

New York State Energy Research and Development Authority (NYSERDA)

Operations and Accomplishments and Mission Statement and Performance Measurement Annual Report Fiscal Year Ended March 31, 2013

Pursuant to Public Authorities Law Section 2800(1)

NYSERDA

New York State Energy Research and Development Authority (NYSERDA) is a public benefit corporation created in 1975 under Article 8, Title 9 of the State Public Authorities Law. NYSERDA is governed by a board consisting of 13 members, including the Commissioner of the Department of Transportation, the Commissioner of the Department of Environmental Conservation, the Chair of the Public Service Commission, and the Chair of the Power Authority of the State of New York, who serve ex officio. The remaining nine members are appointed by the Governor of the State of New York with the advice and consent of the Senate and include, as required by statute, an engineer or research scientist, an economist, an environmentalist, a consumer advocate, an officer of a gas utility, an officer of an electric utility, and three at-large members.

MISSION AND VISION

NYSERDA's mission is to:

Advance innovative energy solutions in ways that improve New York's economy and environment.

NYSERDA's vision is to:

Serve as a catalyst – advancing energy innovation and technology, transforming New York's economy, empowering people to choose clean and efficient energy as part of their everyday lives.

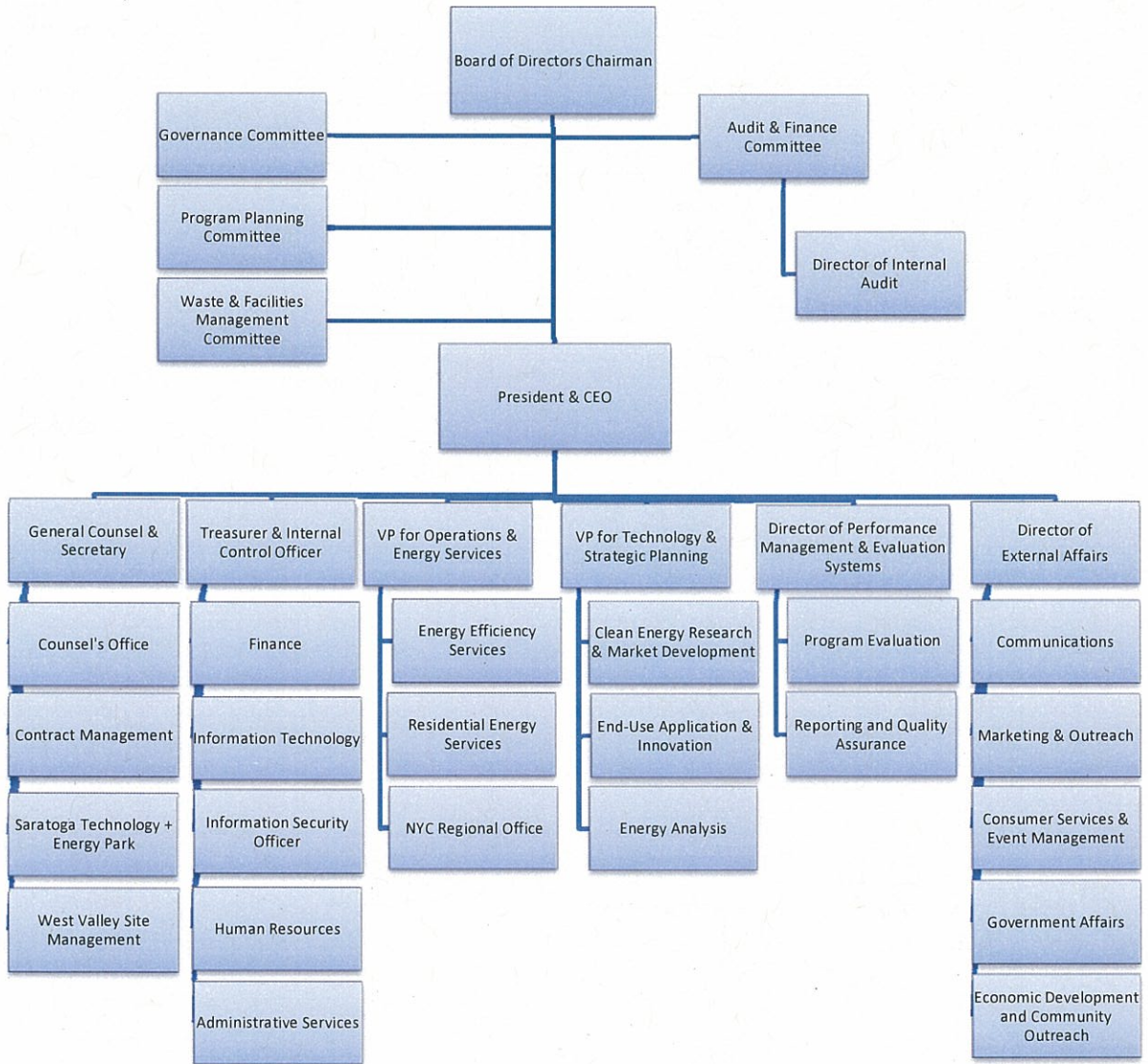
NYSERDA strives to facilitate change through the widespread development and use of innovative technologies to improve the State's energy, economic, and environmental wellbeing. NYSERDA's programs and services provide a vehicle for the State to work collaboratively with businesses, academia, industry, the federal government, the environmental community, public interest groups, and energy market participants.

