

**Office of Clean Energy**

**Comprehensive Resource Analysis - Staff Straw Proposal  
New Jersey's Clean Energy Program  
Proposed Funding Levels FY15**

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## Introduction

### *Procedural History*

On February 9, 1999, the Electric Discount and Energy Competition Act, N.J.S.A. 48:3-49 et seq. (EDECA or the Act) was signed into law. The Act established requirements to advance energy efficiency and renewable energy in New Jersey through the societal benefits charge (SBC), at N.J.S.A. 48:3-60(a)(3). EDECA further empowered the Board of Public Utilities (the Board) to initiate a proceeding and to cause to be undertaken a Comprehensive Resource Analysis (CRA) of energy programs, currently referred to as the comprehensive energy efficiency (EE) and renewable energy (RE) resource analysis. After notice, opportunity for public comment, public hearing, and consultation with the New Jersey Department of Environmental Protection (NJDEP), within eight months of initiating the proceeding and every four years thereafter, the Board would determine the appropriate level of funding for EE and Class I RE programs (now called New Jersey's Clean Energy Program or NJCEP) that provide environmental benefits above and beyond those provided by standard offer or similar programs, in effect as of February 9, 1999.

As required by the Act, in 1999, the Board initiated its first comprehensive EE and RE resource analysis proceeding. At the conclusion of this proceeding, the Board issued its initial order, dated March 9, 2001, Docket Nos. EX99050347 et al. (March 9<sup>th</sup> Order). The March 9<sup>th</sup> Order set funding levels for the years 2001 through 2003, established the programs to be funded and budgets for those programs. The Board has issued numerous Orders since that time that set the funding levels for the years 2004 through fiscal year 2014 (FY14)<sup>1</sup> and approved programs and budgets for each year.

In 2006, the Board transitioned management of the programs from the utilities to third party vendors contracted by the State. The Board selected Honeywell International, Inc. (Honeywell) as the Market Manager for residential energy efficiency and renewable energy programs and TRC Energy Services (TRC) as the Market Manager for commercial and industrial energy efficiency programs. In 2007, the Board selected Applied Energy Group (AEG) to provide Program Coordinator services. Through multiple contract extensions, Treasury has extended Honeywell's, TRC's and AEG's contracts through the end of FY14.

By Order dated October 7, 2011, Docket No. EO11050324V, (the October 11<sup>th</sup> Order), the Board directed the Office of Clean Energy (OCE) to initiate a fourth CRA proceeding and to schedule public hearings on funding allocations for the energy efficiency and renewable energy programs for calendar years 2013-2016. Consistent with the October 2011 Order noted above, the Board began the proceeding to set funding levels for fiscal years 2014-2017.

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<sup>1</sup> In November 2012 the Board began to establish funding levels, programs, and budgets on a state fiscal year basis. Prior to this time, the Board operated on a calendar year basis.

In June 2012, the Board, through the Department of the Treasury, Division of Purchase and Property, issued RFP 13-X-22546 for a single Program Administrator to deliver the services currently provided by Honeywell, TRC and AEG. A critical component of the RFP was that the selected Program Administrator was required to prepare a Strategic Plan within 120 days of the award of a contract. The Strategic Plan was required to establish a long-term plan that included energy savings and renewable energy goals, proposed funding levels to achieve those goals, and provide recommendations on the process of reducing the program's reliance on SBC funds by transitioning the EE programs to alternate means of financing.

In June 2013, when finalizing the CRA for FY14, Staff anticipated that the Program Administrator contract would be awarded in the near future. Therefore, Staff recommended that the Board set a funding level for FY14 only, and defer a decision regarding setting a multi-year funding level until after the anticipated Strategic Plan was developed and informed by additional evaluation studies.

By Order dated June 21, 2013, Docket No. EO11050324V, the Board concurred with Staff's recommendation and set a funding level for FY14 only. In addition, the Board directed Staff to develop working groups to improve coordination between NJCEP and utility-run programs, investigate alternative models for delivering energy efficiency programs, and review and coordinate the data collected by NJCEP and utility programs to improve program evaluations and to participate in alternative financing and the energy efficiency market. Consistent with this directive, Staff has organized and facilitated a number of working groups to develop additional recommendations, which are discussed later in this document.

February 2014 marked the 15th anniversary of EDECA. In response to this milestone, the BPU has engaged the Bloustein School of Rutgers University to perform a study that will undertake a comprehensive look at the clean energy economy in NJ. The underlying goal of this effort is to know and organize the scale and scope of the State's clean energy sector, including the quantity and types of jobs it creates and maintains in the State and the regulatory and economic, policies which will attract private investment, as the NJCEP begins to offer financing in addition to rebates.

Specifically, the study is intended to answer the following questions:

- What types of commercial enterprises comprise New Jersey's clean energy economy, the number and size of these enterprises, including employment levels, and the role and location of such enterprises. The study will establish a baseline against which future growth can be measured.
- What is the value of private and public funds leveraged by state and federal investment in clean energy.
- What are the economic effects (i.e., the various economic multipliers) of New Jersey's clean energy initiatives.

In order to do so, the Bloustein School will summarize the total value of state and federal programs over the past fifteen years, including loans and incentives provided through the

NJCEP, the Solar Renewable Energy Credit (SREC) program and Renewable Portfolio Standard (RPS), federal SEP grants, the American Recovery and Reinvestment Act (ARRA) grants, the State Energy Office (SEO), and the Energy Savings Improvement Program (ESIP). The study will also estimate the value of state and federal tax incentives and spending by ratepayers on utility-run programs, as well as the value of the private investment leveraged by these programs.

The study will identify other economic sectors in the State that have and can continue to benefit from reduced energy costs related to energy efficiency and renewable energy initiatives. The study will highlight selected individual firms and organizations that have participated in clean energy programs and that are important to New Jersey's overall economy. Through the collection of this data, the Bloustein School will assist the BPU in identifying the market conditions and state and regulatory policies necessary to foster a robust clean energy economic sector.

The Center for Energy, Economics and Environmental Policy (CEEPP) commenced the study in late 2013 and recently hired a firm to perform the survey work needed to complete the project. Staff anticipates that CEEPP will issue a draft report in late summer 2014.

## **1.0 Statewide Energy Efficiency and Renewable Energy Policies and Programs (non-SBC funded)**

### **1.1 Energy Master Plan**

The 2011 New Jersey Energy Master Plan (EMP) stated that cost effective programs can reduce the State's energy use, thereby fostering economic development and promoting the State's environmental goals. The 2011 EMP included the following objectives regarding the promotion of cost-effective conservation and energy efficiency:

- Promote energy efficiency and demand reduction in State government buildings
- Incorporate aggressive energy efficiency in building codes
- Redesign the delivery and financing of State energy efficiency programs
- Monitor PJM Interconnection's demand response initiatives
- Improve natural gas energy efficiency
- Expand education and outreach

The EMP does not set specific energy savings goals or specific goals for the NJCEP. However, in the 2014 CRA proceeding, Staff drew the following conclusions from the EMP, which will also inform Staff as it develops its CRA 2015 objectives and funding levels:

- Energy efficiency is the most cost-effective way to lower energy costs.
- Energy efficiency programs should focus on both reducing energy usage and lowering peak demand, which can further lower costs for all ratepayers.
- While energy efficiency programs are the cheapest source of energy, the Board must consider the funding impact on non-participating customers.

- Energy efficiency programs and renewable energy contribute to the State’s overall economic development and create in-State jobs.
- Energy efficiency and renewable energy programs deliver environmental and health benefits and lower peak energy costs, both of which benefit all ratepayers, including non-participating customers.
- Energy efficiency and renewable energy programs must undergo regular and rigorous evaluation to confirm projected energy savings and economic benefits.
- The promotion of in-State renewable energy resources can reduce emissions while promoting economic development.
- Energy savings must be considered comprehensively. Those savings that NJCEP programs deliver should complement other non-NJCEP activities such as stricter building codes, higher appliance standards, utility programs, and EE in State facilities.

In late 2014, Staff and Rutgers’ CEEEP will post to the NJ Energy Data website a progress-towards-goals report which tracks the State’s BPU’s progress against 2011 EMP goals, such as: Electricity Consumption, Residential Electricity Prices, NJCEP Electric and Gas Savings, Emission Reductions, Peak Load Demand, Combined Heat and Power (CHP) Generation, Natural Gas Prices, NJ Solar Growth, Class I and Solar RPS, Offshore Wind Capacity, etc. For more information see <http://www.njenergydatacenter.org/>.

## **1.2 State Energy Office**

While New Jersey’s Clean Energy Program promotes energy efficiency improvements for businesses, residents and local governments, Governor Christie established the State Energy Office (SEO) in June 2011 to follow through on his commitment to “lead by example.” Governor Christie established the SEO within the BPU to determine where the greatest opportunities existed for State facilities to save energy and money. He also established the State Energy Savings Oversight Committee (Committee), comprised of representatives of the Board, NJDEP, the New Jersey Economic Development Authority, and Treasury. The Committee was charged with designing a program framework to implement the New Jersey Energy Savings Improvement (ESIP) Act. The SEO, in conjunction with the Committee, will identify and implement projects, track progress on all projects, as well as job creation, energy savings, energy cost savings and greenhouse gas emissions reductions.

In FY14, the SEO conducted energy audits at a cross-section of State facilities– e.g., prisons, developmental centers, State Police Headquarters, and state hospitals - and created a prioritized list of the State’s largest energy users. Based on the results of these audits, the SEO is preparing to implement ESIP projects focused on the 30 largest energy-consuming facilities, which account for almost 54% of the total energy consumed by all State facilities.

The first round of planned ESIP projects will install energy conservation measures (ECMs) in a total of 7 State-owned facilities, including but not limited to NJ State Police Headquarters, NJ State Prison, DOT Headquarters, and Vineland Developmental Center, and is projected to reduce annual energy usage by approximately 20% and save the State approximately \$15 million in energy costs annually. As with all Clean Energy programs, the SEO will measure and publish the State's progress, tracking total project cost, reduced demand, reduced energy costs, reduced greenhouse emissions, and jobs created.

The State has secured a \$100 million line-of-credit to fund ESIP projects on a performance-contracting basis whereby the saved energy costs over the life of the equipment repay the cost of installing the ECMs. Staff anticipates that the first project will be ready for bid in July 2014, when the funds are available through the Department of Treasury. Subsequent projects will be released for bids on a quarterly basis thereafter.

The SEO has continued to re-negotiate State commodity-supply contracts, and as a result, the State is saving \$ 2,275,569 annually for supply of natural gas and \$ 2,019,432 annually for supply of electricity. Meanwhile, the State continues to benefit from prior energy savings projects installed under the ARRA program, including NJDEP heat pumps, Hughes Justice Complex lighting controls, State House HVAC upgrades, DMAVA lighting and window replacement, and a central boiler conversion at the Hunterdon Developmental Center, which have resulted in annually savings of \$1,589,001 since April of 2012 .

### **1.3 Energy Savings Improvement Program (ESIP)**

Legislation enacted in 2009 (L. 2009, c.4) and revised in 2012 (L. 2012, c.55) provides a funding mechanism for State entities (i.e. agencies and authorities, public institutions of higher education, county colleges, local boards of education, counties, and municipalities) to install high efficiency systems and other ECMs to significantly reduce energy consumption and associated costs without the outlay of upfront capital. The legislation is commonly referred to as the ESIP legislation. The energy cost savings achieved through these upgrades is then used to pay for the installation of the ECMs. These ECMs include, but are not limited to, lighting, occupancy sensors, chillers, boilers, HVAC equipment, demand management controls, and renewable energy, as long as the combined payback period is less than 15 years. Focusing on a more regional approach, some districts are now considering incorporating CHP, , which can extend the payback period to 20 years.

