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**OFFICE OF THE
NEW YORK STATE COMPTROLLER**

**DIVISION OF STATE
GOVERNMENT ACCOUNTABILITY**

**NEW YORK STATE
ENERGY RESEARCH AND
DEVELOPMENT
AUTHORITY**

**COMPLIANCE WITH
EXECUTIVE ORDER 111
REQUIREMENTS TO
PURCHASE POWER FROM
RENEWABLE SOURCES**

Report 2008-S-74

AUDIT OBJECTIVES

The objectives of this audit were to determine whether the New York State Energy Research and Development Authority (NYSERDA) is meeting the current 10 percent target for purchasing power from renewable sources, increasing to a 20 percent target level by 2010, as specified in Executive Order 111 (Order); and whether NYSERDA has taken appropriate actions to coordinate and assist other agencies' efforts to comply with the Order.

AUDIT RESULTS - SUMMARY

The Order was issued in June 2001 and requires that by 2005 all State agencies and certain public authorities, including NYSERDA, seek to purchase sufficient quantities of electricity produced by certain specified renewable technologies so that 10 percent of the overall annual electric energy consumption of the buildings they own, operate or lease would come from renewable sources. The target percentage increases to 20 percent by 2010. The agencies can acquire qualifying electric energy by generating it themselves, or by purchasing it either through their electrical supplier or through a third-party provider in the form of a Renewable Energy Certificate.

We found that NYSERDA has substantially exceeded the Order's 10 percent requirement. During its 2005-06 fiscal year, NYSERDA purchased more than 70 percent of its overall annual electric energy from renewable sources. In fiscal year 2006-07, it purchased 50 percent of its annual consumption from renewable sources. We also found NYSERDA submitted timely and accurate Annual Energy Reports for each year, detailing annual electrical consumption of over 700,000 kilowatt hours (kWhs). NYSERDA is already exceeding the 20

percent target for renewable energy procurements that goes into effect in 2010, and has an appropriate plan in place to continue to meet or exceed the requirements.

We also found that NYSERDA took appropriate actions to assist and coordinate the efforts of agencies affected by the Order, including assigning a program manager with direct responsibility for the effort, providing both written and electronic communications to affected agencies, and sponsoring several statewide training seminars and workshops. However, we also identified certain improvement opportunities that NYSERDA should consider when providing assistance to affected agencies.

In its role as program coordinator, we found NYSERDA did not issue an annual report summarizing Statewide energy reduction efforts and achievements towards the Order's goals for fiscal years 2002-03 or 2004-05. Periodic summary reports are an important tool to help policymakers monitor progress and maintain program momentum. We found reports were prepared for 2001-02, 2003-04, and 2005-06, and NYSERDA officials indicate staff are in the process of preparing the report for fiscal year 2006-07.

To assist NYSERDA in fulfilling its program coordinator role, the Order created the State Energy Efficiency Advisory Council (Advisory Council), where the President of NYSERDA serves as the Chair. The Advisory Council is supposed to meet on a regular basis, but no less than twice a year. However, we found that the Advisory Council did not always meet as required. In addition, although the Advisory Council issued guidelines to help affected State agencies achieve compliance with the requirements of the Order and revised them in December 2004, we found that affected agencies could be better served if the Advisory Council also

addressed the new and emerging issues that have arisen.

Our report contains six recommendations directed toward improving NYSERDA's efforts to comply with the Order. NYSERDA officials concurred with our recommendations.

This report, dated January 16, 2009, is available on our website at: <http://www.osc.state.ny.us>.

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BACKGROUND

Executive Order 111 (Order), issued by the Governor on June 10, 2001, sets out a broad initiative that directs State agencies and certain public authorities, including NYSERDA, to be more energy efficient and environmentally proactive. The Order is divided into individual sections, each addressing a specific energy-related or environmental initiative ranging from establishing broad energy efficiency goals to instituting energy efficient and environmentally sensitive practices. We have previously audited various agencies' efforts to implement certain sections of the Order, including the procurement of clean fuel vehicles and the purchase of energy efficient products. This audit addresses implementation of the section of the Order that requires agencies to purchase power from renewable sources.