OPERATIONAL CHANGES AND NEW INITIATIVES

Organizational Changes

During FY 2012-2013, NYSERDA instituted several organization changes. A new Department, Performance Management and Evaluation Systems (PMES), was created. Included in this change

was the establishment of a new group, Reporting and Quality Assurance, and the movement of the Evaluation group, previously located within Energy Analysis, into PMES. Additionally, several organizational units were shifted. Contracts, previously overseen by the Treasurer and the Saratoga Technology + Energy Park, previously overseen by the VP for Operations & Energy Services, are both now overseen by the General Counsel. Human Resources and Administrative Services, both previously overseen by the VP for Operations and Energy Services, are now overseen by the Treasurer.



New Initiatives

Green Bank - In the 2013 State of the State address, Governor Cuomo announced innovative proposals to further advance New York State's clean energy successes. Central to his energy

policies is a Green Bank, as a division of NYSERDA that will focus on unleashing private sector capital to spur investment in the clean energy economy. The goal is to use government resources to facilitate access to financing where capital is currently constrained for renewable energy and energy efficiency projects, and to improve the terms of such financing in an effort to stimulate increased demand.

NYSERDA currently offers certain financing programs, such as on-bill recovery financing and unsecured loans and mechanisms to leverage capital through secondary and primary capital markets through the GJGNY program, which provide a good foundation for the Green Bank. Opportunities exist to enhance some of these strategies and to implement new structures and approaches. Guiding principles for Green Bank activities will focus on strategies to address sectors or technologies where insufficient capital exists for energy efficiency and renewables, or where the terms of available capital are not attractive to drive demand.

Improving Resiliency – Recent natural disasters including Superstorm Sandy in 2012, Hurricane Irene and Tropical Storm Lee in 2011, and numerous ice storms and heat events have demonstrated the interconnection between our electrical, telecommunications, and public health and safety systems. In 2012, Governor Cuomo created three commissions to improve New York State’s emergency response and preparedness and offer recommendations to increase the strength and resilience of the State’s critical infrastructure against major weather events. In response to recommendations from the three Commissions, NYSERDA will be instituting several resiliency related initiatives, such as the support of distributed generation including CHP and PV, smart grid deployment, advanced buildings, liquid fuels distribution infrastructure, and product development and demonstration to allow more PV solar systems to operate independent of the electric grid during an outage.

Charge NY Initiative – In the 2013 State of the State address, Governor Cuomo announced the Charge NY Initiative, a major effort to lay the groundwork for introduction of up to 40,000 plug-in electric vehicles (PEVs) in New York by 2018. Charge NY aims to achieve this goal by making the State EV-ready including the installation of up to 3,000 public and workplace charging stations which will help alleviate the range anxiety that figures into a car buyer’s decision about purchasing an electric vehicle. The Charge NY Initiative will total \$50 million over five years, including funds from NYSERDA (approx \$8.5 million) and NYPA, as well as additional utility ratepayer-backed investments. This funding will be used to create the statewide network of public and workplace charging stations, provide PEV purchase incentives from investor-owned utilities, reform New York’s regulatory regime to make it easier for the private sector to invest in PEV infrastructure and to educate New Yorkers about the benefits of PEVs.

Developing Sustainable Communities – Set to begin in 2013, Phase II of the Cleaner, Greener Communities Program will provide funding on a competitive basis over several rounds for the implementation of specific projects that further the goals of the local sustainability plans and advance the State’s clean energy goals related to energy efficiency, renewable energy, and greenhouse gas emission reduction.

PROGRAM ACCOMPLISHMENTS

NYSERDA's activities are focused on achieving the five strategic outcomes shown in Table 1. NYSERDA's 2012 accomplishments are organized and reported in alignment with these five strategic outcomes.

Table 1: Mission, Vision, Outcomes

Mission	Advance innovative energy solutions in ways that improve New York's economy and environment.				
Vision	NYSERDA's vision is to serve as a catalyst – advancing energy innovation and technology, transforming New York's economy, and empowering people to choose clean and efficient energy as part of their everyday lives.				
Stakeholders	New York energy users, businesses and institutions engaged in the clean energy economy.				
Core Value	NYSERDA will serve as a source of objective, credible information.				
Goals / Outcomes	Efficient Use of Energy NYSERDA provides energy solutions that reduce the energy consumption and increase the energy efficiency of New York's residents and businesses.	Diverse / Renewable Energy Resources NYSERDA diversifies New York's portfolio of energy resources by growing renewable and distributed generation resources and reducing petroleum use.	Clean Energy Economy NYSERDA catalyzes economic growth by supporting technology and business innovation and by developing a skilled clean energy workforce.	A Cleaner Environment NYSERDA reduces the environmental impact of energy production and use.	Satisfied Customers NYSERDA is responsive to customer needs – delivering accurate and timely information, services and programs

The five accomplishments tables that follow (i.e., Tables 2 through 6) provide performance information for each of the five outcomes, including: data that describes NYSERDA's cumulative performance prior to 2011, NYSERDA's annual incremental performance for calendar years 2011 and 2012, and the total achievement for all years through December 2012. A target for calendar year 2013 is provided for performance measures, where possible. The quantitative performance measurement data are supplemented with a brief bulleted list of 2012 accomplishments.