Boards of Education (K-12 school districts) have the greatest potential for participation in an ESIP project, since the bonds to fund their projects are not considered new debt obligations, as defined by the legislation, and therefore do not require bond referendums. Aging structures requiring high maintenance and operations costs should be able to realize 20% or more in energy related cost reductions. This sector alone has the potential

for over \$1 billion in projects<sup>2</sup>, which can produce a significant reduction in the public entities' energy costs, reductions in electrical demand, and substantial job creation.

In July 2013, the Board approved procedures which implemented elements of the ESIP law, and in FY14, the ESIP office reviewed 36 projects, ranging in size from \$2.1 million to \$21 million. The proposed projects have a total project cost of \$234,228,261, and a projected first year energy cost savings that exceeds \$15,000,000.

Between 2009 (original ESIP legislation, P.L. 2009 c.4) and 2012 (current ESIP legislation, P.L. 2012 c.55) 19 projects, with a project cost of \$141.5 million used the Energy Savings Improvement Program to fund projects. Since 2012, additional procedures were enacted that require more stringent review and monitoring, as well as limiting the Energy Conservation Measures (ECM's) to measureable energy savings. The role of staff is to insure adopted procedures are followed and the interests of the applicants are protected, and the cost savings can be achieved.

Since 2012, staff has been asked to participate in 33 ESIP related projects, with project costs ranging from \$650,000 to \$9 million. If all proposed projects proceed, total estimated project costs will exceed \$40 million, and deliver an estimated combined lifetime savings of more than \$68million.

#### **ESIP Project Review by Year**

Year	ESIP's Submitted
2009-2011	19
2012	5
2013	18
2014 YTD	10

While working closely with the NJ School Business Administrators and the NJ League of Municipalities, in FY15, Staff and the BPU's Ombudsman's office will continue its outreach and education efforts to enroll another 30 entities into an ESIP agreement.

The BPU will continue its partnership with Sustainable Jersey as it launches its new certification program for schools, with its strong focus on energy savings action items.

Furthermore, Staff will continue to play a role as the State rebuilds in response to Superstorm Sandy. There is a growing interest in resiliency and distributed forms of generation at critical facilities and buildings within school districts and municipalities that can serve as a place of refuge during a power outage. Staff is recognizing an increased number of ESIP projects that include CHP or other forms of distributed

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<sup>2</sup> Project potential based upon a 50% district participation rate with an average of 3 facilities per district and \$3.5 million / dist. project

generation and that will likely participate in the Energy Resilience Bank (ERB), discussed further.

## **1.4 Federal Grant Programs**

### **ARRA SEP Grant**

To capitalize on all funds received through the **American Recovery and Reinvestment Act** (ARRA) and compounding benefits of energy efficiency, the Board created a revolving loan fund (RLF) to develop a Demand Response (DR) program for State-owned facilities. These funds will be administered through a memorandum of understanding between the Board's State Energy Office and the NJEDA.

In FY15, the SEO will issue an RFP to solicit bids from curtailment service providers (CSP) to design and implement a Load Management Program for State-owned facilities with loads over 750 kW of peak demand. Payments to the CSP will be based on a revenue sharing agreement, will be calculated as a percentage of the revenue from PJM's demand response incentives under its energy and capacity markets. Treasury's Division of Property Management and Construction will bid the installation of the measures through the State's competitive procurement process. The RLF funds, which will be administered by the NJEDA, will fund the installation of these measures, and the PJM revenues - minus CSP fees - will be returned to the RLF to provide funds for future DR projects in State-owned facilities.

### **SEP Formula Grant**

"The U.S. State Energy Program (SEP) is the only cost-shared program administered by the U.S. Department of Energy (DOE) that provides resources directly to the states for allocation by the governor-designated State Energy Offices for use in efficiency, renewable, and alternative energy demonstration activities. The 30-year program provided \$50 million to the states in FY'10, FY'11, and FY'12."

<http://www.naseo.org/state-energy-program>

New Jersey utilizes the SEP money, to fund incentives paid through the HVAC, Home Performance with ENERGY STAR, and Direct Install Programs to customers of non-investor owned utilities (non-IOU), such as municipal electric cooperatives, oil, and propane fuels. The program's design, eligibility requirements and incentive levels are identical to those funded through the NJCEP. By providing incentives to residents and small businesses who do not otherwise qualify for NJCEP programs, the federal funds extend the environmental and energy savings benefits to a broader pool of NJ residents and small businesses

In State FY2014, DOE allocated \$1,036,820 to New Jersey through the SEP Formula grant. As of February 2014, approximately 280 non-IOU customers had applied for the SEP incentives, and the programs had achieved the following:

- 4 commercial and industrial buildings retrofitted at a total of 12,700 sq. ft.,
- 29 residences retrofitted at a total of 66,700 sq. ft.,
- 114 energy-efficient HVAC units purchased, and

- Served 30 customers in areas hit hardest by Superstorm Sandy in their efforts to rebuild in a more energy efficient manner, and reduce consumption of fossil fuels and greenhouse emissions.

In FY15, the State has been allocated \$1,101,720 in SEP funds and will contribute a match of 20%, or \$220,344, for a total of \$1,322,064. The Board will continue to incentivize applications for non-IOU customers..

### **SEP Competitive Grant**

The Board, in partnership with The College of New Jersey's (TCNJ) Sustainability Institute – Sustainable Jersey and the New Jersey Institute of Technology (NJIT), is developing a technological and financial pathway to direct local governments to the NJCEP energy efficiency and renewable energy programs that are best suited for their needs. Based on key characteristics of municipal building portfolios, this decision tree will steer users on a path to cost-effectively upgrade building stock and to optimize levels of energy efficiency. The overall objective of the project is to achieve a 20% or greater reduction in energy consumption in all local and state government buildings.

In FY14, Sustainable Jersey conducted a preliminary analysis of 354 previously-completed Local Government Energy Audits (LGEA) and broadly categorized the local government entities into municipalities (127), school districts (168) and all others (59). These categories will be further broken out by size and total audited building area, among other characteristics, in order to create building typologies. The data for 1,983 audited buildings, such as building type, area, age, construction, efficiency of appliances and mechanical systems, etc., as well as the Energy Conservation Measures (ECMs) that were installed in response to the audits, have been logged into the USDOE's Asset Scoring Tool, and DOE has asked New Jersey to participate in a beta test for its new Building Performance Database.

## **1.5 Renewable Energy**

### **1.5.1 Status of Renewable Electricity Market Development**

EDECA directed the Board to develop markets for Class I renewable energy sources through a basic framework of incentives including the Societal Benefits Charge, net metering and interconnection standards, and a Renewable Portfolio Standard (RPS). The Board has worked with stakeholders to develop tools that are effective at encouraging a diversity of ratepayer participation in investments that are responsive to market conditions. The Board established incentive levels for the three renewable energy resources with the greatest potential for New Jersey - wind, solar and biopower - based upon their relative installation costs. Reflective of solar photovoltaics' higher resource potential compared to the other renewable electricity sources and its rapidly changing economics, solar market development incentives have evolved since the Board first approved renewable electricity equipment rebates in 2001.

Since 2001, the New Jersey Clean Energy Program has provided over \$363 million in rebates for 126 MW of solar photovoltaic capacity, \$6.13 million for 9.65 MW of wind

capacity, and \$14.2 million for 31 MW of biopower capacity. Many of these installations continue to enjoy incentives from net metering and the RPS. In 2009, the Board approved a set of recommendations, referred to as the “Solar Transition”, which established the solar goal of 2.12% of total retail electricity sales by 2021. The Solar Transition plan was designed to move the solar market away from rebates to greater reliance on market-based incentives. Since the Board established rebates, the Solar Renewable Energy Certificate (SREC) Pilot Program in 2006 and eliminated rebates, over nineteen thousand (19,346) solar electric facilities generating approximately 1,140 MW of capacity have been installed.

Retail electricity suppliers and providers (not the Electric Distribution Companies) must comply with the RPS rules through the purchase of Renewable Energy Certificates (RECs) or Solar Renewable Energy Certificates (SRECs) or by making Alternative Compliance Payments (ACPs or Solar/SACPs) in amounts proportional to their annual retail sales of electricity. The RPS rules differ significantly for solar photovoltaics compared with the other NJ Class I renewable sources. In 2003, the Board established a percentage requirement dedicated specifically to solar photovoltaics, popularly referred to as the “solar carve-out”, from the Class I portion of the RPS.

Due to the relatively higher cost to install solar photovoltaic and its greater potential contribution to the State’s peak load electricity needs, to be eligible for SRECs, solar facilities must be connected to the local distribution system serving New Jersey. At the same time, NJ Class I and II renewable requirements can be met from facilities located throughout PJM Interconnect LLC territory, or facilities delivering power into PJM wholesale electricity markets. Also reflective of the different economics confronting the different resources, the SACP level was originally established at \$300 per MWh, while the NJ Class I and Class I ACP levels were set at \$50 per MWh. While SREC and REC values are designed to be determined by market forces of supply and demand, SACPs and ACPs establish an effective ceiling on the prices during periods of respective shortage for SRECs or RECs.

March 2014 marked the tenth anniversary of New Jersey’s SREC market, with the first SRECs created in August 2004 based upon electricity generation that commenced in March 2004. The original RPS requirements, enacted with EDECA, were expanded in 2006 by adding annual percentage requirements for the years from 2009 through 2020. With new RPS requirements extending to 2020, particularly the solar requirement of 2.12% of total retail electricity sales, the Board recognized that the State could not continue to rely upon rebates to reach its goals.

In response to a public proceeding referred to as the “Solar Transition”, the Board approved amendments to the RPS rules which were designed to place greater reliance on SRECs while eliminating rebates for solar equipment. An eight year SACP schedule was established which boosted the SACP for 2009 to \$711 per MWh and then decreased it by approximately 3 % per year thereafter. To transition the New Jersey solar market away from its reliance on capacity-based rebates to performance, market-based SRECs, the Board also extended the life of an SREC to three years, institutionalized the SREC

Registration Program, and codified a fifteen year qualification life for eligible facilities. The Board also authorized the Electric Distribution Companies (EDCs) to recover their costs of providing loans, directly investing in solar, or offering long term contracts for ratepayers within their territories.

Shortly after the RPS amendments were adopted by rulemaking, the Legislature, through the Solar Energy Advancement Act of 2010, increased the solar obligation, exacerbating the existing shortage of SRECs in Energy Year 2011. By nearly doubling the SREC requirement during a time of shortage, the law's effect was to cause the SREC price to approach the recently increased SACP. High SREC prices, expanded federal investment tax incentives, and rapidly falling solar equipment costs combined to spark over-investment in NJ's solar market from 2011 through 2012.

The NJ RPS requirements for solar and NJ Class I compliance increase annually while the requirements for NJ Class II compliance remain constant at 2.5% per year. Most simply, the cost of compliance is roughly the sum of the costs of RECs and SRECs procured, along with the ACPs and SACP payments made by retail electricity suppliers and providers.

