Community Based Tree Planting (CBTP) efforts are critical to the planting and survival of the urban forest within these inner cities. Previous efforts using the Community Based Tree Planting approach have seen a tree planting success rate of 92% and a commitment from local organizations that has been unprecedented due in part to the outreach, training and educational materials provided to them during the CBTP process. The CBTP approach will involve the residents of Camden, Newark, Atlantic City and Plainfield in every step of the tree planting effort, from site selection to tree planting to tree maintenance.

5. Quality Control Provisions

The biology of a deciduous tree in New Jersey requires that they can only be planted in the spring and in the fall. However, there is a list of tree species that cannot be planted in the fall and they are known as “fall dig hazard trees.” We are very careful to plant the right tree in the right place, the right way and at the right time of year. This expert knowledge is widely applied in all Community Forestry Program tree plantings.

In addition to the above planning and coordination, DEP professional staff now monitors all contractor activities to verify correct species selection, tree stock quality, correct transportation and delivery of nursery stock, and appropriate planting of trees per specifications and in compliance with applicable American National Standards Institute (ANSI) Standards. Several members of our forestry staff spend days at nurseries tagging stock deemed appropriate for the project and rejecting nursery stock that does not meet our standards. Additionally, the public and the municipal employees do not hesitate to notify the Community Forestry Program when they suspect that tree-related matters are not being handled correctly and we always investigate and respond to their concerns.

The contractor guarantees replacement of any tree that is dead or in extreme decline after one year. The DEP staff inspects every tree after one year and supervises the replacements with qualified stock by the contractor and at no additional expense to the initiative. We have learned from that experience and trained DEP staff directly supervises every single tree that is planted.

It became evident that the DOT Tree Planting contract under which we were trying to operate was inadequate for the demands of the Initiative. Community Forestry staff worked closely with State Treasury contract experts to develop a Cool Cities Energy Conservation Tree Planting Contract for Contractual plantings and for the Community Based Tree Planting Initiative. Our strict adherence to quality control to assures all working with us that there are clear specifications are followed.

Trained seasonal employees that are carefully collecting data for the CITYgreen® software application in the summer are also walking through randomly-sampled portions of tree planting locations and recording their measurements of multiple variables. Using that data, the CITYgreen® software quantifies the current and future energy savings values associated with the new trees as the new trees perform their environmental work in conjunction with any existing canopy. Projected tree growth is for 31 years in this model. This computer modeling to confirm energy savings provides further evidence of the quality of the tree plantings.

6. Budget

The following budget is based on the current Memorandum of Agreement between the DEP and the BPU for 2009. The following 39 communities have been proposed to receive a total of at least 10,000 trees at 2" - 3" caliper, balled and burlapped (B&B). These trees will ultimately be in addition to the previous trees scheduled to have been planted in the first four years of the program bringing the total to about 34,450 trees:

Tree Planting Schedule 2009

Community	Spring '09	Fall '09	TOTALS
Atlantic City	50	50	100
Bridgeton City	0	250	250
Bogota	0	200	200
Camden	238	237	475
Carteret	200	200	400
Clifton	250	0	250
East Newark	0	150	150
Edison	125	125	250
Ewing	0	200	200
Garfield	150	0	150
Gloucester City	500	0	500
Hackensack	150	0	150
Harrison	0	150	150
Haledon	0	200	200
Lakewood	300	0	300
Merchantville	0	200	200
Millville	500	0	500
Moonachie	0	200	200
Neptune City	0	150	150
Neptune Twp.	150	150	300
Newark	238	237	475

New Brunswick	125	125	250
North Bergen	125	125	250
Nutley	0	200	200
Palmyra	200	0	200
Pennsauken	0	150	150
Perth Amboy	0	150	150
Plainfield	50	50	100
Phillipsburg	125	125	250
Rutherford	0	200	200
Salem City	0	200	200
Secaucus	100	50	150
Somerville	0	200	200
Trenton	500	0	500
Union City	0	150	150
Vineland	500	0	500
Weehawken	100	100	200
West New York	150	150	300
Woodbridge	200	200	400
Community to be named	0	100	100
TOTALS	5,026	4,974	10,000

*“Community to be named” by BPU staff or if none selected, DEP would select the community from the list of Urban Aid Cities and Urban Centers/Urban Complexes and /or the DEP Tree Canopy list of less than 27.26 %.