Specifically, Section IV of the Order requires that by 2005 each covered agency should have sought to purchase sufficient quantities of energy from certain specified renewable

technologies so that 10 percent of its overall annual electric energy consumption of the buildings it owns, operates or leases would come from renewable sources. The target percentage increases to 20 percent by 2010. Guidelines issued by NYSERDA in December 2004 generally require covered agencies to apply these percentages against all facilities where their power is separately metered and billed, regardless of whether they own or lease the property. Eligible renewable technologies specified in the Order include power generated from wind, solar, thermal, photovoltaics (PV), sustainably managed biomass, tidal, geothermal, methane waste, and fuel cells.

In addition to being an agency covered by the Order, NYSERDA has been designated as the lead agency responsible for coordinating implementation and assisting other agencies to fulfill their responsibilities. To assist NYSERDA in this role, the Order created the Advisory Council, headed by the President of NYSERDA and composed of the heads of 13 other agencies and authorities. NYSERDA and the Advisory Council have developed guidelines that, among other things, interpret the requirements of the Order and specify criteria for periodic reporting and possible exemption of certain facilities or operations. In general, the guidelines allow affected agencies to acquire qualifying energy by generating it themselves or by purchasing it, either through their electrical supplier or through a third-party provider in the form of certificates referred to as Renewable Energy Credits. The guidelines also direct each affected agency, including NYSERDA, to designate a staff member to submit the Annual Energy Report to NYSERDA and to be used as a contact person regarding implementation of the Order. The guidelines also charge NYSERDA with the responsibility of developing an annual report summarizing Statewide energy reduction

efforts and achievements towards the Order's goals.

NYSERDA was established in 1975 by Article 8, Title 9 of the Public Authorities Law, and is involved in a number of energy-related activities. Its mission is to fund research for the development of new energy technologies and to expand the use of the State's indigenous and renewable energy resources, while reducing adverse environmental effects associated with energy production in use. Further, NYSERDA administers the New York Energy Smart program, which is funded by a system benefit charge for the electricity transmitted and distributed by the State's investor-owned utilities. The Energy Smart program provides energy efficiency services for low-income and other populations, funds research and development and other environmental protection activities. NYSERDA consumed more than 700,000 kWhs in fiscal years 2005-06 and 2006-07. NYSERDA has a budget of more than \$488 million with a workforce of over 250.

AUDIT FINDINGS AND RECOMMENDATIONS

Compliance with Order

We found that NYSERDA has procured substantially more than the Order's targeted level of 10 percent of renewable energy consumed and has a plan in place that should allow it to continue to substantially exceed the Order's increased target level of 20 percent in 2010. NYSERDA and the Advisory Council also have provided affected agencies with substantial assistance to facilitate compliance with the Order. We have identified several improvement opportunities that NYSERDA should consider when providing assistance to affected agencies and when reporting the State's overall progress in energy reduction

efforts and achievements towards the Order's goals.

Procurement of Renewable Energy

The Order requires State agencies and other affected entities, such as NYSERDA, to seek to procure 10 percent of their total electrical energy requirements by 2005 from renewable sources, and 20 percent from those renewable sources by 2010.

The Order specifies wind, solar, thermal, photovoltaics (PV), sustainably managed biomass, tidal, geothermal, methane waste, and fuel cells to be qualifying renewable sources. State agencies and other affected entities can purchase any combination of the qualifying renewable sources to meet the goals of the Order.

According to established guidelines, the entities can fulfill their renewable-power procurement obligations in the following ways:

- On-site generation of all renewable power requirements,
- A mix of on-site generation and open-market electricity, and
- Purchasing all renewable-power requirements from the open market.

NYSERDA's annual electrical consumption for fiscal years 2005-06 and 2006-07 was more than 700,000 kWhs. In 2003-04 NYSERDA began purchasing its renewable energy through National Grid, its electrical service supplier, by using a provider that supplies renewable energy to the power pool from various generation facilities.

