
**Thomas P. DiNapoli
COMPTROLLER**



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**OFFICE OF THE
NEW YORK STATE COMPTROLLER**

**DIVISION OF STATE
GOVERNMENT ACCOUNTABILITY**

**DEPARTMENT OF
TRANSPORTATION**

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

Report 2008-S-83

AUDIT OBJECTIVE

The objective of our audit was to determine whether the Department of Transportation (Department) is meeting the current 10 percent target for purchasing power from renewable sources increasing to the 20 percent target level by 2010 as specified within Executive Order 111.

AUDIT RESULTS - SUMMARY

Executive Order 111 (Order) was issued in June 2001, and requires that by 2005 all State agencies and certain public authorities seek to purchase sufficient quantities of electricity produced by certain specified renewable technologies so that 10 percent of the overall annual electric energy requirements of the buildings they own, operate or lease comes from these renewable sources. The target percentage increases to 20 percent by 2010. State agencies and other affected 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 the Department did not meet the 10 percent goal by 2005 and it did not meet this goal for fiscal years 2005-06 or 2006-07. Data provided by the Department and the Office of General Services shows that for the fiscal year ended March 31, 2006 and the fiscal year ended March 31, 2007, the Department purchased 3.2 percent and 8.77 percent, respectively, of its electricity from renewable technologies.

We also found that the Department has not developed a way to meet the 20 percent target in 2010. However, Department officials indicated they want to reach the 20 percent target and will research the cost associated with purchasing sufficient renewable energy

to achieve compliance with Executive Order 111.

Although the Department has submitted its Annual Energy Report each year, the report has been submitted from one to five months late. Also, the Department reported as renewable energy items such as hydropower and renewable energy that is part of its energy supplier's base mix. Neither of these qualifies toward the 10 and 20 percent goals. We could not verify the data reported in the Department's 2005-06 and 2006-07 Annual Energy Reports due to lack of supporting documentation. Further, we found that staff from Department regions provided incorrect data to the preparers of the Annual Energy Report. In addition, the Department has not claimed any exemptions even though our review of its facilities identified 23 buildings that it might be able to exempt from the requirements of the Order.

Our report contains nine recommendations directed toward improving implementation of Executive Order 111. Department officials agree with our recommendations.

This report, dated December 18, 2008, is available on our website at: <http://www.osc.state.ny.us>. Add or update your mailing list address by contacting us at: (518) 474-3271 or Office of the State Comptroller
Division of State Government Accountability
110 State Street, 11th Floor
Albany, NY 12236

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 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 comes 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, sustainably managed biomass, tidal, geothermal, methane waste and fuel cells.

The Order designates the New York State Energy Research and Development Authority (NYSERDA) as the lead agency responsible for coordinating implementation and assisting other agencies to fulfill their responsibilities. To assist NYSERDA in this role, the Order also created the State Energy Efficiency Advisory Council (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 agencies to acquire qualifying energy by generating it themselves or by purchasing it, either through their electrical supplier or through a third party provider referred to as Renewable Energy Credits.

In 1967 the New York State Department of Transportation (Department) was formed to deal with the State's complex transportation system and the ever increasing need to coordinate the development of the transportation with each mode serving its best purpose. The State's transportation network handles 100 billion vehicle miles, covers 110,000 highway miles, includes 17,000 bridges, and 12 major public and private ports handling 110 million tons of freight annually. The mission of the Department is to ensure its customers - those who live, work and travel in New York State - have a safe, efficient, balanced and environmentally sound transportation system.

The Department currently has 11 regional offices throughout the State and a main office in Albany. For the State fiscal year ended March 31, 2007, the Department had over 300 facilities throughout the State - both owned and leased - at which it reported consuming over 36 million kilowatts (36,000 megawatts) of electricity. During this period, the Department purchased 3.2 million kilowatts (3,200 megawatts) of renewable energy through a Memorandum of Understanding with the Office of General Services (OGS).

AUDIT FINDINGS AND RECOMMENDATIONS

Compliance with Order

Procurement of Renewable Power

The Order requires State agencies and other affected entities to seek procurement of 10 percent of their energy requirements from certain renewable energy sources by 2005 and 20 percent from those renewable sources by 2010.

The Order specifies wind, solar thermal, photovoltaics, 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 NYSERDA's guidelines, State 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.

We found the Department did not meet the 10 percent target by 2005 nor has it achieved 10 percent since 2005.

In early 2006, the Department purchased renewable energy through a Memorandum of Understanding between the OGS and the New York Power Authority (NYPA). The

agreement stated that the Department would purchase 3,200 megawatts of biomass renewable energy at a cost of \$4.75/megawatt in calendar years 2006 and 2007. Based on the reported electrical usage in the fiscal year ended March 31, 2006, this purchase would have met the 10 percent goal.

However, during that fiscal year, the Department did not accurately report all electrical usage. In particular, the Department made an error that omitted the reporting of electricity used at almost 100 of its facilities. Taking this error into account, the electrical usage reported in the fiscal year ended March 31, 2007 increased to over 36,000 megawatts. Therefore, the purchase of 3,200 megawatts was not enough to reach the 10 percent goal. Further, the individuals who prepared the Annual Energy Report were not aware of this purchase and, as such, it was not reported to NYSERDA as required.