The costs for procuring REC/SRECs are estimated to be the product of the number of REC/SRECs retired by retail electric suppliers and providers plus the price of the retired REC/SRECs. Alternatively, ACP/SACPs are made in lieu of REC/SREC retirements during times of respective shortage and these total compliance costs are passed along to New Jersey ratepayers by the retail electric suppliers and providers.

The cost of compliance with the RPS has steadily increased from approximately \$7.5 million in Reporting Year 2005 to the recent high of \$197 million, experienced in Energy Year 2011 (EY11), before falling<sup>3</sup> in EY12 and EY13. The comparatively high cost of RPS compliance for EY11 was a direct result of the high average SREC price of \$602 coincident with the SREC market shortage. Subsequently, the market inverted, and the SREC price fell in EY12 to \$287 and to \$180 in EY13.

The Solar Act of 2012 effectively doubled the RPS solar compliance obligation when it changed the requirement for EY14 from 772,000 MWh or SRECs to 2.050% of retail sales. %. If retail sales remain the same as they were in EY13 then the solar obligation for EY14 will be 1.56 million SRECs. The cost of solar compliance in EY14 will set a new high of \$282 million assuming the average retired SREC price remains \$180 per MWh. The total cost of compliance with the RPS for EY14 is estimated to reach \$325 million.

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<sup>3</sup> The RPS rules redefined the compliance period from a reporting year to an energy year in 2010 rule amendments. An Energy Year or EY is defined as the period beginning on June 1 and ending on May 31 of the next year, numbered according to the calendar year in which it ends. N.J.S.A. 48:3-51

The discussion of the cost of compliance is not complete without a discussion of the cost of the EDC solar programs, which were designed to broaden the market segments participating in the New Jersey solar market. In April 2007, PSEG submitted its first petition to manage Solar Loan I, a 30 MW program offering loans in various private market sectors. In 2009, the Board approved the plans of JCP&L, Atlantic City Electric (ACE) and Rockland (RECO) for programs that offered long-term purchases of SRECs equaling 64.8MW at a fixed cost. . In February 2009, PSEG filed a petition to directly invest \$773 million in 120 MW at various solar facilities and recover costs through the sale of energy, capacity, SRECs, and a rider accessed to ratepayers. In 2011, Rutgers CEEEP issued an evaluation of the costs of these programs. CEEEP found that the EDC solar finance programs added \$15.66 to \$51.91 per SREC to the costs borne by ratepayers.

In May 2012, the Board authorized the extension of the EDCs SREC-based finance programs for a total capacity of 180 MW over three years, to be divided among the participating EDCs based on retail sales. Each of the EDCs submitted filings that proceeded through a settlement process and culminated in the Board extending the programs in 2013. PSEG's Solar Loan III program was approved for 97.5 MW in total capacity allocated among five market segments: residential, residential aggregated, small non-residential, large non-residential, and landfills. In December 2013, the Board approved JCP&L, Atlantic City Electric, and Rockland Electric for programs that offer competitively selected long-term SREC contracts for JCP&L, ACE and RECO at 52 MW, 23 MW, and 4.5 MW respectively. PSEG's Solar Loan III program, which offers a competitively established SREC floor value for loan amortization, began in November 2013 and the other three utilities are anticipated to conduct their first solicitations in the summer of 2014.

The contribution of the Board's net metering and interconnection standards to the development of the State's solar market cannot be overstated. The rules for net metering and interconnection in New Jersey have been consistently recognized among the best in the United States. Our interconnection standards provide a transparent application process for prospective project developers and owners to seek approval for interconnecting NJ Class I renewable energy facilities with the distribution systems managed by the State's four (EDCs). Our net metering rules require the EDCs or the retail electricity suppliers to provide full retail credit to "customer-generators" for the electricity produced by these facilities, with monthly excess generation credited at retail rates and annual excess generation credited at wholesale electricity rates. The transparency and simplicity of this approach to valuing the electricity produced by customer-generators is widely recognized as important to the development of the distributed solar market.

### **New Jersey Solar Market: 2013 results**

In 2013, while surpassing the 1 gigawatt (GW) milestone of total installed capacity, New Jersey's solar market experienced another record setting year. Over 6500 new solar installations, with more than 4,800 of these less than 10 kW, completed construction and joined the State's SREC market in the past year. The last solar rebate commitments,

which were entered in January 2011, were paid in 2013, completing the transition away from rebates to reliance on SRECs as the primary source of subsidy provided by the New Jersey ratepayer. The value of the rebates paid by the NJCEP in 2013 was \$4,691, less than what was paid in 2001 (\$37,145), while developers installed more capacity than was installed in the first ten years of New Jersey's solar development combined.

While the State's national ranking on the basis of total annual capacity installed fell from third in 2012 to fifth in 2013, the State retains the distinction of having installed the second largest amount of non-utility owned solar in the US. New Jersey's solar market also exhibited the second lowest average non-residential installation price and the ninth lowest average residential installation price among all the US states in 2013. (US Solar Market Insight, 2013 Year-in-Review, SEIA and GTM Research, March 2014, pp. 55).

### **New Jersey Solar Market: 2014 expected results**

The Solar Energy Industry Association (SEIA) /GTM projects that New Jersey will regain the number two spot among states for total installed capacity in 2014 with 389 MW of new capacity. This characterization of the New Jersey solar market in comparison with other states is remarkable given the proliferation of utility solar ownership across the country and the State's transition to solar market development driven by private sector.

Staff also anticipates the first installations from the recently commenced PSEG Solar Loan III and Solar for All Extension programs will be completed and the first solicitations will be issued by JCP&L, Atlantic City Electric and Rockland Electric for their EDC SREC-based finance programs, known as SREC II. As with the precursors of these EDC run programs, Staff is working with Rutgers Center for Energy, Economic & Environmental Policy to evaluate program cost effectiveness.

### **Implementation of the Solar Act of 2012**

In 2012, Governor Christie signed the Solar Act as part of a bipartisan effort to ensure the continued success of the New Jersey solar industry. This comprehensive legislation was intended to bring greater stability to the solar market. Before the Solar Act was signed, the pace of new solar construction was exceeding the demand for SRECs, thereby creating uncertainty in the market. In addition to supporting solar construction by increasing the demand for SRECs, the Solar Act also provided many prescriptive changes to the RPS including:

- Accelerating the solar requirements, doubling the requirement in Energy Year 2014.
- Adjusting the Solar Alternative Compliance Payment schedule downward for 2014 (from \$625 to \$339) and extended the schedule of SACP levels to 2028.
- Extending the shelf life of a SREC from 3 years to 5 years.

The Solar Act required the Board to conduct an analysis of approaches to mitigate solar development volatility and submit a report to the legislature by July 2014. The Board initiated a proceeding in November 2012 and held ongoing discussions with stakeholders. The Board engaged CEEEP to review other state, national and international approaches.

The draft report was widely circulated and discussed in an open public forum with stakeholders in April 2014. The Board has solicited written comments on the report prior to the preparation of a final report to the Legislature.

The Board has issued numerous decisions related to the implementation of the various sections of the Solar Act related to large grid connected projects.

### **1.5.2 Status of Offshore Wind**

The EMP states that: “The RPS for Class 1 renewable energy resources increases over time, reaching 20% by 2021 and includes carve-outs for solar and offshore wind,” The Offshore Wind Economic Development Act (OWEDA) was enacted August 19, 2010. OWEDA calls for at least 1,100 MW of offshore wind generation on the outer continental shelf in the Atlantic Ocean. Like solar, the offshore wind provision is also defined as a carve-out from the total Class I RPS requirement.

On February 10, 2011, the Board adopted rules (N.J.A.C. 14:8-6.1 et seq.) establishing an Offshore Renewable Energy Certificate (OREC) Program and providing an application process and a framework under which the Board will review any application and ultimately approve, conditionally approve, or deny the application. The cost of reviewing applications filed pursuant to OWEDA is reimbursed by the applicant. On February 20, 2013, the Board readopted these rules with amendments to improve the application process and to ensure ratepayers a net benefit. Through multiple stakeholder meetings prior to the proposed re-adoption, and through the public comment period, the offshore wind stakeholders were given the opportunity to provide their input and recommendations on the rules.

On May 19, 2011, Fisherman’s Atlantic City Windfarm (FACW) submitted an Initial Application for a State Waters Project in response to the Board’s request for offshore wind applications pursuant to N.J.S.A. 48:3-87.1. FACW requested numerous extensions of the review period and ultimately submitted an amended application on June 1, 2012. This amended application was fully evaluated, and the Board determined that the project did not meet the requirements of OWEDA and the FACW application was thus denied.

The federal Bureau of Ocean and Energy Management (BOEM) is preparing a Proposed Sale Notice (PSN) of offshore wind leases in federal waters for public review and comment. The PSN is expected to be released in 2014 which will set the stage for a public lease auction to be held. The Board anticipates announcing an open application window for ORECs once the federal auction is set and after the OREC funding mechanism rules have been proposed.

The section of the Board’s OREC rules relating to the funding mechanism, i.e., the means by which payment for the offshore wind OREC revenue is relayed from suppliers to the developers of successful applications, was reserved since no ORECs would be generated for several years. Following the adoption of the rules, the stakeholders were unanimous

in their belief that the funding mechanism was a fundamental prerequisite for the opening of any application window for the Board’s review of proposed offshore wind projects.

Since that time, Board Staff has convened multiple stakeholder meetings and retained Boston Pacific Company as a consultant to develop a proposal that meets the requirements for regulatory certainty and funding security. This proposal was presented to the stakeholders on February 21, 2013. The stakeholders expressed some concerns with aspects of the proposal and submitted comments and three competing proposals which demonstrated a lack of agreement among the stakeholders on how to proceed. Staff has worked to develop a revised proposal that would both be able to provide regulatory certainty to all OSW stakeholders while maintaining its funding security. Board Staff is close to completing this process and anticipates the distribution of a straw proposal to the stakeholders and the public in mid-2014 seeking their feedback. The Board hopes to proceed with a rule proposal following that feedback.

### 1.6 Utility Programs

Pursuant to N.J.S.A. 48:3-98.1 several utilities have implemented various energy efficiency and renewable energy programs in New Jersey over the past several years.

The following table shows utility expenses on EE programs for the period 2010 -2013

<b>Utility</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
New Jersey Natural Gas	\$13,142,715	\$17,164,001	\$19,678,980	\$33,504,508
South Jersey Gas	\$4,855,839	\$6,278,245	\$6,131,609	\$3,568,908
Elizabethtown Gas	\$1,792,508	\$3,289,492	\$2,326,579	\$8,985,378
Rockland Electric	\$189,932	\$258,755	\$221,330	\$220,650
Public Service Electric and Gas	\$104,289,299	\$65,917,553	\$38,879,992	\$49,269,234
<b>Total</b>	<b>\$124,272,303</b>	<b>\$92,910,057</b>	<b>\$67,240,502</b>	<b>\$95,548,678</b>

The utilities develop programs individually and submit programs plans to the Board for review and approval. In FY14, New Jersey Natural Gas, South Jersey Gas and Elizabethtown Gas received approval to extend their respective programs through 2015. Rockland Electric currently has a filing pending before the Board to extend its low-income program. PSE&G is currently managing four programs previously approved by the Board - Technology Demonstration; Multi-family Housing; Hospital Efficiency; and Government and Non-Profit Direct Install - and anticipates submitting a filing to the Board in the near future to continue these four programs.