The numbers in the above data table indicate the quantity of trees that have been designated for that community in 2009. However, while the final total of at least 10,000 trees will not change, the exact number of trees actually planted in each of the above listed communities may be altered as circumstances arise in the community. As in the past years, in most communities, no tree will be planted adjacent to a property if the owner of that property notifies us that they wish to decline the offer of the tree. Trees that are declined will immediately be made available for planting in the same neighborhood or along its perimeter until all suitable sites are filled, at which time the tree may be planted in a suitable site of a different listed community in one of the Cool Cities designated neighborhoods.

Also, because municipal governments change frequently, each year there is the possibility that trees will not be welcomed by the new governing body, while another city may become even more receptive than previously. It is primarily for this reason, among others, that the agreement between the DEP and the BPU allows the DEP the leeway to remove trees assigned to one city and plant them in another qualified city. Harrison and Perth Amboy, for example were unable to accept trees for the fall of 2006. Due to unforeseen circumstances, trees may be planted in a suitable site of a different listed community found on the Urban Aid Communities and the Urban Centers and Urban Complexes lists and /or the DEP Tree Canopy list of less than 27.26 %.

Trees bought for planting in the Cool Cities neighborhoods are all ordered at 2" to 3" caliper and must be balled and burlapped (B&B) at the nursery. Trees are tagged at the nursery and only trees with this tag are accepted at the planting pits in the neighborhood. Trees are shipped from the nursery under a cover to reduce the likelihood of damage caused by windburn. Trees are off-loaded from the trailer on the street using a front-end loader with a padded bucket to avoid scraping the tree bark. All crown roping and nursery color-tag ribbons are removed before the tree is stood in the hole. All wire baskets are removed before the tree goes in the ground and all burlap that cannot be removed from the rootball is shoved into the deepest edges of the planting hole. These details and other technicalities that we abide by can be referenced to the American Standard for Nursery Stock (American National Standard Institute ANSI-Z60.1) and the Standard for Tree Planting (ANSI-A300), both of which are available from www.ansi.org on the Internet.

Below is the list of the 16 common names for the trees most usually planted:

Kwanzan Cherry	Thornless Dwarf Honey Locust	Dwarf Green Ash	Hedge Maple
Sergeant Cherry	Norwegian Sunset Maple	Scholar Tree	Tree Lilac
Hackberry	London Plane Tree	Green Ash	Katsura Tree
Purple Leaf Plum	Little Leaf Linden	Red Maple	Pin Oak

An assortment of species is used to prevent a dangerous monoculture in any neighborhood and for other reasons explained here. All tree species used are previously proven to be urban tolerant. Every planting pit address is designated and clearly labeled (with very safe water-based white paint sold for this purpose) for a small tree or for a large tree. This is to assure that when the tree reaches its mature full-size it still will fit in the space it has and will not interfere with overhead transmission lines. Every address that is getting a tree has been cleared for underground utilities by a New Jersey One-Call ticket number that is tracked. No trees will be planted that block designated handicapped parking spaces, street signs, traffic lights, intersection sight triangles, fire hydrants, or any other similar infrastructure.

The project management costs incurred by the DEP will be less than or equal to ten-percent (10%) of the total funding of \$4 million.