While the listed performance measures are used to evaluate NYSERDA's progress toward goals, many of the measures are influenced by factors that are out of NYSERDA's direct control, such as, general economic conditions, changes in energy markets and prices, and various federal and state policy and funding decisions. The performance measures serve as general indicators of NYSERDA's progress in the context of these external factors.

Table 2: Performance Measures - Efficient Use of Energy

EFFICIENT USE OF ENERGY							
<i>NYSERDA provides energy solutions that reduce the energy consumption and increase the energy efficiency of New York's residents and businesses.</i>							
Performance Measures	Prior2 to 2011	CY 2011 Addition	TARGET CY 2012 Addition	ACHIEVE D CY 2012 Addition	Total at end of CY 2012	TARGET CY 2013 Addition	TARGET Total at end of CY 2013
Electricity³ (MWh) saved due to improved energy efficiency in New York's buildings and facilities. <i>(Comparison Point⁴: 2011 Statewide sales of electricity - 144,047 GWh)</i>	4,298 GWh	1,111 GWh	677 GWh	554 GWh	5,963 GWh	994 GWh	6,957 GWh
Fossil Fuels² (MMBtu) saved due to improved energy efficiency in New York's buildings and facilities. <i>(Comparison Point³: 2011 Statewide natural gas and petroleum usage - 1,053 million MMBtu)</i>	9.7 million MMBtu	1.7 million MMBtu	1.6 million MMBtu	1.5 million MMBtu	12.9 million MMBtu	2.0 million MMBtu	14.9 million MMBtu
Number of New York households served.⁵ <i>(Comparison Point⁶: 2011 Households in NYS - 8,119,364)</i>	297,400 Households	111,200 Households	97,900 Households	88,333 Households	496,933 Households	81,500 Households	578,433 Households
Number of commercial and industrial customers served. <i>(Comparison Point⁷: 2010 Business Establishments in NYS - 519,504)</i>	17,700 Customers	3,470 Customers	3,670 Customers	3,069 Customers	27,979 Customers	2,800 Customers	30,779 Customers
Energy Bill Savings⁸ -							
1) Annual direct energy bill savings realized by participating customers	\$804 million	\$211 million	**9	\$103 million	\$1,118 million	**8	Growth
2) Energy bill savings realized by participating customers per energy efficiency dollar spent by NYSERDA	\$2.3 dollars saved per dollar spent	N/A	**8	N/A	\$3 dollars saved per dollar spent	**8	**8

22 Performance measures began accumulating results in 1999 subsequent to the PSC's 1998 approval of the SBC Plan.

3 Electricity savings and fossil fuel savings have been revised from previously reported values to segregate Combined Heat and Power (CHP) contributions from NYSERDA's existing facilities and technical assistance programs and to correct data discrepancies discovered in EEPS 2011 Reporting.

4 NYSERDA, Patterns & Trends, Energy Information Administration (EIA)

5 Households served include ARRA appliance rebates and completed multi-family units, (i.e., units that have installed their full work scope - partial completions are not counted). Previously reported values for the number of households served have been revised to correct computational errors discovered subsequent to the submittal or the 2010 report.

6 <http://quickfacts.census.gov/qfd/states/36000.html>

7 The total number of establishments in New York State for 2010 was 519,504 as reported by the U.S. Census Bureau: State and County QuickFacts.

8 Energy bill savings reflects savings associated with System Benefits Charge funded New York Energy Smart and Energy Efficiency Portfolio Standard programs only.

9 The measure will be monitored and reported but a target has not been set. NYSERDA has elected not to establish a target in cases where the measure is a function of a parameter that cannot be reliably predicted (e.g., energy costs) or in cases where the metric is new to NYSERDA.

Table 2: Performance Measures - Efficient Use of Energy

<u>EFFICIENT USE OF ENERGY</u>							
<i>NYSERDA provides energy solutions that reduce the energy consumption and increase the energy efficiency of New York's residents and businesses.</i>							
Performance Measures	Prior2 to 2011	CY 2011 Addition	TARGET CY 2012 Addition	ACHIEVED CY 2012 Addition	Total at end of CY 2012	TARGET CY 2013 Addition	TARGET Total at end of CY 2013
Number of net additional jobs created as a co-benefit of NYSERDA's SBC-funded energy efficiency activities¹⁰	Not additive-annual analysis only	5,700 Jobs	**8	Not additive-annual analysis only	4,200 Jobs	**8	**8

Highlights of Additional "Efficient Use of Energy" Accomplishments:

- Through December 2012, NYSERDA achieved over \$5.8 billion dollars in cumulative energy bill savings through SBC and EEPS programs. For every \$1 in energy-efficiency funds spent by NYSERDA, \$3.0 in energy bill savings were realized as a result of the energy-efficiency improvements installed by customers participating in NYSERDA energy efficiency programs.
- Over the past 15 years, NYSERDA-administered energy efficiency programs have saved enough electricity to power 866,000 homes each year (i.e., 5,963,000 annual MWhs) and enough natural gas, propane, oil and other heating fuels to heat 165,385 homes each year (i.e., 12,900,000 annual MMBtu).
- Over 496,933 households and 27,979 commercial, industrial and institutional customers have reduced their energy use and annual energy bills by participating in NYSERDA programs.
- In 2012, 4,200 additional jobs were created as a co-benefit of NYSERDA's SBC and EEPS-funded energy efficiency activities.
- The American Council for an Energy-Efficient Economy (ACEEE) ranked New York 3rd in the nation in its 2012 State Energy Efficiency Scorecard, a benchmark for state efforts on energy efficiency policies and programs.
- ACEEE named NYSERDA's On-Bill Recovery Financing, New Construction and Existing Facilities programs "exemplary" for their effectiveness and innovation.