We found 70 percent of the electricity consumed by NYSERDA during 2005-06 was generated by wind and biomass; substantially

exceeding the current requirement of 10 percent. For fiscal year 2006-07, we found more than 50 percent of NYSERDA's energy was generated by wind. In addition, NYSERDA complements its renewable energy purchases through on-site generation using a PV system installed in February 2007. This system generated about 2,000 kWhs annually, or less than 1 percent of NYSERDA's renewable energy. NYSERDA also installed an on-site hydrogen fuel cell system in 2006-07. The fuel cell is used only for emergency back-up power situations and demonstrational purposes.

NYSERDA also has adequate plans in place to meet and exceed the 20 percent goal for 2010. NYSERDA officials plan to continue to purchase 70 percent renewable energy each year through a Green-Up provider and to generate less than 1 percent of their electric needs through the on-site PV system. Given NYSERDA's current purchasing percentage of renewable energy, this is a reasonable plan to meet the Order's 20 percent requirement for fiscal year 2010.

Reporting Requirements

NYSERDA's guidelines require every State agency and other affected entities to submit an Annual Energy Report by December 1st following the close of each fiscal year. The first annual report was due December 1, 2002 for the period April 1, 2001 through March 31, 2002.

The purpose of the Annual Energy Report is for the agencies to demonstrate progress toward achieving the goals of the Order. State agencies and other affected entities are to report their total energy usage, electrical demand, and the amount of renewable power they purchase and generate on site. They are also required to report how much renewable energy they will need to purchase to meet the

20 percent renewable energy goal in 2010, as well as if they met the previous goal of 10 percent in 2005.

We found that NYSERDA prepared Annual Energy Reports for fiscal years 2005-06 and 2006-07 that were timely, accurate and in compliance with the Order. We verified the accuracy of these reports by tracing the reported total annual energy consumed, the total renewable energy purchased, and the breakdown of the renewable energy sources to vendor billing invoices. We also confirmed the on-site PV meter readings. We then compared these results to the Order's requirements to assess NYSERDA's compliance with the Order.

While the Order requires each affected agency to individually report its efforts on an annual basis, NYSERDA is also charged with the additional responsibility of developing an annual report summarizing Statewide energy reduction efforts and achievements towards the Order's goals. This annual report is to be made available to the Governor's Office, the Division of the Budget and all affected agencies to allow individual agencies and policymakers to monitor progress. We reviewed the annual Statewide reports since the inception of the Order and found that NYSERDA only issued the report in three of the five years for which it was due: 2001-02, 2003-04 and 2005-06. For fiscal years 2002-03 and 2004-05, NYSERDA did not issue a formalized report, but according to NYSERDA officials, they did share the information with the Governor's Office and publicly through presentations and seminars. NYSERDA is in the process of preparing the report for fiscal year 2006-07.

Periodic summary reports are an important tool to help policymakers monitor progress and maintain program momentum. It is therefore important that NYSERDA publish

this information annually so that performance can be measured and analyzed, and adjustments or support can be made to assist affected agencies reach the Order's goals.

Assisting Affected Agencies

The Order establishes NYSERDA as the agency responsible for coordinating the implementation of the Order and assisting each agency in fulfilling its responsibilities under the Order. The Order created the Advisory Council, which NYSERDA's President chairs, to assist NYSERDA in fulfilling its requirements. We found that NYSERDA has used various practices to provide assistance and guidance to affected agencies, including posting information on its web-site, conducting statewide training seminars and workshops, exchanging written correspondence and answering specific agency questions through e-mails and phone calls. Officials pointed out that NYSERDA often conducts specific training stemming from agency requests and that NYSERDA's project manager maintains regular contact with agencies to offer assistance and answer questions pertaining to the Order.

We confirmed that NYSERDA has been active in organizing various training seminars, workshops and meetings regarding the Order. In January 2002, NYSERDA conducted statewide meetings at three locations: New York City, Buffalo and Albany. These meetings consisted of an educational presentation for agencies to learn about both the Order and the availability of various financial incentives. During December 2004, NYSERDA co-hosted and sponsored a two-day workshop for all affected agencies concerning various ways to comply with the Order. In 2008, as a result of requests from several agencies, NYSERDA created three separate presentations covering various topics of energy conservation and efficiencies

pertaining to the Order. We verified the occurrence of the training seminars and workshops by obtaining copies of the announcements, agendas and presentations related to the training events and confirmed that they were attended by some of the affected agencies.