Budget: Cool Cities Initiative 2009

1. Administration	\$400,000.00
1.1. Staff and Overhead	
2. Sales (Int. or Contr.)	0
3. Marketing & Promotions	\$180,500.00
3.1. Contractor Community Based Tree Planting (CBTP) outreach and training for four cities as per the scope of work (3.2, 3.3, 3.4) found in Treasury Contract # 70274 (sub-total:\$161,000.00).	
3.2. DEP outreach needed for the translation/communication of Cool Cities materials into appropriate languages associated with the neighborhoods Cool	

Cities' work is being implemented (sub-total:\$19,500.00)

4. Training	0
5. Market Research, Evaluation & Program Development	\$24,000.00
5.1. CITYgreen GIS, model upgrades, data collection and analysis	
6. Grants, Incentives, Arrears Reduction:	0
7. Implementation Contractors	\$3,395,500.00
7.1 Landscaping Supplies (Picks, shovels, and other landscaping tools)	
7.2 Contract Services (Planting stock including tree & shrubs, construction services, signage, consultants, tagging, watering, etc.)	
8. Performance Incentives	0
Total	\$4,000,000.00

7. Specific Program Energy Savings Goals

It is the goal of this project to reduce energy consumption by 3% to 8% for those families living in the targeted neighborhoods impacted by the urban heat island effect. This goal is based on US Forest Service data in *Handbook of Urban and Community Forestry for the Northeast*. Specific current and projected energy savings are being calculated by using site collected data and CITYgreen 5.0 software from American Forests in Washington, DC, as an extension for ArcView GIS software from ESRI.

The Board of Public Utilities has the right to any and all carbon emission offsets or any other emission offsets or energy credits that may be generated as a result of the Cool Cities program. This condition shall be included in contracts between DEP and any local governments executed in connection with Cool Cities.

8. Minimum Requirements for Program Administration

The minimum requirements for Program Administration in 2009, as per the Attachment 1 in the MOA, are \$400,000 which will be invested in staff and overhead.

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Attachment B: Edison Innovation Clean Energy Fund Program Description

NEW JERSEY COMMISSION ON SCIENCE AND TECHNOLOGY EDISON INNOVATION CLEAN ENERGY FUND COMPLIANCE DOCUMENT

Program Description

The Edison Innovation Clean Energy Fund (CEF), to be administered by the New Jersey Commission on Science and Technology (NJCST) pursuant to a Memorandum of Understanding (MOU) to be executed with the New Jersey Board of Public Utilities (BPU) through its Office of Clean Energy (OCE), will offer assistance in the form of grants to support New Jersey renewable and energy efficiency technology companies for proof-of-concept research and development activities and ancillary activities necessary to commercialization of the identified clean energy technology. The award of grants from the CEF shall include: advertisement inviting qualified applicants to submit proposals, a defined process for receiving such proposals and an evaluation process based on established criteria by an objective and disinterested review team.

Products and services under this program will ultimately benefit the New Jersey consumer by providing long-term energy needs in an environmentally sound manner and by facilitating competitive and diverse electricity supply for New Jersey in accordance with the Governor's Energy Master Plan and New Jersey's implementation of the Regional Greenhouse Gas Initiative (RGGI), P.L. 2007, c.340, and the "Global Warming Response Act", P.L. 2007, c.112, which sets long-term goals for reducing greenhouse gas emissions in New Jersey. The program provides support for research and development activities for energy efficient technologies, systems or products and renewable energy technologies, systems or products that will assist Class I renewable energy in becoming competitive with traditional sources of electric generation.

Expected benefits of the CEF are to include: increasing the number of renewable energy and energy efficiency businesses in New Jersey by encouraging expansion of the current pool of clean energy companies and development of clean energy technology products; providing sufficient incentive to other clean energy companies to locate in New Jersey; and stimulating economic development in the New Jersey renewable energy and energy efficiency sector.

Background

NJCST is responsible for the development and oversight of policies and programs promoting science and technology research and entrepreneurship in New Jersey. NJCST provides grant funding under the Edison Innovation Research and Development Fund program to New Jersey technology companies, in partnership with a New Jersey research university, company or institution for proof-of-concept research and development activities necessary for commercialization of an identified technology. This funding provides grants for early stage commercialization of innovative technologies, including those specializing in clean technologies.