Staff’s CRA Straw Proposal dated June 3, 2013 identified a number of issues related to the coordination of the NJCEP and the utility programs. The Straw Proposal recommended that Staff convene a Utility Work Group to evaluate existing procedures for review and approval of utility EE and RE filings, the administrative and programmatic coordination of the utility programs with NJCEP programs, and issues

related to reporting utility program results. The activities of the Utility Work Group are discussed further below.

## 2.0 New Jersey's Clean Energy Program Update

The NJ Clean Energy Program remains a program in transition. At the June 2013 agenda meeting Staff recommended to the Board that it set a funding level for FY14 only. This recommendation was based on several factors, including:

- Staff's expectation that a contract for a new Program Administrator (PA) would be awarded in the summer of 2013
- Uncommitted balances in NJCEP funds were lapsed to the State General Fund pursuant to the FY 2013 Appropriations Act
- The expectation that the new strategic plan would identify and prioritize a rigorous and on-going plan for program evaluations
- That with the results of ongoing program evaluation, the strategic plan would propose a path to transition the EE programs to financing, and
- That the NJCEP was still assessing the impact of Superstorm Sandy on its budgets and program design

Specifically, the RFP for a new Program Administrator stated that the Strategic Plan shall "identify opportunities and pathways to achieve continuous administrative improvements, efficient resource acquisition and market transformation, including the use of innovative financing and alternative funding sources...and shall include a timetable for the transition to long term financing and reduction of SBC funding."

As of this writing, the award of the contract for a new Program Administrator has been canceled. Staff intends to draft and release a new RFP in FY15.

Uncertainty regarding funding levels and the annual need to reduce NJCEP budgets due to funding lapses undercuts market confidence, makes long-term planning difficult, and impacts customer and contractor participation. Industry participants have consistently indicated their unwillingness to make investments in clean energy due to the uncertainty of funds availability when projects are completed or ready to apply to the NJCEP for rebates.

This issue is particularly pronounced for the CHP industry. CHP developers have repeatedly stated that the investment in time and money required to develop a CHP project is substantial. The process takes several months and requires significant financial investment to perform energy audits, engineering studies, financial analysis and obtain permits. The annual lapses of SBC funds have created an environment in which potential applicants are unwilling to invest in project development, and as a result, the CHP program has seen a steady decline in applications.

Based on the above, Staff will rely on the analysis set out in the 2014 CRA proceeding, updated to reflect current program activity levels and other factors as described in more detail below, in developing proposed FY15 funding levels and goals. Staff recommends that the Board set a one-year funding level for FY15, pending the recommendations of the Work Groups, as described below in section 2.2.

**2.1 Program Evaluation**

Through on-going research and evaluation, The Center for Energy, Economics and Environmental Policy (CEEEM) has supported the NJCEP by performing cost-benefit analyses, developing program evaluation plans, developing RFPs for evaluation services, procuring third party evaluation contracts, evaluating the costs of utility and renewable energy programs, and evaluating pilot programs. Going forward, Staff recommends that the program continue to utilize the services currently provided by CEEEM and expand some evaluation services to meet the goals of the EMP.

In addition to the NJ Clean Energy Economy study discussed above, in 2014, CEEEM performed the following studies/evaluations to inform policies and NJCEP program design. The chart below also includes CEEEM’s proposed a schedule of evaluations through 2016.

<p><b>2013/2014 (studies initiated in 2013-2014)</b>            Clean Energy Economic Study            Solar Development Volatility Analysis            Small-Scale Wind, Biopower and Fuel Cell Impact Evaluation            Evaluation Work Group            NJCEP Evaluation Plan Update            CHP Cost-Benefit Analysis and the Value of Resiliency            Protocols Update            Tracking Systems Assessment (NJCEP Information Management System)            Benchmarking Study/Peer State Comparison</p>
<p><b>2014/2015</b>            NJCEP Evaluation Plan Update            Portfolio-level Process Evaluation            Baseline Studies            Cost-Benefit Analysis            Protocols Update</p>
<p><b>2015/2016</b>            NJCEP Evaluation Plan Update            Impact Evaluations            Market Potential Study            NJ Clean Energy Market update            Cost-Benefit Analysis            Protocols Update</p>

**Evaluations Performed in FY14**

Offshore Wind Analysis –The objective of this analysis is to provide the OCE with an integrated set of tools by which to perform the economic evaluation of developer proposals for offshore wind projects in New Jersey. CEEEM (along with the Rutgers Institute of Marine and Coastal Sciences) is working to link the various environmental and economic models (DAYZER, R/ECON, CMAQ) to calculate the direct and indirect economic impacts of a generic offshore wind project in New Jersey.

Solar Development Volatility Study - The aim of this study was to define solar market development volatility and explore possible mitigating solutions. CEEEP has retained a subcontractor to investigate impacts to the market and analyze varying market scenarios. In April 2014, CEEEP presented its draft findings at a public forum. This study shall inform OCE's policies and programs for mitigating solar development volatility.

EDC Solar Financing Update – In 2012, CEEEP reported its findings from review of the NJ Electric Distribution Companies (EDC) Solar Long-term Contracting Programs. This study will report the updated costs and revenues generated by the EDC solar contracting program, as well as calculate the cost per SREC for the EDC programs.

Combined Heat and Power, Distributed Energy Resources and Energy Storage Cost-Benefit Analysis - This analysis will develop a CBA model to evaluate applications received by the proposed New Jersey Energy Resilience Bank to develop resilient EE and RE projects. Expanding on a previous CBA model that evaluates the cost-effectiveness of proposed CHP projects, CEEEP will expand the model to include other distributed energy resources and energy storage options.

EMP Indicators – CEEEP has tracked the performance of the State's energy policies and programs against the 2011 EMP goals and has submitted its draft presentation for review by Staff.

Small-Scale Wind, Biopower and Fuel Cell Impact Evaluation Study - This study assesses the actual performance of projects awarded incentives through the NJCEP small-scale wind, Biopower and fuel cells programs. This study shall inform future program design.

### **Evaluations to be Performed/Initiated in FY15**

NJ Energy Efficiency E Baseline Study - This study will inventory and describe NJ's existing building stock, appliance and HVAC equipment, lighting, motors, etc. and the associated energy characteristics.. This study will provide a baseline against which energy savings targets can be set, new technologies can be proposed, and program performance can be measured.

Portfolio Level Process Evaluation Study - This survey-based study will interview contractors, consultants, customers and market actors about the accessibility and effectiveness of the current NJCEP programs and administrative model in meeting the needs of ratepayers and the marketplace. This study will inform the processes and design of energy efficiency programs.

Renewable Portfolio Standard Process Evaluation Study - The aim of this study is to evaluate the effectiveness of the current suite of renewable programs, including the SREC registration program, SBC incentives and implementation of net metering and interconnection standards, in the effort to reach the State's RPS goals at the least cost to the ratepayer. This study shall help inform the OCE of effectiveness of market-based

policies and programs versus SBC derived incentives in developing the renewable energy market in New Jersey.

Portfolio Benchmarking and Metrics Study - This study will build upon AEG's Benchmarking study to compare for New Jersey's statewide and utility EE program performance to its peer states. This study set appropriate energy efficiency benchmarks for its portfolio of programs.

## **2.2 CRA 2014 – Work Groups**

In the 2014 CRA proceeding, Staff recommended that the Board direct Staff to create three work groups to investigate changes to the programs, processes, and structure of the NJCEP and inform funding levels and improve program performance: Utilities Work Group, Evaluation Work Group, and Data Work Group.

The purpose of the **Utilities Work Group** was to review and better coordinate utility-run and NJCEP programs.

The Utility Work Group was tasked with the following goals:

1. Review the full scope of utility-run and NJCEP programs to compare incentive levels, eligibility requirements, data collection, reporting requirements and compliance filing timelines and to identify a common platform for each program. This evaluation shall seek to improve customer and contractor participation, eliminate overlap and/or competition between NJCEP and utility programs, standardize and aggregate the data being collected and reported by all clean energy programs, and establish a uniform schedule for submitting compliance filings..
2. Determine how to/who is best able to/which programs deliver the maximum energy savings per dollar invested and set clear goals for improved energy savings through the outlier years of the CRA 2014-17.
3. In recognition of the Energy Master Plan goal of transitioning clean energy programs from reliance on the Societal Benefits Charge (SBC), identify which programs lend themselves to alternate means of financing, such as on-bill repayment, revolving loan funds, etc.
4. Explore opportunities for combining energy efficiency and renewable energy with Demand Response programs.

The Utility Work Group, which is comprised of representatives of the OCE, Rate Counsel, the Utilities, the Large Energy Users Coalition, current Market Managers, NRDC, the NJ Utilities Association, Sustainable Jersey, and the Clean Energy States Alliance, has held regular meetings starting in the fall of 2013.

The Utility Work Group commenced discussions by focusing on ways to better coordinate the programs. The discussions addressed each program's budget, programmatic requirements, energy savings performance and reporting requirements, as well as the pros and cons of alternative administrative structures to cost effectively

deliver energy efficiency programs to ratepayers. As per the EMP-stated goal to “redesign the delivery and financing of State energy efficiency programs”, the work group investigated the role of performance incentives and the nature of traditional utility ratemaking, which discourages the utilities from investment in energy efficiency (identified as the “throughput” issue).

To better inform work group members, Staff invited representatives of the Lawrence Berkeley National Laboratory (LBNL) and the Regulatory Assistance Project (RAP) to make presentations regarding several of the issues being assessed.

LBNL’s presentation introduced members to a variety of administrative models being used across the country by utilities and other PUCs when administering energy efficiency programs. The presentation investigated the pros and cons of the various administrative models, including programs managed by:

1. Utilities with oversight by Regulatory Commissions
2. Utilities with Oversight Board
3. Public Utility Commissions
4. Third Party
5. Hybrid models

LBNL provided criteria by which to assess the potential effectiveness of the different administrative models, including:

1. Clarity of purpose, structure and funding
2. Stability of the portfolio over time
3. Support among key stakeholders

LBNL made a presentation on the role of performance incentives in achieving energy savings targets and cost-effective administration. Through this presentation, LBNL discussed how performance incentives can address key policy goals, program design issues, and trends and results in other states.

RAP’s presentation addressed alternatives to the throughput issue, whereby traditional ratemaking motivates a utility to increase sales, and is in conflict with the State’s desire to promote energy efficiency and develop its EE market. Through a discussion of the basic concepts of decoupling and the key principles of developing a decoupling method, RAP identified potential alternative ratemaking structures.

The Work Group continues to hold meetings, and recently had presentations by individuals from Efficiency Vermont, the Energy Trust of Oregon and Energy Indiana, on three administrative models that Staff believes can inform the NJCEP.

In late summer 2014, Staff anticipates releasing a report which will discuss the pros and cons of alternative administrative models for NJ’s Clean Energy Program, and make recommendations on those models, the role of performance incentives, and alternatives to traditional ratemaking. Staff will recommend that the Board initiate a formal proceeding

and obtain public input regarding alternative administrative and financing models for delivering EE programs.

In addition to the Utilities Work Group, Staff created Evaluation and Data Work Groups to identify data collection needs, develop standard reports for NJCEP and utility-run programs, and to identify and track additional EE program metrics, in order to make the information more accessible to the Board, CEEEP, stakeholders and investors.