¹⁰ Net additional jobs created are estimated using the Regional Economic Models, Inc. (REMI) Policy Insight™ model, and reflect the net macroeconomic impacts stimulated by the program activities. The estimated jobs impacts are largely driven by the additional purchasing power that results from the electricity and fossil fuel savings to customers, and also include the macroeconomic impacts of program expenditures, customer expenditures, lower sales by energy providers, and the opportunity costs of the program funds collected from ratepayers. The impacts of utility revenue decoupling are also accounted for across all years. The job figures represent the number of jobs that are estimated to exist as a result of cumulative program activity through the program year, relative to the number of jobs that would have existed in that year in the absence of the energy efficiency programs. The estimates of net jobs created are based on assumptions for average distributions of residential and commercial customer spending, and could be somewhat higher or lower in a given year depending on specific spending patterns, such as the proportions applied to pay off debt or to re-invest in a business.

- U.S. Environmental Protection Agency (EPA) honored NYSERDA with its highest ENERGY STAR award, the 2013 Partner of the Year Sustained Excellence Award, for leading the field with its commitment to energy efficiency

Table 3: Performance Measures – Diverse / Renewable Energy

DIVERSE / RENEWABLE ENERGY							
<i>NYSERDA diversifies New York's portfolio of energy resources by increasing renewable and distributed generation resources and reducing petroleum use</i>							
Performance Measures	Prior11 to 2011	CY 2011 Addition	TARGET CY 2012 Addition	ACHIEVE D CY 2012 Addition	Total at end of CY 2012	TARGET CY 2013 Addition	TARGET Total at end of CY 2013
Electricity produced from renewable sources (<i>Comparison Point12: 2011 Statewide sales of electricity - 144,047 GWh</i>) –							
1) Electricity Production (GWh) delivered to wholesale power market from incentivized installations	1,941 GWh	253 GWh	976 GWh	553 GWh	2,748 GWh	631 GWh	3,379 GWh
2) Electricity Production (GWh) from on-site installations ¹³	53 GWh	38 GWh	121 GWh	61 GWh	152 GWh	118 GWh	270 GWh
Number of operating renewable resource installations	3,364 Installations	1,391 Installations	2,315 Installations	2,531 Installations	7,286 Installations	3,096 Installations	10,382 Installations
Electricity (GWh) produced from combined heat and power (CHP) sources	697 GWh	65 GWh	50 GWh	9.3 GWh	771.5 GWh	45.5 GWh	817 GWh
Number of operating CHP installations	79 Installations	23 Installations	19 Installations	12 Installations	114 Installations	25 Installations	139 Installations
Petroleum Displacement (Thousands of gallons) in transportation sector (<i>Comparison Point14: 2011 Total Petroleum Use in Transportation Sector – 6.9 billion gallons</i>)	60,733 thousand gallons	11,640 thousand gallons	11,669 thousand gallons	11,414 thousand gallons	83,787 thousand gallons	11,927 thousand gallons	95,714 thousand gallons

11 The electricity production from the renewable resource performance measures listed in Table 2 began accumulating results in 1999 subsequent to the Public Service Commission's (PSC) 1998 approval of the System Benefits Charge Operating (SBC) Plan, and more significantly in 2006 subsequent to the PSC's 2004 authorization of the Renewable Portfolio Standard. The CHP performance measures began accumulating results in 1999 subsequent to the Public Service Commission's (PSC) 1998 approval of the System Benefits Charge Operating (SBC) Plan. Petroleum Displacement results began accumulating as early as 2006 with more significant funding and benefits arriving in 2002.

12 NYSERDA, Patterns & Trends, Energy Information Administration (EIA)

13 Previously reported values for the electricity production for on-site generation have been revised to correct computational errors discovered subsequent to the submittal or the 2010 report.

14 NYSERDA, Patterns and Trends New York State Energy Profiles

Highlights of Additional “Diverse / Renewable Energy” Accomplishments:

- Through 2012, NYSERDA administered renewable energy programs installed renewable generation at over 7,000 locations across New York State, primarily under the Renewable Portfolio Standard (RPS) Program.
- Through 2012, NYSERDA delivered 2,748 GWh of electricity production to the wholesale power market from incentivized installations. NYSERDA also delivered 152 GWh of electricity production from on-site installations.
- NYSERDA is helping to develop 54 large-scale renewable generation projects representing more than 1,800 MW of renewable generation capacity; 50 facilities are operating, producing enough electricity to power 550,000 homes. The remainder of the projects are under design and construction.
- More customer-sited photovoltaic capacity is under development in the state in 2012 than in the entire prior decade.
- The Clean Energy States Alliance (CESA) awarded NYSERDA two State Leadership in Clean Energy (SLICE) Awards for programs promoting wind power and a clean-energy-focused business incubator program.
- To date, NYSERDA’s Combined Heat & Power (CHP) programs have led to the installation of 150 MW of distributed generation at 120 sites across New York State. Another 40 MW of projects are under design and construction.
- Through 2012, the use of nearly 84 million gallons of petroleum has been reduced in the transportation sector through introduction of alternative fuels and efficiency strategies for vehicles and transportation systems.