Program Goals

The goals of the CEF grant programs include leveraging public and private resources for advancing the technologies and services necessary to support vibrant energy efficiency and renewable energy industries in New Jersey in accordance with Governor Corzine's Economic Growth Strategy and New Jersey Energy Master Plan. The latter states a goal of reducing projected non-renewable energy use by 20% by 2020 and meeting 20% of the State's electricity needs with Class 1 renewable energy sources by 2020. This goal states that a combination of energy efficiency, conservation, and renewable energy resources should allow New Jersey to meet any future increase in demand without increasing its reliance on non-renewable resources. Funded projects are expected to lead to the establishment of a dynamic business infrastructure for New Jersey's renewable energy and energy efficiency industry. It also provides support for development of technological advances that will assist renewable energy technologies to become competitive with traditional energy generation technologies.

NJCST will solicit at least 20 applications for a first round during the Winter 2009 solicitation and target granting of 6 awards. The focus will be to provide funding for a broad range of eligible renewable energy and energy efficiency technologies.

Program Definition

Funding in the form of demonstration projects will be open to proposals that seek funding for research, market development, deployment, and technology demonstrations of innovative products or services that advance the delivery of renewable energy and energy efficiency technologies. The proposal should demonstrate how any research conducted will contribute to proving the scientific or technical feasibility of the approach or concept proposed.

The demonstration grant program is not applicable to basic lab or bench scale research and development. This program is not intended to provide financing for construction and installation of renewable energy systems.

“Demonstration Project” - a systematic application of knowledge toward the production of useful materials, devices, and systems or methods, including design, development, and improvement of prototypes and new processes to meet specific requirements. This term implies the potential exists for commercial value through practical application of the concept or technology being studied. The existence of bench top models can be used to demonstrate the “proof of concept” needed for applications or technologies to satisfy this requirement.

“Basic Research” – is research undertaken to acquire knowledge for knowledge's sake or to expand mankind's knowledge without an expectation of near term application. Basic research is not fundable under this solicitation.

Target Market/Eligibility

Eligible technologies for funding under the CEF include energy efficiency equipment and technology such as furnaces, boilers, and air conditioning systems with higher efficiencies than energy codes or standards, as well as lighting systems, including LED lights and energy

monitoring and control systems would qualify. Renewable Energy products and services include photovoltaic technologies, wind energy, renewably fueled fuel cells, wave, tidal, renewably generated hydrogen, sustainable harvested biomass and other technologies that can demonstrate their integral nature to the development of Class I renewable energy technologies that produce or support the production of renewable or clean energy generation.

For the CEF, applicants must be a legally organized, for-profit company operating within New Jersey and the applicant owns, has filed for, or has a license to use protected, proprietary intellectual property that would qualify as an eligible renewable energy or energy efficient technology. Lead companies are encouraged to submit applications with a partnering New Jersey university or New Jersey-based company or research institution. The CEF focuses on the state priority areas as established by Governor Corzine that include energy efficiency and renewable energy and environmental science.

This program requires applicant companies to identify other third party sources of funding, either from grants, loans, or equity, for meeting a required match of the total program funding.

Program Offering and Incentives

The CEF offers grants of \$100,000 to \$500,000 to eligible companies for research and development projects that meet the eligibility guidelines. Total funds awarded are subject to a maximum of \$500,000 per each company project.

Additional supplemental financing of up to 20% of the approved grant for non-project specific costs such as rent and utilities, not to exceed \$100,000, is available from the New Jersey Economic Development Authority (NJEDA) pursuant to an agreement directly between NJCST and NJEDA. In addition, warrants are granted to the NJEDA over a ten-year life for providing this loan program.

Program Criteria

The BPU and NJCST will apply technical and business criteria in determining whether an applicant meets the requirements as set forth in the CEF program solicitation and solicitations for other clean energy technology programs administered in the future on behalf of the BPU by NJCST. The specific requirements for each program will be set forth in their individual program guidelines, to be developed jointly by the BPU and NJCST.

Program Delivery

NJCST will accept applications when program announcement deadlines are posted, which is anticipated to occur annually.