Rutgers CEEEP facilitated the Evaluation Work Group. The purpose of this group was to draft an updated evaluation plan which will identify and prioritize an ongoing schedule of NJCEP program evaluations. Members included Staff, representatives from the Utilities and Rate Counsel, as well as current NJCEP market managers.

Based on discussions with Work Group members, CEEEP has finalized a draft Evaluation Plan for BPU's review and approval. Staff anticipates that this draft Evaluation Plan will be circulated for public comment in summer 2014. (See Section 2.1 for brief descriptions of evaluations performed in FY14 and evaluations expected to be performed in FY15.)

In addition to the two Work group discussed above, Applied Energy Group (AEG) facilitated a **Data Work Group** that was tasked with the following goals:

1. Identify the data points/metrics collected by USDOE, industry and other clean energy programs as the foundational data to be reported by NJCEP and utility programs. In considering the goals of the EMP and the transition to financing, determine what additional data should be collected to meet reporting requirements and evaluation needs. These additional metrics shall include, at minimum, jobs created and funds leveraged.
2. Understand what data private capital needs to assess risk, in order to attract private investment in NJ's clean energy economy.
3. In addition to traditional data points – energy savings, energy cost savings, avoided emissions, etc. - consider the benefits of collecting qualitative data, in order to measure and report the full benefits of clean energy programs.
4. The CRA 2014-17 funded increased marketing activities, and Staff believes it is important to measure the impacts of additional marketing. In response, the work group shall identify specific metrics for tracking the effectiveness NJCEP marketing activities.

Coordinating its efforts with the Evaluation Work Group, the **Data Work Group** reviewed all data currently being collected via the NJCEP's Information Management System (IMS) for the NJBPU-managed Clean Energy Programs, as well as the programs managed by the state's investor-owned utilities, and in particular, focused on the data CEEEP requires for program evaluation.

In January 2014, a joint meeting of the Data and Evaluation Work Groups provided each with presentations on calculating and tracking the impact of energy efficiency programs on the jobs market, the importance of collecting the right data for evaluation studies, and the practice of regional economic modeling. At the same meeting the Environmental Defense Fund also provided details on its Investor Confidence Project, which in part seeks to establish standardized EE protocols and processes for energy efficiency projects that provide private capital with confidence in the data required to make an investment decision.

As an outgrowth of the Data Work Group, the **Reporting Task Force** was established to review and evaluate current reports and reporting requirements for the New Jersey's Clean Energy Program (NJCEP) and ratepayer-funded, EE programs run by the utilities in their operating areas. This review included NJCEP reports produced for the NJBPU (Board or Staff) for regulatory purposes, reports presented at PC meetings and the EE and RE Committee meetings for program management, as well as those reports that disseminate program information to the general public. The Task Force make recommendations for modification and/or new reports or reporting requirements, which will be included in the final report of the Data Work Group.

Members of the Data work group included OCE Staff, representatives of the utilities and Rate Counsel, as well as the Environmental Defense Fund (EDF) and the American Council for an Energy-Efficient Economy (ACEEE).

The draft recommendations of all three work groups will be issued for public comment in late summer 2014.

### **2.3 Assessing the Impact of Superstorm Sandy: Resiliency and the ERB**

As of the June 2013 agenda meeting, the Board and Staff were still assessing the impacts of Superstorm Sandy on its policies and programs. With over 70% of the State's grid impacted by the storm, New Jersey was reevaluating its energy policy and its need to build resiliency and to develop distributed forms of generation.

In the wake of the storm, the State will receive up to \$3.3 billion in federal emergency funds to aid in rebuilding and recovery, including \$200 million in US Housing and Urban Development (HUD) funds dedicated to developing an Energy Resilience Bank (ERB). The ERB, which will be supplemented with SBC funds, will support resilient EE and RE projects at critical infrastructure, public facilities, not-for-profit hospitals, and other facilities deemed critical by FEMA. Eligible technologies may potentially include Combined Heat and Power with blackstart capability, solar PV with dynamic inverters and energy storage, micro-grids and the necessary technologies to bridge the "resiliency gap."

Use of SBC funds will be limited to ERB projects that contain a qualifying EE or RE component. SBC funds will not be used to support installation of resilience measures that do not support or drive qualifying EE or RE technologies.

Staff continues to believe that CHP/ FC and solar PV technologies should play a critical role in hardening the State's infrastructure for critical facilities and enhancing system reliability. These technologies contribute to the State's resiliency and provide opportunities to leverage NJCEP programs and technologies and build program participation.

Currently, New Jersey has approximately 200 CHP facilities serving universities, hospitals, multi-family buildings, waste treatment facilities, office buildings and industrial facilities. The 2011 EMP established a goal of securing 70% of the State's energy needs from 'clean' energy sources by 2050, including fuel cells and CHP. It also committed the State to developing 1,500MW of CHP over the next ten years (150MW/yr). As Staff stated in the 2014 CRA proceeding, this goal will not be accomplished through NJCEP incentives alone. Staff believes the ERB is an opportunity to advance the realization of this goal.

BPU will execute an MOU with EDA for the purposes of joint administration and funding of the ERB. Staff will look to create administrative and programmatic efficiencies between the ERB and NJCEP programs when practical.

### **3.0 FY15 Funding Levels and Goals**

Pending the recommendations of the Work Groups and further program evaluation, and to provide consistency for future program evaluations and a degree of market certainty, Staff recommends a continuation of the current portfolio of programs in FY15.

As the tables below indicate, the NJCEP program has seen a steady increase in participation and spending over the past four years, and Staff anticipates a continued increase in spending,

The tables in each subsection below show actual spending levels and commitments for the program years 2011-2013, estimated expenses and commitments as of the end of FY14, and proposed FY15 funding level by program. Estimated expenses and commitments for FY14 are based on 7 months of actual expenditures and commitments through January 31, 2014 and 5 months of estimated expenses and commitments through June 30, 2014. All outstanding commitments as of the end of the FY14 will carry forward into FY15 as committed funds.

#### **3.1 Energy Efficiency**

Staff recommends continuation of the current portfolio of EE programs and is proposing to increase EE program marketing from the current level of approximately \$2.4 million to \$5 million in FY15.

Marketing and outreach are key drivers that directly impact the success of New Jersey's Clean Energy Programs. For the last four years, the budget for marketing has been less than one percent of the total Clean Energy Program budget and is one of the smallest marketing budgets in the nation when compared to peer clean energy programs. Over the years, Board staff has repeatedly received comments from industry stakeholders that NJCEP program participation is suffering as a result of the low marketing funding levels.

In tandem with contract extensions, current funding levels have prevented marketing campaigns from being reevaluated and/or updated in several years. Staff has requested that the Market Managers revamp their respective NJCEP marketing campaigns. Additional funding would allow marketing managers to conduct market research, increase NJCEP presence and participation at trade shows, update and enhance designs for marketing collateral and campaigns, more accurately track and report on the effectiveness of various marketing tactics and increase program participation levels.

New Jersey's Clean Energy Programs rely heavily on contractor promotion to generate leads and educate customers about the programs. When contractors develop their own marketing strategies and tactics, a larger disconnect between contractors and the NJCEP forms based on customer's lack of understanding of the contractor's relationship to the NJCEP. Trade Allies have continuously reported that a major hurdle for them is trying to portray the legitimacy of their partnership with the Program, and continue to reiterate that much of their initial face-to-face time with potential customers is spent on explaining their affiliation with the state and these ratepayer-funded programs.

When marketing budgets were nearly cut in half in 2011, Board staff relied on the website as the main resource for program information and announcements. Contractors have indicated that the website is difficult to navigate and the user interface needs to be improved. Most contractors claim to rarely use the Clean Energy website as a resource for customers. Its inability to host the amount of information associated with the program, combined with its lack of functionality, has created an ongoing deficiency in the dissemination of program information.

### 3.1.1 Residential and Low-Income EE Programs

The proposed FY15 funding level for the residential EE programs is based upon a continued increase in levels of expenditures and recognizes that the Home Performance with Energy Star program has seen a steady increase in participation over the past several years.

The following table shows actual spending levels and commitments for the years 2011-2013, estimated expenses and commitments as of the end of FY14, and proposed FY15 funding level by program for the Residential EE and Low-Income programs:

#### Proposed FY15 Funding Level: Residential EE and Low-Income Programs

Program		2011	2012	2013	FY2014	Proposed FY15 Funding Level
<b>RESIDENTIAL EE PROGRAMS</b>						
Residential HVAC	Actual Expenditures	\$ 19,923,078.40	\$ 14,883,934.26	\$ 13,459,607.68	\$ 13,350,477.34	\$14,000,000.00
Residential New Construction	Actual Expenditures	\$ 7,039,315.47	\$ 11,096,499.95	\$ 7,045,774.71	\$ 7,749,135.56	
	Committed Expenditures	\$ 8,455,672.00	\$ 9,241,315.00	\$ 8,982,770.05	\$ 9,800,000.00	
	<b>Actual plus Committed Expenses</b>	<b>\$ 15,494,987.47</b>	<b>\$ 20,337,814.95</b>	<b>\$ 16,028,544.76</b>	<b>\$ 17,549,135.56</b>	\$9,000,000.00
Energy Efficient Products	Actual Expenditures	\$ 16,643,930.61	\$ 14,530,276.19	\$ 14,991,970.37	\$ 20,093,761.75	\$20,000,000.00
Home Performance with Energy Star	Actual Expenditures	\$ 15,266,819.30	\$ 24,813,646.67	\$ 26,875,738.45	\$ 34,517,793.64	
	Committed Expenditures	\$ 5,512,456.00	\$ 7,274,848.00	\$ 8,410,440.10	\$ 10,957,000.00	
	<b>Actual plus Committed Expenses</b>	<b>\$ 20,779,275.30</b>	<b>\$ 32,088,494.67</b>	<b>\$ 35,286,178.55</b>	<b>\$ 45,474,793.64</b>	\$36,000,000.00
Marketing - Residential EE	Actual Expenditures	\$ 1,111,985.10	\$ 1,102,306.86	\$ 1,220,700.68	\$ 1,308,978.58	\$2,500,000.00
<b>Sub-Total: Residential EE Programs</b>	<b>Actual Expenditures</b>	<b>\$ 59,985,128.88</b>	<b>\$ 66,426,663.93</b>	<b>\$ 63,593,791.89</b>	<b>\$ 77,020,146.87</b>	
	<b>Committed Expenditures</b>	<b>\$ 13,968,128.00</b>	<b>\$ 16,516,163.00</b>	<b>\$ 17,393,210.15</b>	<b>\$ 20,757,000.00</b>	
	<b>Actual plus Committed Expenses</b>	<b>\$ 73,953,256.88</b>	<b>\$ 82,942,826.93</b>	<b>\$ 80,987,002.04</b>	<b>\$ 97,777,146.87</b>	<b>\$81,500,000.00</b>
<b>RESIDENTIAL LOW INCOME</b>						
Comfort Partners	Actual Expenditures	\$ 28,405,761.97	\$ 31,465,895.21	\$ 31,236,457.21	\$ 35,102,473.20	\$35,000,000.00