Table 4: Performance Measures – Clean Energy Economy

CLEAN ENERGY ECONOMY							
<i>NYSERDA catalyzes economic growth by supporting technology and business innovation and by developing a skilled clean energy workforce</i>							
Performance Measures	Prior15 to 2011	CY 2011 Addition	TARGET CY 2012 Addition	ACHIEVE D CY 2012 Addition	Total at end of CY 2012	TARGE T CY 2013 Addition	TARGE T Total at end of CY 2013
Impacts of Product Development Activities –	\$1,491 million	\$234 million	Growth	Data lags by one year	\$1,725 million (at end of CY 2011)	Growth	Growth
1) Annual product sales							
2) Number of products¹⁶ in the market as a result of previous technology and business development investment	201 Products	15 Products	20 Products	31 Products	247 Products	20 Products	267 Products
3) Change in GSP as a Result of R&D Product Development, expressed as a ratio of GSP impact to NYSERDA investment in R&D product development¹⁷	6.8 Benefit / Cost Ratio	6.8 Benefit / Cost Ratio	**18	Data lags by one year	N/A	**17	**17
4) Number of net additional jobs created as a result of the net macroeconomic activity stimulated by R&D product development activities¹⁹	1,440 Jobs	828 Jobs	**17	Data lags by one year	2,268 Jobs (at end of CY2011)	**17	**17

15 Product development performance measures listed in Table 3 reflect ten years of sales data (e.g., 2001-2010) and ten years of NYSERDA spending data (1998-2007). Dollars invested in business development activities and the number of businesses receiving financial support began accumulating results in 2006, subsequent to PSC's 2005 authorization of SBCIII. Number of workers trained began accumulating results in 2005.

16 The reported number of new products are from NYSERDA's incubator programs only. Efforts are underway to collect new product data from other program efforts and will be incorporated in future reports.

17 Gross State Product (GSP) impacts were estimated using a macroeconomic model called Policy Insight+, developed by Regional Economic Models, Inc. (REMI). GSP impacts include the effects of NYSERDA spending on product development activities; private monies spent on product development activities; and product sales that resulted from program activities. The negative GSP impact resulting from the collection of ratepayer funds was also incorporated.

18 The measure will be monitored and reported but a target has not been set. NYSERDA has elected not to establish a target in cases where the measure is a function of a parameter that cannot be reliably predicted (e.g., energy costs) or in cases where the metric is new to NYSERDA.

19 Net additional jobs created are estimated using the Regional Economic Models, Inc. (REMI) Policy Insight™ model, and reflect the net macroeconomic impacts stimulated by the program activities. The estimated jobs impacts are largely driven by the additional purchasing power that results from the electricity and fossil fuel savings to customers, and also include the macroeconomic impacts of program expenditures, customer expenditures, lower sales by energy providers, and the opportunity costs of the program funds collected from ratepayers. The impacts of utility revenue decoupling are also accounted for across all years. The job figures represent the number of jobs that are estimated to exist as a result of cumulative program activity through the program year, relative to the number of jobs that would have existed in that year in the absence of the energy efficiency programs. The estimates of net jobs created are based on assumptions for average distributions of residential and commercial

Table 4: Performance Measures – Clean Energy Economy

CLEAN ENERGY ECONOMY							
<i>NYSERDA catalyzes economic growth by supporting technology and business innovation and by developing a skilled clean energy workforce</i>							
Performance Measures	Prior15 to 2011	CY 2011 Addition	TARGET CY 2012 Addition	ACHIEVED CY 2012 Addition	Total at end of CY 2012	TARGET CY 2013 Addition	TARGET Total at end of CY 2013
5) Number of new clean energy products in development ²⁰	new metric in 2011	99 Products	100 Products	124 Products	N/A	135 Products	N/A
Funding leveraged ²¹ by NYSERDA's investment in business and technology product development	new metric in 2011	\$158 million	\$150 million	\$437 million	\$595 million	\$200 million	\$795 Million
Dollars invested by NYSERDA in technology and business development activities	\$130 million	\$36 million	\$36 million	\$44 million	\$210 million	\$40 million	\$250 Million
Number of clean energy businesses receiving financial support <i>(Comparison Point: 22 2010 NYSDOL Green Jobs Survey - ~14,500 clean energy firms in NYS)</i>	Not additive - some businesses are assisted for multiple years	188 businesses	180 businesses	227 businesses	Not additive - some businesses are assisted for multiple years	140 businesses	Not additive - some businesses are assisted for multiple years
Number of patents, UL Listing certifications, license agreements, copyrights and other knowledge certifications	new metric in 2011	14	Growth	32	46	Growth	Growth
Number of workers trained in clean energy sectors ²³	23,690 trainees	4,819 trainees	3,000 trainees	3,392 trainees	31,901 trainees	2,200 trainees	34,101 Trainees

customer spending, and could be somewhat higher or lower in a given year depending on specific spending patterns, such as the proportions applied to pay off debt or to re-invest in a business.