In addition, the Annual Energy Report included as a discrete purchase renewable energy that was already part of the energy supplier's base mix. Furthermore, this base mix was predominately nuclear and hydropower, which are not eligible renewable sources of power for Section IV of the Order.

Department officials attribute the conditions we found to the change in administrations and information not being conveyed when a key employee retired. We also noted that the Department has not developed any policies or procedures to guide employees in the procurement and use of renewable power.

Our recalculation of the Department's renewable energy purchases presented in the following table demonstrates that the Department has not met the 10 percent target.

Fiscal Year	Electricity Consumed (kWh)*	Renewable Energy Purchased per Department (kWh)*	Renewable Energy Purchased per Audit (kWh)	Percent of Total of Renewable Energy Per Audit
2005-06	24,980,221	963,233 (3.86%)	800,000	3.20
2006-07	36,501,498	4,015,165 (11.00%)	3,200,000	8.77

*Data Source: Department's Annual Energy Report

Reaching 20 Percent of Renewable Power By 2010

To meet the Order's renewable energy goal of 20 percent by 2010, NYSERDA's Guidelines encourage entities to increase renewable energy use each year. State agencies are required to note their efficient energy strategies on the Annual Energy Report. The Department has not increased the consumption of qualifying renewable energy each year since 2005. The Department does not have any current contracts in place to procure renewable energy; its most recent contract expired December 31, 2007. The Department has not developed a way to meet the 20 percent target by 2010 and, as a result, has not achieved the goals of environmental protection and economic growth intended by the Section IV of Executive Order 111. Department officials stated they will research the cost associated with purchasing sufficient renewable energy to reach the 20 percent target by 2010.

Reporting Requirements

The NYSERDA's guidelines require every state agency and other affected agencies to submit an Annual Energy Report to NYSERDA by December 1st following the close of each fiscal year. The first Annual Energy Report was due December 1, 2002 for the period April 1, 2001 through March 31, 2002. Department officials submitted their reports for fiscal years 2005-06 and 2006-07.

The report for 2005-06 was not dated so we could not determine whether it was filed on time, but the report for 2006-07 was five months late.

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 noted that the Department's reports were incomplete and inaccurate. We found several errors and instances of incompleteness in the data reported in the Annual Energy Reports, including:

- Reporting renewable energy, such as hydropower, that is not eligible to be counted toward the 10 percent or 20 percent goals.
- Not reporting 3,200 megawatts of biomass renewable energy purchased through a Memorandum of Understanding between OGS and NYPA.
- Some regions providing incorrect data to the preparers of the report.

(For example, two regions reported the readings directly off the meter for some buildings. However, a meter multiplier must be used to determine the kilowatt usage. This resulted in underreporting usage by approximately 120,000 kilowatts.)

- The 317 facilities identified in the report submitted April 1, 2008 (for the year ended March 31, 2007) not matching the 321 facilities in a report prepared by the Department three days later.

The Department produces some of its own renewable energy, using photovoltaic panels at its Kirkwood facility, but it has not claimed this on the Annual Energy Report because it does not have a meter to measure the amount of energy produced by these panels. However, officials at NYSERDA stated that the Department could report the energy produced, based on industry averages for the length of time the panels are in use.

We attempted to verify the electrical usage and procurement data in the Annual Energy Report, but were unable to do so because the Department did not maintain adequate supporting documentation. In addition, our review of Department facilities identified 115 facilities that were less than 5,000 square feet in area; 23 of these buildings used electric power, and thus may qualify for exempt status under Section IV of Executive Order 111. However, Department officials did not claim any exemptions and they have not contacted NYSERDA for assistance in completing the Annual Energy Report, including identifying appropriate exemptions.

We noted several possible reasons for the lack of compliance including poor communication between the individuals who currently prepare

the Annual Energy Reports and their predecessor; no one person being assigned the responsibility of preparing the annual report; and the current preparers of the report not contacting NYSERDA for assistance in completing the report correctly. In addition, Department management has not monitored this process to determine whether those assigned complied with the Order.

Recommendations

1. Consult NYSERDA for assistance in determining what purchases are eligible under Executive Order 111.
2. Monitor the level of compliance with Executive Order 111 to determine if any corrective actions are necessary to achieve full compliance.
3. Develop policies and procedures specific to the procurement and use of renewable energy.
4. Designate one individual responsible for ensuring compliance with Section IV of Executive Order 111. Notify NYSERDA of this designation.
5. Contact NYSERDA and OGS for assistance in identifying supplier(s) of renewable energy for fiscal year 2008-09 and beyond.
6. Develop a way to meet the 20 percent target by 2010 and seek to increase renewable energy consumption each year until the 2010 compliance date.
7. Ensure the accurate and timely reporting of data in the Annual Energy Report.
8. Determine methods for measuring the renewable energy the Department produces and include this on the Annual Energy Reports.