### 3.1.2 C&I EE Programs

The proposed FY15 funding level for the C&I EE programs is based upon a continued increase in levels of expenditures and recognizes that the Pay-for-Performance program has seen a steady increase in participation over the past several years. The following table shows actual spending levels and commitments for the years 2011-2013, estimated expenses and commitments as of the end of FY14, and proposed FY15 funding level by program for the C&I EE programs:

## Proposed FY15 Funding Level: C&I EE Programs

Program		2011	2012	2013	FY2014	Proposed FY15 Funding Level
<b>C&amp;I EE Programs</b>						
C&I New Construction	Actual Expenditures	\$ 2,387,636.95	\$ 1,825,928.93	\$ 763,649.78	\$ 730,951.91	\$1,000,000.00
	Committed Expenditures	\$ 2,430,340.00	\$ 778,771.52	\$ 706,844.46	\$ 1,176,779.70	
	<b>Actual plus Committed Expenses</b>	<b>\$ 4,817,976.95</b>	<b>\$ 2,604,700.45</b>	<b>\$ 1,470,494.24</b>	<b>\$ 1,907,731.61</b>	
C&I Retrofit	Actual Expenditures	\$ 15,697,501.92	\$ 20,278,977.16	\$ 25,519,359.47	\$ 22,349,684.68	
	Committed Expenditures	\$ 21,743,160.00	\$ 21,163,959.69	\$ 27,512,011.78	\$ 28,070,978.75	
	<b>Actual plus Committed Expenses</b>	<b>\$ 37,440,661.92</b>	<b>\$ 41,442,936.85</b>	<b>\$ 53,031,371.25</b>	<b>\$ 50,420,663.43</b>	\$23,266,000.00
Pay-for-Performance New Construction	Actual Expenditures	\$ 478,711.08	\$ 874,646.08	\$ 1,116,420.28	\$ 1,447,137.38	
	Committed Expenditures	\$ 1,083,760.00	\$ 2,492,618.70	\$ 6,122,943.30	\$ 7,969,576.50	
	<b>Actual plus Committed Expenses</b>	<b>\$ 1,562,471.08</b>	<b>\$ 3,367,264.78</b>	<b>\$ 7,239,363.58</b>	<b>\$ 9,416,713.88</b>	\$3,000,000.00
Pay-for-Performance	Actual Expenditures	\$ 5,023,091.48	\$ 8,437,899.74	\$ 9,527,617.61	\$ 13,987,711.77	
	Committed Expenditures	\$ 26,724,700.00	\$ 29,899,535.05	\$ 24,956,766.75	\$ 29,494,923.85	
	<b>Actual plus Committed Expenses</b>	<b>\$ 31,747,791.48</b>	<b>\$ 38,337,434.79</b>	<b>\$ 34,484,384.36</b>	<b>\$ 43,482,635.62</b>	\$18,000,000.00
Combined Heat & Power (CHP)	Actual Expenditures	\$ -	\$ 185,424.05			
	Committed Expenditures	\$ 1,000,000.00	\$ 2,082,000.00			
	<b>Actual plus Committed Expenses</b>	<b>\$ 1,000,000.00</b>	<b>\$ 2,267,424.05</b>			
Local Government Energy Audit	Actual Expenditures	\$ 3,493,179.00	\$ 2,213,625.50	\$ 2,617,517.00	\$ 2,798,127.00	
	Committed Expenditures	\$ 2,404,280.00	\$ 2,391,997.43	\$ 1,252,997.23	\$ 898,746.50	
	<b>Actual plus Committed Expenses</b>	<b>\$ 5,897,459.00</b>	<b>\$ 4,605,622.93</b>	<b>\$ 3,870,514.23</b>	<b>\$ 3,696,873.50</b>	\$3,000,000.00
Teaching Energy Awareness with Children's Help (TEACH)	Actual Expenditures	\$ 121,599.50				
	Committed Expenditures	\$ 561,230.00				
	<b>Actual plus Committed Expenses</b>	<b>\$ 682,829.50</b>				
Direct Install	Actual Expenditures	\$ 21,733,218.78	\$ 21,264,846.70	\$ 24,497,175.83	\$ 23,122,882.26	
	Committed Expenditures	\$ 1,086,568.00	\$ 11,614,173.94	\$ 18,382,796.30	\$ 19,737,382.22	
	<b>Actual plus Committed Expenses</b>	<b>\$ 22,819,786.78</b>	<b>\$ 32,879,020.64</b>	<b>\$ 42,879,972.13</b>	<b>\$ 42,860,264.48</b>	\$20,000,000.00
Marketing - C&I	Actual Expenditures	\$ 1,062,330.79	\$ 1,017,500.37	\$ 1,091,768.06	\$ 1,075,000.00	\$2,500,000.00
Large Energy Users Program	Actual Expenditures	\$ 71,596.10	\$ 272,457.86	\$ 3,636,867.83	\$ 8,553,036.08	
	Committed Expenditures	\$ -	\$ 8,156,564.56	\$ 11,637,698.31	\$ 9,294,883.53	
	<b>Actual plus Committed Expenses</b>	<b>\$ 71,596.10</b>	<b>\$ 8,429,022.42</b>	<b>\$ 15,274,566.14</b>	<b>\$ 17,847,919.61</b>	\$8,000,000.00
<b>Sub-Total: C&amp;I EE Programs</b>	<b>Actual Expenditures</b>	<b>\$ 50,068,865.60</b>	<b>\$ 56,371,306.39</b>	<b>\$ 68,770,375.86</b>	<b>\$ 74,064,531.08</b>	
	<b>Committed Expenditures</b>	<b>\$ 57,034,038.00</b>	<b>\$ 78,579,620.89</b>	<b>\$ 90,572,058.13</b>	<b>\$ 96,643,271.05</b>	
	<b>Actual plus Committed Expenses</b>	<b>\$ 107,102,903.60</b>	<b>\$ 134,950,927.28</b>	<b>\$ 159,342,433.99</b>	<b>\$ 170,707,802.12</b>	<b>\$78,766,000.00</b>

### 3.2 CHP-Fuel Cell Program

In FY14, participation in the CHP-Fuel cell program was minimal. As of the end of January 2014, only \$1.1 million had been expended and \$5.2 million committed against a FY14 budget of almost \$38 million. Staff has heard from stakeholders that there are two primary causes: that repeated budget lapses have eroded market confidence and participation levels; and that many potential applicants were awaiting the design and eligibility requirements of the Energy Resilience Bank (ERB).

Staff anticipates that the ERB will commence operation in FY15 and will provide attractive financing options and grants for critical facilities, public entities, and non-profit hospitals. While ERB program details are still under development, as of this writing, projects that are eligible for ERB financing and rebates/grants would be ineligible for NJCEP rebates.

In response to stakeholder comments, Staff anticipates that the NJCEP will see renewed interest in its Small and Large Scaled CHP/Fuel Cell program in FY15, as entities that are ineligible for the ERB seek program incentives through the NJCEP. Staff is

recommending that \$25 million in new funding be allocated to the CHP-Fuel Cell program in FY15.

The following table shows actual spending levels and commitments for 2013 and estimated expenses and commitments as of the end of FY14, as well as the proposed FY15 funding level for the CHP-Fuel Cell program:

**Proposed Funding Level: CHP-Fuel Cell Program**

Program	2013	FY2014	Proposed FY15 Funding Level
<b>CHP-Fuel Cell Program: Large and Small</b>			
Actual Expenditures	\$ 1,119,011.92	\$ 3,456,026.56	
Committed Expenditures	\$ 5,242,956.00	\$ 9,796,810.00	
<b>Actual plus Committed Expenses</b>	<b>\$6,361,967.92</b>	<b>\$13,252,836.56</b>	<b>\$25,000,000.00</b>

**3.2 Renewable Energy Programs**

**SRP Program**

The SREC Registration Program (SRP) anticipates processing approximately 8,500 new registrations in 2014. Additionally, the SRP team anticipates processing 8,000 post-construction registration packages from existing and new registrants throughout 2014.

**New Jersey’s small wind rebate program** paid the final two rebate commitments in the program which ceased taking new commitments following the catastrophic failure of 3 wind systems located in New Jersey. The small wind rebate program was suspended in March 2011. A series of public stakeholder meetings on the development of a proper response to the failures were held prior to September 2011 when Board Staff contracted with the National Renewable Energy Lab (NREL) for a forensics study of the turbine failures. The final two installations provided rebates included a 50 kW turbine at the Borough of Ocean Gate Water Treatment Plant. And after a delay due to Sandy, a fifty (50) kW Endurance wind turbine was completed at a storage facility in Brick, NJ. These installations brought the number of wind installations to 42 projects totaling 9.65 MW, of which 7.5 MW is attributable to the five turbines totaling 7.5 MW installed at the Atlantic County Utility Authority Wind. In August 2013, NREL completed its investigation of the wind turbine failures and found that the failures were a result of manufacturing design flaws. NREL also provided suggestions for wind incentive program improvements should the Board decide to reinstitute the small wind rebate program. NREL’s report can be found at <http://www.njcleanenergy.com/renewable-energy/technologies/wind>

As part of the FY14 NJCEP program budget, the Board approved New Jersey’s membership in the Interstate Turbine Advisory Council (ITAC) managed by the Clean Energy States Alliance. ITAC, composed of state wind rebate program administrators, has developed criteria and processes for certifying small wind turbines for use in state

wind incentive programs. In 2013, ITAC developed a certification program for mid-sized wind turbines. Staff recommends maintaining membership in ITAC for FY15.

Also in 2013, the Renewable Energy Market Managers continued to receive anecdotal reports from former small wind rebate program participants of poor performance by their turbines. Staff has worked with Rutgers CEEEP to design a Request for Proposals for consultants to conduct an energy impact evaluation to study the performance and cost effectiveness of New Jersey's fleet of small wind turbines.

Staff recommends that no wind incentive program be offered in Fiscal Year 2015. Following the release of the energy impact evaluation, Staff anticipates reconvening the NJ Small Wind Working Group in FY15 to discuss the findings of the NREL forensics study and the anticipated results of an energy impact evaluation of the performance of the 42 turbines installed with NJCEP incentives, toward making a recommendation to the Board on the future of the small wind rebate program. Staff recommends that no wind incentive program be offered in FY15.

### **Biopower**

New Jersey's biopower rebate program has resulted in the installation of 18 projects totaling 31 MW. The biopower rebate structure and incentive approach has not seen significant change since they were first developed by the utilities in 2001. Projects were slow to develop and to complete in a timely fashion, often seeking extensions of their rebate commitments.

In June 2013, the Board approved a stakeholder process to redesign the biopower incentive program and to determine incentive amounts through a competitive solicitation. Stakeholders were convened in the fall of 2013, and the Board approved the release of a biomass solicitation in February 2014 that offered up to \$2.5 million in incentives.

In March 2014, in order to gauge potential demand for biopower incentives in FY15, the Renewable Energy Market Managers issued a survey of market stakeholders. A total of 10 survey responses were received, with half of the respondents identifying themselves as "developers" and the remainder "client/end user". For the FY14 Solicitation, respondents advised they would be submitting seven projects with a combined capacity of 13.2 MW with incentive requests between \$7 and \$13.75 million. Ten projects were proposed for FY15 and eleven for FY16. Survey respondents projected demand for incentives over the next three years for 5 to 10 projects at 20 to 25 MW. Respondents felt that incentives should cover 25% of total project costs on average, with 5 to 7 years being the consensus for a reasonable payback period. Eighteen months was the most common answer for completion time, with 25-50% of that period allocated for permitting, interconnection and inspections. Four respondents recommended annual budgets in the \$3-\$5 million range; the others ranged from \$20-\$100 million.