20 Because product development efforts take years, the number of products in development is not cumulative, it is the total products in development at that time. The metric serves as an indicator of the degree of private sector engagement in NYSERDA's R&D program.

21 Leveraged funding includes co-funding and subsequent follow-on private funding. Data collection for follow-on private funding is an ongoing effort. The reported values represent an incomplete data set that will be supplemented in future years.

22 The DOL and its research partners surveyed 20,000 businesses in late 2010 to determine the number and types of green jobs in the State, specifically companies that produce goods or services that increase energy efficiency or generate renewable energy. DOL results were gathered under four industry sectors - Construction, Component Manufacturing, Professional Services and Building Services. New York State Department of Labor. *New York State Green Jobs Survey*. 2010.

23 Number of workers trained is a count of the occupied seats at training sessions. A worker that attends more than one training session will be counted more than once.

Highlights of Additional “Clean Energy Economy” Accomplishments

- As a result of NYSERDA’s technology and business development investments, there are over 200 new and improved clean energy products in the market, in all end-use energy sectors, from high-efficiency furnaces, to advanced lighting controls and hybrid electric buses.
- NYSERDA has invested \$210 million dollars in business and technology development activities. An additional \$595 million in funds has been leveraged by NYSERDA’s investment in business and technology product development.
- For every dollar invested by NYSERDA in product development, New York State realized approximately \$6 in statewide economic and environmental benefits, including the creation of over 2,268 additional jobs at the end of 2011.
- NYSERDA’s incubator program, which supports six cleantech incubators, has assisted 100 clients and helped these startups raise \$79 million in private funds while creating 71 new products and 217 new jobs. This program was lauded in a 2012 Brookings Institution’s report, “Leveraging State Clean Energy Funds for Economic Development.” The report said NYSERDA’s six incubators have “been critical in helping New York create and retain the types of companies that form the bedrock of a clean energy economy.”
- ACEEE named NYSERDA “an outstanding model of an effective and influential research and development institution” in its 2012 State Energy Efficiency Scorecard
- Over 31,000 classroom participants received training through NYSERDA’s clean energy workforce development programs.
- NYSERDA continued to develop the Saratoga Technology and Energy Park (STEP), a 280-acre knowledge community that currently houses 15 clean energy and high tech tenant companies with over 200 employees.

Table 5: Performance Measures – A Cleaner Environment

A CLEANER ENVIRONMENT							
<i>NYSERDA reduces the environmental impact of energy production and use.</i>							
Performance Measures	Prior 24 to 2011	CY 2011 Addition	TARGET CY 2012 Addition	ACHIEVED CY 2012 Addition	Total at end of CY 2012	TARGET CY 2013 Addition	TARGET Total at end of CY 2013
CO₂ equivalent emission reductions due to NYSERDA's energy efficiency, renewable and diverse energy programs (annual tons)²⁵ <i>(Comparison Point: 2011 Annual NYS Power Sector Emissions²⁶ - 40 million short tons CO₂)</i>	3,165,424 annual tons	679,023 annual tons	828,059 annual tons	563,556 annual tons	4,408,003 annual tons	949,535 annual tons	5,357,538a annual tons
NO_x emission reductions due to NYSERDA's energy efficiency, renewable and diverse energy programs (annual tons)²⁴ <i>(Comparison Point: 2011 Annual NYS Power Sector Emissions²⁵ - 29,000 short tons NO_x)</i>	3,033 annual tons	653 annual tons	800 annual tons	542 Annual tons	4,228 annual tons	913 annual tons	5,141 annual tons
SO₂ emission reductions due to NYSERDA's energy efficiency, renewable and diverse energy programs (annual tons)²⁴ <i>(Comparison Point: 2010 Annual NYS Power Sector Emission²⁵ - 48,000 short tons SO₂)</i>	5,600 annual tons	1,248 annual tons	1,579 annual tons	1,039 annual tons	7,888 annual tons	1,731 annual tons	9,619 annual tons
Energy-related environmental policies informed by NYSERDA	new metric for 2011	See bulleted items in row below	List will be maintained	See bulleted items in	See bulleted items in row below	List will be maintained	List will be maintained

24 Performance measures listed in Table 4 began accumulating results in 1999 subsequent to the Public Service Commission's (PSC) 1998 approval of the System Benefits Charge Operating (SBC) Plan, with the renewable contribution becoming more significantly in 2006 subsequent to the PSC's 2004 authorization of the Renewable Portfolio Standard.

25 These emission reductions are associated with electric and fossil fuel energy efficiency measure savings and renewable generation.