We also examined NYSERDA's communication efforts to determine if officials had corresponded with all affected agencies. Overall, we found that NYSERDA has sent an array of correspondence to as many as 154 agencies since 2001. However, we found that not every entity is always contacted. For example, only large agencies were sent letters reminding them to submit their 2006-07 Annual Energy Reports. Also, there is some question regarding precisely which entities must comply with the Order. NYSERDA officials stated that they rely on the Governor's web page to identify agencies (the Order refers to such agencies "...the heads of which are appointed by the Governor."). Although the web page is an informative source of entities providing State services, it is not necessarily an authoritative source to determine which State agencies and authorities must comply with Executive Orders. At the time of our audit, the list of contacts maintained by NYSERDA totaled 111, and included the Senate, the Assembly, the Attorney General and the State Comptroller, who are not subject to the Order. Notable agencies with officials appointed by the Governor that were missing from the list included the Developmental Authority of the North County, the Environmental Facilities Corporation, and the Governor's Traffic Safety Committee. While we recognize NYSERDA's efforts to correspond and provide guidance to agencies, we believe all covered agencies should be contacted. We recommend that NYSERDA seek clarification from the Governor's Office regarding which agencies are covered by the Order and then

ensure everyone gets all the guidance provided.

We also found that many agencies are not submitting the required Annual Energy Reports to NYSERDA. The Advisory Council's guidelines clearly direct affected agencies to submit reports to NYSERDA by December of each year. However, we found that 90 agencies submitted annual reports for fiscal year 2001-02, 43 agencies for 2002-03, 70 agencies for 2003-04, and 26 agencies for 2005-06 (information was not available for 2004-05 and 2006-07). NYSERDA needs to monitor the submission of these reports so that the information can be included in the annual report for Statewide energy reduction efforts and achievements. We found NYSERDA does not consistently follow up with affected agencies that do not submit their Annual Energy Reports. Officials indicate staff attempt to follow up on outstanding reports, but contend that the Order does not grant NYSERDA specific authority to enforce compliance. While NYSERDA may lack authority to compel agencies to report, it still has a responsibility to follow up with agencies that do not comply and should take actions to encourage compliance, such as including a list of delinquent agencies in its annual Statewide report to State policymakers.

Advisory Council

The Order requires that the Advisory Council meet regularly, but no less than twice a year, for the purpose of advising NYSERDA as to how it can best assist State agencies and other affected entities in achieving the goals of the Order. To determine if these meetings occurred, we obtained agendas and meeting minutes from NYSERDA officials, which included topics of discussion and, in some instances, presentations. We found that the Advisory Council met at least twice each year from 2001 through 2004, but only once

during 2005 and 2007 and not at all during 2006. We did find that the meetings that were held were well attended with over 90 percent representation by Council members. The Advisory Council should meet at least twice each year as directed by the Order to address the challenges of this emerging area.

Our audit found that the Advisory Council did advise NYSERDA in relation to the renewable energy requirements of the Order. For example, the Advisory Council was responsible for coordinating the development of the 2004 Green and Clean Guidelines. The guidelines set a framework that agencies can utilize for meeting the renewable power procurement component of the Order and established the reporting and exemption requirements for agencies to follow. However, these guidelines have not been revised since they were issued in 2004 and, accordingly, do not address several new and emerging issues that have arisen in more recent times.

Affected agencies would benefit if the Advisory Council and NYSERDA were to provide guidance addressing unique or emerging issues through addendums, bulletins or supplements to the guidelines. Specific issues we identified during this audit where agencies could benefit from additional guidance include: defining process loads eligible for exclusion under the Order, clarifying whether renewable energy used as process load should count towards the targeted level of renewable energy purchased, considering basic energy mixes which already include some level of renewable energy, and other unique property leasing or ownership issues that exist among individual affected agencies.