According to the Market Managers, it was apparent from the survey responses that a significant number of the proposed projects were not realistic. A number of survey respondents identified a need to commingle biogas with natural gas to improve the

economics of their proposals. Based on the results of the survey and the stakeholder process used to develop the FY14 solicitation, Staff recommends that a biopower incentive program budget be increased to \$3 million.

### **Energy Storage**

For the first time, in the FY14 CRA, the Board approved an offer of incentives designed to develop a market for technologies which store electricity from renewable energy sources. The Board directed Staff to convene a stakeholder process to design the REIP Energy Storage incentive program and to provide incentives through a competitive solicitation. Since September 2013, Staff has convened stakeholder meetings and issued straw proposals seeking input into the development of a solicitation for energy storage systems installed as part of a renewable energy system.

In February 2014, the RE Market Manager issued a survey intended to gauge interest in the program. There were 19 responses to the survey with 13 respondents identifying themselves as developers. For the FY14 solicitation, survey respondents anticipated proposing a total of 38 projects. Respondents identified the commercial and industrial (“C&I”) market sector as the predominant end-user of renewable electricity storage applications, followed by the public and government sector. There was little consistency in the respondent’s expression of capacity of the systems in kW and kWh.

Survey respondents estimated 50 projects were likely to seek incentives in FY15 and 57 projects in FY16, with C&I and Public and Government the two largest market sectors. The most commonly estimated incentive was \$500,000 and the most common project completion time was 12 months. Frequency regulation and emergency back-up was the most frequently mentioned purpose for installing a renewable electricity storage system, while load shifting and emergency back-up were cited as secondary purposes.

Respondents overwhelmingly named lithium-ion batteries as the technology with the highest expected market penetration. Survey respondents estimated that the number of projects to be installed over the next three years from 20 to several thousand. Similarly, survey respondents’ estimate of the appropriate per kW cost of a renewable electricity storage system ranged from \$1.50 to several thousand dollars. Appropriate incentive levels averaged 30% of project cost, while 5 years was most frequently cited as a reasonable payback period. Survey respondents equally chose 6, 12 and 18 months as an appropriate completion time, with 25% of that time allocated for permitting, interconnection and inspections. Most respondents felt there should be no minimum or maximum electricity storage discharge time mandated for incentive eligibility. Finally, survey respondents proposed budget requirements from \$2 million to \$200 million per year, with several respondents advising \$20 million as an appropriate budget amount.

Based on stakeholder input from meetings and responses to the survey, the Market Manager is in the process of developing a revised proposal for the first competitive solicitation for REIP renewable electricity storage incentives. Staff anticipates that the first solicitation will be issued in early FY15 with an offering of \$3 million.

### Proposed FY15 RE Funding Level

Staff proposes \$9.6 million in new funding for the renewable energy programs that includes the following components:

1. \$200,000 to fund consultants to review offshore wind applications. These funds are expected to be reimbursed through application fees.
2. \$3.4 million for SREC Registration Program administration
3. \$3 million to fund one or more biopower project solicitation(s)
4. \$3 million to fund one or more energy storage project solicitation(s)

The following table shows actual spending levels and commitments for the years 2011-2013, estimated expenses and commitments as of the end of FY14, and proposed FY15 funding level by program for the renewable energy programs:

### Proposed FY15 Funding Level: RE Programs

New Jerseys Clean Energy Program						
Actual and Committed Expenses for 2011 through Fiscal Year 2014						
Program		2011	2012	2013	FY2014	Proposed FY15 Funding Level
<b>RENEWABLE ENERGY PROGRAMS</b>						
Customer On-Site Renewable Energy (CORE)	Actual Expenditures	\$ 13,139,812.21	\$ 3,940,353.82	\$ 96,852.00		
	Committed Expenditures	\$ 6,045,121.40	\$ 96,852.00	\$ -		
	<b>Actual plus Committed Expenses</b>	<b>\$ 19,184,933.61</b>	<b>\$ 4,037,205.82</b>	<b>\$ 96,852.00</b>		
Clean Power Choice	Actual Expenditures	\$ 29,209.40	\$ 28,529.94	\$ -		
	Committed Expenditures	\$ 2,633,211.00	\$ 3,668,411.63	\$ 1,768,630.37	\$ 350,800.70	\$200,000.00
Offshore Wind	Actual Expenditures	\$ 2,633,211.00	\$ 3,668,411.63	\$ 1,768,630.37	\$ 350,800.70	\$200,000.00
	Committed Expenditures	\$ 8,437,042.00	\$ 1,768,630.37	\$ -	\$ -	
	<b>Actual plus Committed Expenses</b>	<b>\$ 11,070,253.00</b>	<b>\$ 5,437,042.00</b>	<b>\$ 1,768,630.37</b>	<b>\$ 350,800.70</b>	
Renewable Energy Program: Grid Connected (REDI)	Actual Expenditures	\$ -	\$ -	\$ -	\$ -	
	Committed Expenditures	\$ 3,856,320.00	\$ 3,856,320.00	\$ 256,320.00	\$ 256,320.00	
	<b>Actual plus Committed Expenses</b>	<b>\$ 3,856,320.00</b>	<b>\$ 3,856,320.00</b>	<b>\$ 256,320.00</b>	<b>\$ 256,320.00</b>	
Renewable Energy Incentive Program	Actual Expenditures	\$ 21,336,854.39	\$ 5,338,009.05	\$ 3,322,347.26	\$ 6,759,084.25	\$9,400,000.00
	Committed Expenditures	\$ 5,152,540.50	\$ 7,223,057.70	\$ 11,283,055.00	\$ 11,373,700.00	
	<b>Actual plus Committed Expenses</b>	<b>\$ 26,489,394.89</b>	<b>\$ 12,561,066.75</b>	<b>\$ 14,605,402.26</b>	<b>\$ 18,132,784.25</b>	
Edison Innovation Clean Energy Fund (CST)	Actual Expenditures	\$ 1,824,234.60	\$ 1,170,575.11	\$ 431,448.80	\$ 46,323.27	
	Committed Expenditures	\$ 1,831,041.40	\$ 660,466.28	\$ 216,198.42	\$ -	
	<b>Actual plus Committed Expenses</b>	<b>\$ 3,655,276.00</b>	<b>\$ 1,831,041.39</b>	<b>\$ 647,647.22</b>	<b>\$ 46,323.27</b>	
<b>TOTAL RENEWABLE ENERGY PRO</b>	<b>Actual Expenditures</b>	<b>\$ 38,963,321.60</b>	<b>\$ 14,145,879.55</b>	<b>\$ 5,619,278.43</b>	<b>\$ 7,156,208.22</b>	
	<b>Committed Expenditures</b>	<b>\$ 25,322,065.30</b>	<b>\$ 13,605,326.35</b>	<b>\$ 11,755,573.42</b>	<b>\$ 11,630,020.00</b>	
	<b>Actual plus Committed Expenses</b>	<b>\$ 64,285,386.90</b>	<b>\$ 27,751,205.90</b>	<b>\$ 17,374,851.85</b>	<b>\$ 18,786,228.22</b>	<b>\$9,600,000.00</b>

### 3.4 EDA Programs

Staff is proposing a continuation of EDA's Clean Energy Manufacturing Fund and Green Growth Fund. Both programs seek to promote the commercialization and development of energy efficient and renewable energy technologies in New Jersey and create and retain jobs. While management of EDA's Large CHP program was transferred to Staff in FY14, EDA's budget continues to include funding to pay CHP-FC commitments made by EDA before the transfer.

The following table shows actual spending levels and commitments for the years 2011-2013, estimated expenses and commitments as of the end of FY14, and proposed FY15 funding level for the EDA programs:

## Proposed FY15 Funding Level: EDA Programs

EDA PROGRAMS		2011	2012	2013	FY2014	Proposed FY15 Funding Level
Program						
Edison Innovation Clean Energy Manufacturing Fund (CEMF)	Actual Expenditures	\$ 5,915,017.00	\$ 1,199,242.00	\$ 1,553,032.96	\$ 4,357,064.72	
	Committed Expenditures	\$ 6,475,983.00	\$ 4,538,483.00	\$ 2,687,219.38	\$ 6,887,219.38	
	<b>Actual plus Committed Expenses</b>	<b>\$ 12,391,000.00</b>	<b>\$ 5,737,725.00</b>	<b>\$ 4,240,252.34</b>	<b>\$ 11,244,284.10</b>	\$4,500,000.00
Edison Innovation Green Growth Fund (EIGGF)	Actual Expenditures	\$ 60,000.00	\$ 867,542.00	\$ 2,907,469.34	\$ 1,931,570.68	
	Committed Expenditures		\$ 1,713,200.00	\$ 1,070,000.00	\$ 1,070,000.00	
	<b>Actual plus Committed Expenses</b>	<b>\$ 60,000.00</b>	<b>\$ 2,580,742.00</b>	<b>\$ 3,977,469.34</b>	<b>\$ 3,001,570.68</b>	\$3,000,000.00
EE Revolving Loan Fund (EERLF)	Actual Expenditures	\$ 360,000.00	\$ 270,000.00			
	Committed Expenditures		\$ -			
	<b>Actual plus Committed Expenses</b>	<b>\$ 360,000.00</b>	<b>\$ 270,000.00</b>			
Large Scale CHP/Fuel Cells	Actual Expenditures		\$ 494,241.98	\$ 2,644,369.34	\$ 2,581,670.68	
	Committed Expenditures		\$ 9,128,100.00	\$ 5,148,960.00	\$ 6,179,472.00	
	<b>Actual plus Committed Expenses</b>		<b>\$ 9,622,341.98</b>	<b>\$ 7,793,329.34</b>	<b>\$ 8,761,142.68</b>	
<b>TOTAL EDA PROGRAMS</b>	<b>Actual Expenditures</b>	<b>\$ 6,335,017.00</b>	<b>\$ 2,831,025.98</b>	<b>\$ 7,104,871.64</b>	<b>\$ 8,870,306.08</b>	
	<b>Committed Expenditures</b>	<b>\$ 6,475,983.00</b>	<b>\$ 15,379,783.00</b>	<b>\$ 8,906,179.38</b>	<b>\$ 14,136,691.38</b>	
	<b>Actual plus Committed Expenses</b>	<b>\$ 12,811,000.00</b>	<b>\$ 18,210,808.98</b>	<b>\$ 16,011,051.02</b>	<b>\$ 23,006,997.46</b>	\$7,500,000.00

### 3.5 NJCEP Administration

NJCEP Administration funds the following activities:

1. OCE Staff and Overhead: OCE Staff salaries related to the NJCEP plus incidentals such as travel
2. Program Coordinator services: Fees paid to AEG to provide Program Coordinator services including maintaining IMS, regulatory and financial reporting, quality assurance, budgeting, regulatory support, dispute resolution, maintenance of the NJCEP web site, and marketing coordination
3. Memberships: annual memberships for organizations such and the Consortium for Energy Efficiency (CEE) and the Design Lights Consortium (DLC) which support NJCEP programs
4. Contract with CEEEP for evaluations/studies (see sections 2.1 and 2.2)
5. State-procured evaluation studies (see section 2.2)
6. Clean Energy Business website
7. Sustainable Jersey

In FY15, the OCE will continue its partnership with Sustainable Jersey under the structure already established in the FY14 contract. Resources have been rebalanced to address ESIP and NJCEP needs and priorities, especially in light of the launch of SJ's new schools certification program. In FY15, Sustainable Jersey aims to double the number of energy-related action items in its certification programs, and extend the market target from 565 municipalities to an additional ~2,500 schools.