26 NYS DEC 2011 Electric Generation Facility Emissions Data: Carbon Dioxide, Sulfur Dioxide and Nitrogen Oxides.

Table 5: Performance Measures – A Cleaner Environment

A CLEANER ENVIRONMENT <i>NYSERDA reduces the environmental impact of energy production and use.</i>							
Performance Measures	Prior24 to 2011	CY 2011 Addition	TARGET CY 2012 Addition	ACHIEVED CY 2012 Addition	Total at end of CY 2012	TARGET CY 2013 Addition	TARGET Total at end of CY 2013
reports / studies				row below			
<p>CY 2012</p> <ul style="list-style-type: none"> • NYSERDA led a collaborative effort with the NYS Department of Environmental Conservation (DEC) to transition from the NYS Acid Deposition Network to the National Atmospheric Deposition Network (NADP). This cost-saving transition enables direct comparison of data from NYS with other acid sensitive regions across the country, resulting in more robust data for regulation development. Also, as a result this transition and additional collaborative efforts with DEC and EPA, NYS has been selected as a pilot site for collecting data to inform the Secondary NOx/SOx National Ambient Air Quality Standards (NAAQS). Both of these efforts strengthen NYS's ability to comment on future federal air quality standards and control programs. • In 2012 NYSERDA initiated the development of a Biomass Heating Roadmap for New York State. It will evaluate critical technical, environmental, public health, forest health, economic, and policy issues; assess potential biomass fuel feedstocks and their availability; assess biomass combustion technologies and the implications of employing them; and identify critical actions to create a pathway that can: (1) stimulate the necessary research, investments and policies to build appropriate capacity; (2) maintain feedstock supplies; and (3) ensure public health and environmental protection. • The Renewable Fuels Roadmap and Sustainable Biomass Feedstock Supply Study for New York was updated in 2012. Previously, USDA Forest Service Inventory and Analysis (USDA FIA) data was collected once every 10 years. Now, a portion of the plots is measured each year and the entire set of plots is re-measured every five years. In addition, some changes were made to how tree biomass was estimated. • Few wastewater treatment plants (WWTPs) with anaerobic digestion beneficially use their biogas beyond process heating. To address this, NYSERDA and the Water Environment Research Foundation co-funded a study assessing the barriers to implementing combined heat and power (CHP) projects. The resulting report, titled "Barriers to Biogas Use for Renewable Energy" has subsequently been presented to dozens of utility representatives via four focus groups timed with industry conferences. Concurrently, Biogasdata.org was launched, creating a free, publicly available consensus data set describing current and potential future opportunities from existing anaerobic digestion systems at U.S. WWTPs. The ultimate goal is to expand and refine the data set to promote development of anaerobic digestion fueled CHP projects. <p>Several additional significant policies informed in 2012 are included as 2012 Accomplishments. Policies informed prior to 2012 are included in the Cleaner Environment table in the FY ending March 31, 2012 Operations and Accomplishments Report.</p>							

Highlights of Additional "Cleaner Environment" Accomplishments

- NYSERDA's energy efficiency and renewable energy programs reduce the need for fossil fuel production of electricity and avoid associated emissions. For 2012, this equates to eliminating over 4,220 annual tons of NOx, 7,880 annual tons of SO2, and nearly 4.4 million annual tons of CO2 into New York's air – equivalent to removing 881,000 cars from New York's highways.
- The Citizens Budget Commission (CBC) made note of New York's "strong leadership role" when it awarded its 2012 CBC Prize for Public Service Innovation to RGGI. New York was recognized for its role developing RGGI and its innovative approach to greenhouse gas emission reduction.

- Released at the end of 2011, NYSERDA's report, "Responding to Climate Change in New York State: An Integrated Assessment for Effective Climate Change Adaptation" (ClimAID) has since influenced numerous local climate action plans, sustainability plans, and comprehensive plans. The ClimAID report was also a significant contributing resource for the Commissions formed by Governor Cuomo in the aftermath of Superstorm Sandy.
- NYSERDA published a major report on the concentration of mercury in Adirondack loons.. The report provides science-based evidence for environmental harm of coal-powered electric generation – a major source of mercury emissions, and helps guide policies to regulate mercury on local, national and global scales.
- NYSERDA's Biomass Heating Program supported Brookhaven National Laboratory's development of an energy efficiency and emissions test method for advanced, 2-stage cord wood boilers with partial thermal storage. This test method is more similar to in-use operation than any other US, Canadian, or European test method, and captures start-up, steady-state, and burn out emissions. The test method was accepted by NYSDEC as an alternative test method for outdoor wood boilers under Part 247. This is a necessary and critical step in raising the energy and environmental performance of biomass heating technologies available to consumers in the NY market.
- NYSERDA launched the Cleaner Greener Communities Program and enabled the development of regional sustainability plans for the 10 Regional Economic Development Councils. More than 2,500 stakeholders participated in the planning process.
- NYSERDA's extensive maintenance and monitoring programs ensure the radioactive waste is safely contained at the Western New York Nuclear Service Center, protecting public health and the environment. The West Valley Site Management Program completed a two-year effort to repair soil erosion in a creek near the State-Licensed Disposal Area and NRC-Licensed Disposal Area. This work will keep the creek stable while decommissioning activities continue at the site.