CEF Proposals require the following information to be documented for meeting project goals including:

- Company business plan
- Financial Statements including cash flow projections & capitalization chart
- Technology and business commercialization plan with fully articulated milestones
- Technical project description

- License Agreement(s) to Commercialize Patent(s)
- Patent(s) and Documentation of Ownership by Applicant
- Gantt chart showing the proposed milestones and timeline
- Project Budget and Justification
- Evidence of Availability of Applicant Matching Funds
- Complete Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis
- Resumes for all key personnel

The applicant company must provide a cash match at a minimum of 50% of the grant amount while partners have a 20% matching fund requirement.

Program Budget

The BPU will make an initial transfer, as approved in its 2008 budget, of \$3 million for the first year to the CEF within thirty (30) days after full execution of the MOU, to be held by NJCST for research and development grant awards, and then \$3 million per year projected for four additional years within 30 days after the annual adoption of the BPU budget (subject to budget appropriations). The grants are to support renewable energy and energy efficiency companies entering or expanding clean energy technology products in New Jersey. The BPU may make additional transfers of funds to NJCST for the CEF Program or other programs for the purpose of providing financing assistance to support renewable energy and energy efficiency companies and projects and further grow the clean energy technology sector in New Jersey.

Marketing Plans

- The NJCST jointly with the BPU will develop marketing materials for distribution and update websites, including industry databases, for announcement of the solicitation and awards.
- Promote the solicitation at educational and networking events with potential participants and industry stakeholders.

Performance Indicators

The annual performance report should present the following information for the period covered by the report:

- Revenue of Company
- Location of Company
- Amount of Third-party financing (also identifying the sources of this financing)
- Number of License/Royalties agreements entered
- Amount of Royalties for the product identified in the proposal
- Number of Patents Applied for and granted for Company as a whole
- Number of Patents Applied for and granted for the product identified in this proposal
- Number of Commercial Products or Services
- Number of Joint Partnerships/ Strategic Alliances formed
- Number of Spin-off Firms Formed
- Number of jobs (total jobs and number created since initial award)
- Amount of Federal Funds acquired (e.g. SBIR, etc.)
- Amount of Capital Expenditures

- Amount of Net Income of product identified in the proposal

Quality Control Provisions

The BPU through its OCE and/or its market managers with expertise in renewable energy and energy efficiency technologies will assist in prescreening the applications and have the authority to reject all applications that do not meet the technical eligibility guidelines for technologies promoting energy efficiency and renewable energy programs as set forth at N.J.S.A., 48:3-49 et seq, the Electric Discount and Energy Competition Act.

NJCST will create a Clean Energy Advisory Review Board, whose membership will include NJCST Commissioners, the venture capital community, OCE project managers, and/or marketing managers. At a minimum the review panel will consist of one member from the venture community, one member from the NJEDA, one member from BPU/OCE, and two NJCST Commission members. At the maximum, the review panel will consist of two members from the venture community, one member from the EDA, one member from BPU/OCE, and four NJCST Commission members. Nevertheless, at all times NJCST will have at least one additional member more than the other participants on the review Board.

The OCE and/or its designated market managers will be consulted to conduct field inspections and monitor the project and its milestone deliverables for compliance with program technical requirements.

Planned Program Implementation Activities for 2009

The following program implementation activities will be undertaken in 2009:

- Develop guidelines, procedures and scoring criteria, and manage all aspects of a competitive solicitation with 2008 program funding, that may include 2009 funding when approved. The competitive solicitation is expected to be a 6-month process until award recipients are announced, and the target date for a joint announcement of this program is Winter 2009.
- Develop and distribute educational and marketing promotion materials with the BPU.
- Develop standard grant and other funding agreements and contracts for CEF recipient awards.
- Draft press releases and any other public announcements with the BPU.
- Create a Clean Energy Advisory Board review committee whose membership may include NJCST Commissioners, the venture capital community, OCE project managers, and/or market managers.
- Implement system enhancements for processing applications, project information and quarterly reporting to the BPU in compliance with BPU IMS accounting and reporting requirements.
- Develop outcome metrics