Recommendations

1. Annually prepare and make available to the Governor's Office, the Division of the Budget, and affected agencies the required report summarizing Statewide energy reduction efforts and achievements towards the Order's goals.
2. Seek clarification from the Governor's Office to develop a comprehensive listing of affected State agencies and authorities covered under the Order.
3. Ensure all affected State agencies and authorities covered under the Order, receive all guidance provided.
4. Monitor the submission of the Annual Energy Reports and follow up with State agencies and authorities that fail to submit timely and complete reports.
5. NYSERDA's President should convene meetings of the Advisory Council at least twice a year as required by the Order.
6. NYSERDA's President should consider utilizing the Advisory Council to provide additional guidance addressing emerging issues to help ensure that affected agencies are in compliance with the Order.

AUDIT SCOPE AND METHODOLOGY

The objectives of our audit were to determine if NYSERDA is in compliance with the Order by reporting their annual electrical energy consumption, and procuring at least 10 percent of its power from renewable sources in 2005, increasing to 20 percent in 2010; and to assess whether NYSERDA has taken appropriate actions to coordinate and assist other affected agencies' efforts to comply with the Order. Our audit period was from April 1, 2001 through March 31, 2007.

To accomplish our audit objectives, we analyzed the Order and interviewed NYSERDA officials to determine what steps were taken to comply with the Order. To verify the accuracy of the total annual energy and the renewable energy consumption reported by NYSERDA for State fiscal years 2005 through 2007, we traced this information back to the actual energy bills. In addition, we reviewed NYSERDA's contract for the purchase of its PV system and confirmed the actual PV meter readings. Further, we reviewed the annual Statewide reports issued by NYSERDA since the inception of the Order. We also analyzed the agenda and minutes of Advisory Council meetings. To assess the level of assistance provided to affected agencies, we reviewed relevant correspondence issued by NYSERDA, information on its web site, seminars and training sessions that it administered, and Annual Energy Reports that it received.

We conducted our performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

In addition to being the State Auditor, the Comptroller performs certain other constitutionally and statutorily mandated duties as the chief fiscal officer of New York State. These include operating the State's accounting system; preparing the State's financial statements; and approving State contracts, refunds, and other payments. In addition, the Comptroller appoints members to certain boards, commissions and public

authorities, some of whom have minority voting rights. These duties may be considered management functions for purposes of evaluating organizational independence under generally accepted government auditing standards. In our opinion, these functions do not affect our ability to conduct independent audits of program performance.

AUTHORITY

We performed this audit pursuant to the State Comptroller's authority as set forth in Article X, Section 5 of the State Constitution and Section 2803 of the Public Authorities Law.

REPORTING REQUIREMENTS

A draft copy of this report was provided to NYSERDA officials for their review and comment. Their comments were considered

in preparing this report, and are included as Appendix A.

Within 90 days after final release of this report, as required by Section 170 of the Executive Law, the President of New York State Energy Research and Development Authority shall report to the Governor, the State Comptroller, and the leaders of the Legislature and fiscal committees, advising what steps were taken to implement the recommendations contained herein, and where recommendations were not implemented, the reasons therefor.

CONTRIBUTORS TO THE REPORT

Major contributors to this report include Frank Houston, John Buyce, Bob Mainello, Thalia Melendez, Constance Walker and Clint Green.

APPENDIX A - AUDITEE RESPONSE



New York State Energy Research and Development Authority

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December 11, 2008

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123 William Street – 21st Floor
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RE: Reply to Audit Report 2008-S-74, Compliance with Executive Order 111 Requirements to Purchase Power from Renewable Sources

Dear Mr. Houston:

This letter is in reply to your draft audit report (2008-S-74) regarding whether NYSEERDA was meeting its requirements for purchasing power from renewable sources as specified in Executive Order 111, and whether NYSEERDA has taken appropriate steps to coordinate and assist other agencies' efforts to comply with the Executive Order. We are pleased that your report found NYSEERDA has substantially exceeded the Executive Order's requirement and that NYSEERDA had taken appropriate actions to assist and coordinate efforts with other affected agencies.

We concur with the recommendations included in your report and will address these when your final report is issued.

Thank you for the opportunity to respond to the draft report, the professionalism displayed by your staff during the course of your audit, and for the recommendations contained in your report which should improve State government's leadership by example to adopt more energy efficient and environmentally sound practices.

Sincerely,

Robert G. Callender
Vice President for Programs and
Acting President and CEO

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