Table 6: Performance Measures – Satisfied Customers

SATISFIED CUSTOMERS					
<i>NYSERDA is responsive to customer needs – delivering accurate and timely information, services and programs</i>					
Performance Measures	Prior to 2011	CY 2011	TARGET CY 2012	CY 2012	TARGET CY 2013
Contract processing time - Median time to process (weeks):					
1) Contracts Awarded from Solicitations;	31.5 weeks <i>(660 contracts)</i>	36.9 weeks <i>(209 contracts)</i>	28.3 weeks	32.6 weeks <i>(196 contracts)</i>	28.3 weeks
2) Open Enrollment Incentives;	14.6 weeks <i>(1,925 contracts)</i>	14.6 weeks <i>(2,681 contracts)</i>	13.1 weeks	14.6 weeks <i>(3,909 contracts)</i>	13.1 weeks
3) Direct Contracts	7.0 weeks <i>(210 contracts)</i>	3.9 weeks <i>(534 contracts)</i>	4.0 weeks	3.9 weeks <i>(405 contracts)</i>	4.0 weeks
4) Modifications / Task Orders	3.3 weeks <i>(2,352 contracts)</i>	2.9 weeks <i>(3,050 contracts)</i>	3.0 weeks	4.7 weeks <i>(2,042 contracts)</i>	4.0 weeks
Invoice payment –					
1) Number of invoices paid within 30 days	42,356 invoices	63,010 invoices	**27	67,285 invoices	**26
2) Percent of payments made within 30 days	99.98%	99.99%	100%	99.99%	100%

27 The measure will be monitored and reported but a target has not been set. NYSERDA has elected not to establish a target in cases where the measure is a function of a parameter that cannot be reliably predicted (e.g., energy costs) or in cases where the metric is new to NYSERDA.

MAJOR PROGRAM OPERATIONAL UNITS

Energy Efficiency Services (EES)

Helps nonresidential customers reduce their energy consumption, improve productivity, save money and make informed energy-related decisions. Organizations that qualify for EES technical and financial assistance include: manufacturers, healthcare facilities, commercial real estate owners and developers, data centers, colleges and universities, and retailers.

Residential Efficiency Services (RES)

Residential Energy Services (RES) helps residents become more energy efficient, save money and adopt energy-efficient products and advanced technologies. RES works with retailers, manufacturers, builders, contractors, and related stakeholders to improve the delivery of energy services and products to the residential sector. Programs for homeowners focus on a “whole house” approach to energy efficiency, providing comprehensive assessments of energy use and opportunities to reduce energy waste, as well as financial incentives for energy-saving home improvements. New construction programs provide support for continued growth of energy-efficient building practices. RES also supports: the growing clean energy workforce with training opportunities; incentives to promote the installation of photovoltaic and thermal energy systems; and energy-related K-12 curricula and professional development for teachers. To expand New York’s clean energy economy, RES programs influence all levels of the supply chain and create an infrastructure that spurs market transformation and a cleaner environment for all New Yorkers.

Multifamily Performance Program

The NYC Office manages the Multifamily Performance Programs (MPP) and supports implementation of EES and RES programs within the NYC region. MPP provides technical assistance and cash incentives to help low-income and market rate multifamily buildings reduce annual energy use. MPP promotes and facilitates relationships between independent, pre-qualified energy consultants and building professionals and New York multifamily property owners and managers. New York City staff devotes considerable effort to coordinating NYSERDA’s programs with those offered by Con Edison, New York City, and others. New York City staff promotes NYSERDA’s energy efficiency programs by working very closely with the Mayor’s office, the New York City Department of Buildings, and the New York City Department of Environmental Protection, and through participation on the New York City Energy Policy Task Force.

Clean Energy Research and Market Development (CERMD)

Clean Energy Research and Market Development accelerates the development and commercial introduction of emerging clean energy technologies in New York by supporting a range of technology development, business development, and market development activities. Clean energy technologies include wind, solar, biomass, marine, energy storage, advanced transportation technology, and environmental pollution control. The program also supports research to better understand and mitigate the environmental effects of energy production, including climate change.

End-Use Application and Innovation

End-Use Application & Innovation develops and advances technologies and renewable energy applications relevant to the building stock and industrial sectors where such activities occur on the customer side of the meter. These programs support technology innovation, but also business case and market development activities seen as crucial for commercial success. The ultimate goals are to increase the availability of options for deployment programs and New York markets as a whole.

Energy Analysis Program

Energy Analysis develops the State's energy policy planning and provides objective and timely data and analysis to energy-related decision-making by the Governor, Legislature, other State agencies, and NYSERDA management and staff.

Saratoga Technology + Energy Park® (STEP®)

Owned by the New York State Energy Research and Development Authority (NYSERDA), the Saratoga Technology + Energy Park® (STEP®) is a knowledge community with significant resources for companies in the clean-energy field looking to expand in New York's Tech Valley. A 280-acre site, STEP is located in Malta, New York, and is approved for 1.25 million square feet of office, research and development, and light manufacturing space while maintaining 77% green space. By creating a foundation for innovative clean-energy companies to collaborate, STEP is playing a pivotal role in the remarkable growth of the clean-energy economy in New York State.

West Valley Site Management Program

NYSERDA has a major environmental responsibility through its stewardship of the West Valley site in Cattaraugus County. NYSERDA's West Valley Site Management Program (WVSMP) works with the U.S. Department of Energy (DOE) to conduct the West Valley Demonstration Project (WVDP), a high-level radioactive waste solidification, decontamination, and decommissioning demonstration project. The unique state and federal partnership at West Valley was created by the U.S. Congress in 1980 through the passage of the West Valley Demonstration Project Act. The WVSMP is also responsible for the safe management of the remainder of the 3,300-acre Center, including the shut-down State-Licensed Disposal Area (SDA), a 15-acre disposal facility that contains 2.4 million cubic feet of radioactive waste that was disposed in the 1960s and 1970s.