**Attachment C: Edison Innovation Clean Energy Manufacturing
Fund Description**

**EDA Program
Edison Innovation Clean Energy Manufacturing Fund
Reporting Year 2009**

December 8, 2008

EDA Program

Edison Innovation Clean Energy Manufacturing Fund

Program Description

The Edison Innovation Clean Energy Manufacturing Fund (CEMF) program offers assistance in the form of zero-interest loans and non-recoverable grants to companies manufacturing renewable energy, clean and energy-efficiency products in New Jersey. The CEMF will ultimately provide New Jersey consumers with greater access to these products by developing manufacturing facilities in New Jersey.

Products and services under this program ultimately benefit the New Jersey consumer by providing long-term energy needs in an environmentally sound manner and by facilitating competitive and diverse electricity supply for New Jersey. The program provides support for manufacturing of energy efficient products and renewable energy products that will assist Class I renewable energy in becoming competitive with traditional sources of electric generation.

Background

The New Jersey Board of Public Utilities Office of Clean Energy (OCE) and the New Jersey Economic Development Authority have been administering New Jersey's Clean Energy Programs including Renewable Energy Programs, which are designed to promote the development and installation of renewable energy projects statewide. The OCE will be able to leverage the financial expertise of the EDA that provides funding for manufacturers in New Jersey and to early stage technology companies specializing in clean technologies via its Edison Innovation Fund Programs.

Target Market/Eligibility

The recipients of the CEMF are companies manufacturing renewable energy and energy-efficiency products in New Jersey with their target markets including investor-owned utilities, municipalities, co-operatives, system integrators, installers and private-label customers/original equipment manufacturers. Renewable Energy products under the CEMF must contribute to the cost-competitiveness of renewable energy in New Jersey, and other tangible ratepayer benefits such as economic development, environmental benefits, etc. from either the production or the direct use of the applicant's products.

Eligible technologies for funding under the CEMF include energy efficiency equipment and technology such as furnaces, boilers, and air conditioning systems with higher efficiencies than energy codes or standards, as well as lighting systems, including LED lights and energy monitoring and control systems, as well as renewable energy technology and equipment.

Eligible renewable energy technologies are: photovoltaic technologies, wind energy, renewably fueled fuel cells, wave, tidal, renewably generated hydrogen, sustainable harvested biomass and other technologies that can demonstrate their integral nature to the development of Class I renewable energy technologies that produce or support the production of renewable or clean electricity generation.

For the CEMF, applicants must be a for-profit company that currently, or plans to, manufacture eligible renewable energy or energy efficient technology products in New Jersey and is entering

or expanding with the manufacturing stage of commercial development. Modifications to existing manufacturing lines will not be considered. Funds will be used for identifying and securing a site and to obtain the necessary permits and regulatory approvals, and for capital equipment, leasehold improvements, and engineering and construction services related to such equipment and improvements, and, potentially, increase in inventory. The use of NJ contractors, suppliers, labor and products are preferred. Non-project costs – such as interest expense on loans - are not considered to be eligible under this program. All projects must be in compliance with all applicable laws.

This program requires a firm commitment of a 50% cash match of total project costs from other third party sources of funding for cost sharing, either from grants, loans, or equity, for meeting the total renewable energy/energy efficiency project expenditures. This policy is intended to encourage applicants to seek collaborators that can provide additional resources and expertise that will increase the likelihood of commercial success.

Program Offering and Incentives

Total funds awarded are subject to a maximum of \$3,300,000 per each company project with funds advanced under two tranches. This program offers traditional grants – up to 10% of total CEMF funds requested not to exceed \$300,000 – as well as performance grants up to \$1 million or one-third of a zero interest loan with zero interest loans up to a maximum \$3 million per project. The latter is funded according to the applicant meeting pre-determined employment and production or sales milestones during the disbursement period subsequent to the closing of the CEMF funding.