The FY15 deliverables for Sustainable Jersey are organized into four work areas that directly support the ongoing delivery, growth, and improvement of the NJCEP.

- **Operations and Program Coordination:** basic operation of the energy elements of the Sustainable Jersey program, including implementation of the certification process, direct "help desk" support, updates and maintenance of the website and database, delivery of the small grants program, and the regional hub development program. This work item includes ongoing participation in public meetings and working groups as appropriate.

- **Education and Outreach:** Continued use of the Sustainable Jersey website for promotion of the program, and as a resource for NJCEP and related incentives. Ongoing communications, including weekly email blasts, quarterly newsletters, and promotion through social media. Continued promotion of the NJCEP at a minimum of 15 events, and delivery of at least 6 workshops, panels, or seminars, including participation in the annual NJ League of Municipalities conference. Sustainable Jersey staff will also participate in at least 4 outside events on clean energy related topics.
- **Municipal Program Development:** Continued management and support of the Sustainable Jersey Energy Task Force, and ongoing going maintenance and enhancement of the municipal energy action portfolio. Complete two research projects that support development program activities, and participate in BPU strategic planning efforts as requested.
- **School Program Development:** Complete the initial development of the Sustainable Jersey for Schools energy action portfolio, and support its launch in October 2014. A new website for the schools program will be launched, and the program will be promoted at the NJ School Board Association conference in October 2014.

The following table shows actual spending levels and commitments for the years 2011-2013, estimated expenses and commitments as of the end of FY14, and proposed FY15 funding level for each activity in the NJCEP Administrative budget:

### Proposed FY15 Funding Level: NJCEP Administration

Program		2011	2012	2013	FY2014	Proposed FY15 Funding Level
<b>OCE ADMINISTRATION AND OVERHEAD</b>						
OCE Staff and Overhead	Actual Expenditures	\$ 1,393,247.55	\$ 3,281,363.16	\$ 2,164,143.57	\$ 3,076,659.54	\$2,300,000.00
Program Coordinator	Actual Expenditures	\$ 1,872,038.25	\$ 1,922,575.65	\$ 1,887,875.10	\$ 1,862,870.58	\$1,900,000.00
<b>Sub-Total: OCE ADMINISTRATION AND OVERHEAD</b>	<b>Actual Expenditures</b>	<b>\$ 3,265,285.80</b>	<b>\$ 5,203,938.81</b>	<b>\$ 4,052,018.67</b>	<b>\$ 4,939,530.12</b>	<b>\$4,200,000.00</b>
<b>MEMBERSHIPS-DUES</b>						
Clean Energy States Alliance	Actual Expenditures	\$ -				
Consortium for Energy Efficiency	Actual Expenditures	\$ 131,196.00				
Sponsorships	Actual Expenditures	\$ -	\$ -	\$ 83,179.38	\$ 100,000.00	\$200,000.00
<b>Sub-Total: MEMBERSHIPS-DUES</b>	<b>Actual Expenditures</b>	<b>\$ 131,196.00</b>	<b>\$ -</b>	<b>\$ 83,179.38</b>	<b>\$ 100,000.00</b>	<b>\$200,000.00</b>
<b>OCE EVALUATION AND RELATED RESEARCH</b>						
Rutgers-CEEEP	Actual Expenditures	\$ 387,802.07	\$ 367,270.15	\$ 725,092.60	\$ 1,884,236.87	\$1,000,000.00
Funding Reconciliation	Actual Expenditures		\$ 17,455.00	\$ -		\$50,000.00
O&M Scoping Study/Online Academy	Actual Expenditures	\$ 391,097.89				
Program Evaluation	Actual Expenditures	\$ 156,293.10	\$ -	\$ -	\$ 1,000,000.00	\$3,000,000.00
<b>Sub-Total: OCE EVALUATION AND RELATED RESE</b>	<b>Actual Expenditures</b>	<b>\$ 935,193.06</b>	<b>\$ 384,725.15</b>	<b>\$ 725,092.60</b>	<b>\$ 2,884,236.87</b>	<b>\$4,050,000.00</b>
<b>OCE MARKET AND COMMUNICATIONS</b>						
Outreach and Education/Community Partner Grants	Actual Expenditures	\$ -	\$ 60,209.53	\$ -	\$ 62,562.78	
Clean Energy Business Web Site	Actual Expenditures	\$ -	\$ -	\$ -	\$ 60,000.00	\$60,000.00
Sustainable Jersey	Actual Expenditures			\$ 674,996.34	\$ 1,001,357.94	\$500,000.00
DCA RE Firefighter Training	Actual Expenditures			\$ -	\$ 35,000.00	
<b>Sub-Total: OCE MARKET AND COMMUNICATIONS</b>	<b>Actual Expenditures</b>	<b>\$ -</b>	<b>\$ 60,209.53</b>	<b>\$ 674,996.34</b>	<b>\$ 1,158,920.72</b>	<b>\$560,000.00</b>
<b>TOTAL NJCEP ADMINISTRATION</b>	<b>Actual Expenditures</b>	<b>\$ 4,331,674.86</b>	<b>\$ 5,648,873.49</b>	<b>\$ 5,535,286.99</b>	<b>\$ 9,082,687.71</b>	<b>\$9,010,000.00</b>

### 3.6 Energy Resilience Bank

As per section 2.3 above, “Assessing the Impacts of Superstorm Sandy – Resiliency and the ERB”, Staff recommends an ERB funding level of \$30 million in SBC funds for FY15.

### 3.7 State Energy Efficiency Projects and Utility Costs

Governor Christie’s proposed 2015 State Budget proposed \$68.2 million of NJCEP be allocated to the following State energy efficiency projects and utility costs:

State Utility Costs	\$42,500,000
DEP Office of Sustainability and Green Energy	\$3,700,000
State Energy Efficiency Projects	\$9,200,000
NJ Transit Utility Costs	\$12,889,000
Total	\$68,289,000

The expenditure for state utility costs and NJ Transit utility costs recognizes that the State’s EE initiatives extend beyond the BPU. Through energy efficiency efforts implemented by sister agencies, the office of Sustainability and Green Energy in DEP, the State conducts valuable research on clean energy technologies. Funding SAGE is consistent with EDECA in that a goal of SAGE is to accelerate the transition to a clean energy economy. Specifically, SAGE aims to “speed deployment of solar energy, offshore wind, sustainable biomass, geothermal, alternative fuels and vehicles, and innovative technologies like energy storage, fuel cells and tidal energy.” By supporting SAGE, the NJCEP is furthering its commitment to EE and RE programs. BPU will enter into an MOU with DEP concerning use of the funds, including but not limited to program coordination. Likewise, NJ Transit aims to implement strategic energy efficiency initiatives to lower utility costs. Such efforts have a direct impact on utility costs and should be encouraged.

### 3.8 Energy Savings Goals

Staff’s CRA Straw Proposal dated June 3, 2013 included energy savings goals based in part upon a market potential study performed by EnerNOC Utility Solutions Consulting, a benchmarking analysis performed by AEG, and other factors such as historic program savings. Please refer to the June 3, 2013 Straw Proposal for additional details.

The following table shows the FY14 energy savings goals for the EE programs that were included in Honeywell and TRC’s FY14 compliance filings and the proposed energy savings goals for FY15:

#### Proposed Annual Energy Savings Goals

Program	FY14 Goals		FY15 Goals	
	MWh	DTherms	MWh	DTherms
Residential EE Programs	257,299	657,611	285,000	725,000
C&I EE Programs	261,066	653,358	290,000	725,000
Total EE	518,365	1,310,969	575,000	1,500,000

In addition to the energy savings goals set out above, Staff recommends that the NJCEP set the following FY15 goals for the RE, EDA and CHP-Fuel Cell Programs:

- Issue approvals for 10 MW of biomass projects

- Issue approvals for 3 to 6 MW of renewable energy storage projects
- Approved 20 MW of CHP-Fuel Cell applications
- Approve 1 CEMF and 3 GGF projects

## 4.0 Staff Recommendations

The following table summarizes the FY15 funding levels proposed by Staff above:

<b>Proposed FY15 Funding Level</b>	
<b>Program</b>	<b>Proposed FY15 Funding Level</b>
Energy Efficiency	\$195,266,000.00
CHP-FC	\$25,000,000.00
Renewable Energy	\$9,600,000.00
EDA	\$7,500,000.00
NJCEP Administration	\$9,010,000.00
State EE Projects and Utility Costs	\$68,289,000.00
ERB	\$30,000,000.00
<b>Proposed FY15 Funding Level</b>	<b>\$344,665,000.00</b>

### **Proposed FY15 Program Planning Goals**

In response to current circumstances and the various open issues discussed in this Straw Proposal, in addition to the funding levels recommended above, Staff recommends the following planning goals for FY15:

1. With Treasury, issue a new RFP for Program Administrator.
2. With Treasury, extend current the Market Manager and Program Coordinator contracts through the fiscal year and include contract modifications to update and improve marketing tactics, and transfer the Large CHP/FC Program and SBC Program administration to TRC.
3. Issue the recommendations report of the three working groups with short, mid- and long-term goals for improving program performance and redesigning the delivery and financing of state-wide energy efficiency programs.
4. Conduct the evaluations identified by the Evaluation Work Group and write RFPs for next round of evaluations so as to commence an on-going, continuous cycle of program evaluation.
5. Form a work group to review the portfolio of existing NJCEP programs to make recommendations for changes to existing programs and for new programs, including but not limited to, Residential Renovation EE, Multi-Family EE, Retro-Commissioning, and demand response programs that sell NJCEP energy savings into the PJM capacity market,
6. Concurrent with this review, and in support of the 2011 EMP objective to transition NJCEP EE programs to market-based financing, the work group will work with EDF's Investor's Confidence Project (ICP) to identify programs that can adopt industry protocols and processes necessary to develop investor-ready projects. Expand Outreach and Education – With the recent addition of staff, the Ombudsman's office is working with the NJSBA to create videos about NJCEP

and ESIP programs that will be distributed to all of NJ's school districts. Furthermore, Staff is working with the NJ Business Action Center and chambers of commerce throughout the State to focus on sector specific energy efficiency and provide leadership and education to those entities that qualify for ERB funds to implement energy efficiency while building resiliency. The initial focus will be on water and wastewater treatment plants, non-profit hospitals, and municipal entities that are deemed critical facilities. Finally, with the recent approval of a new NJBPU exhibit, the Office of the Ombudsman will participate in all State-wide conferences to increase NJCEP visibility and to provide information regarding broader BPU initiatives, such as energy aggregation, vegetation management, and resiliency.

7. Confer with NJ's peer states to inform the ongoing development of NJ's Energy Resiliency Bank to respond to EE market conditions and industry development, so as to serve as a future financing mechanism for the NJCEP.

### **5.0 Rate Impacts**

The proposed FY15 funding level recommended by Staff is a continuation of the current funding level. Therefore, there will be no incremental impact on rates. Any adjustments to rates necessary to collect the recommended funding level will be addressed in individual utility rate cases.