Tranche I - Project Assessment and Design (A&D)

These funds are to be advanced to identify and secure a site (either a lease or purchase), complete initial project facility design, and to obtain the necessary permits and regulatory approvals to operate the facility. Funds are to be allocated up to \$300,000 per each company project with a minimum of a 50% cash match of total project costs from other financial sources. Up to 10% of the total CEMF funds requested – not to exceed \$300,000 - will be funded under this specific A&D tranche. At closing of the grant, twenty (20%) percent of the approved funds will be advanced for upfront seed money with the remainder paid after work has been completed upon submission of invoices.

Tranche II - Project Construction and Operation (C&O) Zero Interest Loan with Performance Grant

These funds are to support site improvements, equipment procurement and facility construction and completion. A preference will be given to those projects that demonstrate a greater percentage of the project being designed, manufactured, processed, assembled or made ready for commercial sale at the applicant's facilities within New Jersey. The total amount awarded under this tranche is up to a maximum \$3 million per each company project with a minimum 50% match of these total project costs from firmly committed, non-state-derived matching support. No more than 50% of funds requested may be advanced prior to commercial production.

Up to a maximum \$3 million zero interest loan as evidenced by a loan note shall be repaid with repayment starting on the first month of the fourth year (month 37) on the anniversary date of the closing of the funding and will fully amortize in equal monthly payments over the remaining seven years or eighty-four months of the zero interest loan repayment period. Any unpaid balance will be due at the 10-year anniversary if not previously paid in the course of amortization. One-third or 33.33% of the C&O zero interest loan not exceeding \$1 million may be converted to a performance grant with no terms of repayment. This condition is subject to the applicant meeting all pre-determined milestones during the 36-month disbursement period subsequent to the closing of the CEMF funding. These milestones will be deemed satisfactorily completed, in their sole discretion, by the BPU or designated market managers monitoring the project.

Program Delivery

The award of grants and no interest loans from the Edison Innovation Clean Energy Manufacturing Fund shall include: advertisement inviting qualified applicants to submit proposals, a defined process for receiving such proposals and an evaluation process based on established criteria by an objective and disinterested review team.

The EDA will accept the program applications with a solicitation deadline to be posted during the calendar year. There will be a pre-application solicitation for technical screening followed by a full application for those successful pre-applicants. When the full applications are received, a dual review scoring process will be conducted by the EDA for evaluating business viability and by the BPU for technical criteria. Subsequently, each final applicant will have the ability to make a project presentation to a Clean Technology Evaluation Committee comprised of EDA, BPU, and other industry representatives. The Clean Technology Evaluation Committee will provide their recommendation and the Agency will subsequently determine the successful award recipients for Board approval.

After the CEMF award recipients are selected, then the application with underwriting proposal prepared by the EDA will be submitted to the BPU Board for approval. Both the EDA and the BPU will jointly notify all applicants.

CEMF Proposals must document the approach, plans and strategies intended to meet project goals including:

- Technical project information and benefits
- Business plan including financial projections
- Proposing team and qualifications
- Project procedural steps to accomplish the project milestones
- Project Budget including schedule of matching funds

Technical monitoring and project milestones will be set in collaboration with a senior creditor or a designated market manager, with the latter to be hired in consultation with the OCE and paid out of the program proceeds.

Applications will be subject to an extensive financial and technical due diligence. Final approval of the project grants and zero interest loans will be by BPU's Board. EDA will arrange for the

issuance of all zero interest loans and grants to award recipients and will perform the documentation closing of all CEMF zero interest loans and grants.

Planned Program Implementation Activities for 2009

The following program implementation activities will be undertaken in 2009:

- Manage all aspects of a competitive online solicitation with 2009 program funding. The competitive solicitation is expected to be a 6-month process until award recipients are announced, and the target date for a joint announcement of this program is Spring 2009.
- Develop and distribute educational and marketing promotion materials with the BPU.
- Draft press releases and any other public announcements with the BPU.
- Implement system enhancements for processing applications, project information and quarterly reporting to the BPU in compliance with BPU IMS accounting and reporting requirements.

Quality Control Provisions

The OCE and/or its market managers with expertise in renewable energy and energy efficiency technologies will assist in prescreening the applications and have the authority to reject all applications that do not meet the technical eligibility guidelines for technologies promoting energy efficiency and renewable energy programs as set forth at N.J.S.A., 48:3-49 et seq, the Electric Discount and Energy Competition Act.

As part of the final evaluation committee, the OCE and/or its market managers will conduct a full application review of meeting requirements of technical criteria. Subsequent to this technical review, a Clean Technology Evaluation Committee comprised of EDA, BPU, and industry representatives will attend individual presentations by the chosen applicants and submit their final recommendations of award recipients for EDA underwriting and BPU Board approval.

The OCE and/or its designated market managers will be consulted to conduct field inspections and monitor the project and its milestone deliverables for compliance with program technical requirements.

Program Budget

The proposed 2009 budget of \$23,928,000 includes \$11,928,000 in 2008 carry over plus \$12,000,000 in new 2009 funds in accordance with the Board's CRA Order. EDA will comply with the BPU IMS accounting and reporting requirements. A budget breakdown for this program is included in the OCE compliance filing budget.

A budget breakdown for other EDA Clean Energy programs governed by the terms and conditions of the prior 2003 BPU-EDA MOU for which EDA administrative services are provided is also included in the budget.

Marketing Plans

- The EDA jointly with the BPU will develop marketing materials for distribution and update websites, including industry databases, for announcement of the solicitation.
- Promote the solicitation at educational and networking events with potential participants and industry stakeholders.

Program Goals and Performance Indicators

The goals of this program include leveraging public and private resources for advancing the technologies and services necessary to support vibrant energy efficiency and renewable energy industries in New Jersey in accordance with the NJ Governor's Energy Master Plan and New Jersey's implementation of the Regional Greenhouse Gas Initiative (RGGI), P.L. 2007, c.340, and the "Global Warming Response Act", P.L. 2007, c.112, which sets long-term goals for reducing greenhouse gas emissions in New Jersey. The State of New Jersey Energy Master Plan aims to meet 20% of its energy needs through Class I renewable energy by 2020 and reduce electricity and heating consumption 20% by 2020. It is therefore the mission of the Clean Energy Manufacturing Fund to decrease electricity and heating costs, improve electric reliability and maximize economic and environmental benefit to New Jersey's ratepayers by driving down the cost of key market-transforming efficiency and renewable energy technologies.

Achieving this mission includes:

- Providing a range of tools to integrate policies across programs for research and development support, gap funding, equity investments, and stimulating market demand
- Developing a balanced clean energy industry cluster
- Supporting technologies that will provide the most benefit to New Jersey ratepayers
- Building upon consumer choice

Expected benefits of the CEMF are to include: increasing the number of renewable energy and energy efficiency manufacturing jobs in New Jersey by encouraging expansion of current manufacturers and to provide sufficient incentive to other manufacturers to locate in New Jersey; stimulating economic development in the New Jersey renewable energy and energy efficiency sector through demand for goods and services by manufacturers; and increasing the volume of renewable energy and energy efficient products manufactured in New Jersey to New Jersey consumers.

Performance Indicators

- Number of jobs created in the renewable energy and energy efficiency sector in NJ
- Number of new renewable energy and energy efficiency manufacturers that locate and/or expand in New Jersey
- Amount of renewable energy and energy efficient products manufactured in New Jersey
- Contribution to lowering the cost of renewable energy and energy efficiency systems

Goals for the program include the following:

- Solicit at least 10 applications for a Winter 2008 solicitation and target 3 awards. Focus will be to provide seed funding and financial incentives from a broad range of eligible renewable energy and energy efficiency technologies.
- Provide program information in order to attract qualified applicants at state, regional and national renewable energy and energy efficiency forums, publications and/ or websites.
- Launch the initiative and transition market managers to assist OCE and EDA with technical review and milestone setting and monitoring.