9. Review the current facilities to determine if they qualify to be listed as exemptions under Executive Order 111.

AUDIT SCOPE AND METHODOLOGY

We conducted our audit in accordance with generally accepted government auditing standards. Our audit determined if the Department of Transportation complied with Section IV of Executive Order 111 by reporting their annual electrical energy consumption to NYSERDA and procuring at least 10 percent of the power from renewable sources by 2005 and increasing to 20 percent by 2010. Our audit covered the period April 1, 2005 through May 23, 2008.

To accomplish our objective, we met with Department officials and obtained the relevant energy procurement reports for fiscal years ended March 31, 2006, 2007 and 2008. We also obtained a listing of their facilities including square footage and electrical consumption data. Further, we obtained relevant reporting and procurement information and documentation from NYSERDA and OGS.

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

The performed this audit pursuant to the State Comptroller's authority as set forth in Article V, Section 1, of the State Constitution and Article II, Section 8, of the State Finance Law.

REPORTING REQUIREMENTS

A draft copy of this report was provided to Department officials for their review and comment. Their comments were considered in preparing this final 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 Commissioner of the Department of Transportation 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 why.

CONTRIBUTORS TO THE REPORT

Major contributors to this report were Carmen Maldonado, Gerald Tysiak, Joel Biederman, Brandon Ogden, Jeffrey Dormond, and Lauren Bizzarro.

APPENDIX A - AUDITEE RESPONSE



STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
ALBANY, N.Y. 12232
WWW.NYSDDT.GOV

ASTRID C. GLYNN
COMMISSIONER

DAVID A. PATERSON
GOVERNOR

November 21, 2008

Ms. Carmen Maldonado
Office of the State Comptroller
Division of State Government Accountability
123 William Street – 21st Floor
New York, NY 10038

Re: O&C Draft Report 2008-S-83
Compliance with Executive Order 111
Requirement to Purchase Power from
Renewable Sources

Dear Ms. Maldonado:

Thank you for the opportunity to respond to the subject report. Below is the Department of Transportation's (Department) response to each recommendation.

Recommendation 1: Consult NYSERDA for assistance in determining what purchases are eligible under Executive Order 111.

Response:

We agree with this recommendation. During October 2008, the Department's Operation Division staff, in conjunction with the New York State Office of General Services (OGS), reached out to the New York State Energy Research and Development Authority (NYSERDA) and the New York Power Authority and has requested assistance in identifying what types of energy purchases are eligible under Section IV of Executive Order 111 (EO 111) as well as which vendors and/or State contracts exist for purchasing renewable energy.

Recommendation 2: Monitor the level of compliance with Executive Order 111 to determine if any corrective actions are necessary to achieve full compliance.

Response:

We agree with this recommendation. The Director of the Operations Division has taken the lead on monitoring the Department's compliance with EO 111 and has established a multidivisional team (EO 111 Team) consisting of Operations, Engineering and Administrative Services representatives to manage this initiative for the Department. Part of the EO 111 Team's responsibilities will be to monitor the Department's compliance with the requirements of Section IV of EO 111.

Recommendation 3: Develop policies and procedures specific to the procurement and use of renewable energy.

Response:

We agree with this recommendation. Part of the EO 111 Team's responsibilities will be to develop policies and procedures not only specific to the procurement and use of renewable energy but also policies and procedures that will enable the Department to meet the intent of EO 111. The Development of the policies and procedures will include a description of the roles and responsibilities of the EO 111 Team. The Department expects to have draft policies developed by May 1, 2009.

Recommendation 4: Designate one individual responsible for ensuring compliance with Section IV of Executive Order 111. Notify NYSERDA of this designation.

Response:

We agree with this recommendation and have implemented it. The Commissioner has assigned responsibility for ensuring compliance with Section IV of EO 111 to the Director of the Operations Division. The Department verbally informed NYSERDA on August 14, 2008 and via email on October 10, 2008.

Recommendation 5: Contact NYSERDA and OGS for assistance in identifying supplier(s) of renewable energy for fiscal year 2008-09 and beyond.

Response:

We agree with this recommendation and have implemented it. On October 16, the Department's Administrative Services Division Director requested that OGS purchase 10,000 megawatts of renewable power on the Department's behalf for State Fiscal Year 2008-2009. The purchase of 10,000 megawatts will enable the Department to exceed the renewable energy purchase goal of 10 percent as required in EO 111.

Recommendation 6: Develop a way to meet the 20 percent target by 2010 and seek to increase renewable energy consumption each year until the 2010 compliance date.

Response:

We agree with this recommendation. Part of the EO 111 Team's responsibility will be to develop a draft renewable energy purchase plan by May 1, 2009 that outlines the Department's strategy to meet the 20 percent target by 2010.

Recommendation 7: Ensure the accurate and timely reporting of data in the Annual Energy Report.

Response:

We agree with this recommendation. The Director of Operations in conjunction with the Administrative Services Division will oversee the accuracy of the information contained in the Annual Energy Report and will ensure timely filing by the required due date. To ensure that the information contained in the Annual Energy Report is complete and accurate, representatives from the Operations Division will research and reconcile the Department's building inventory to the OGS Statewide Fixed Asset Accounting System. Additionally, the Department's Facilities Management will confirm the Department's energy purchases from its providers to confirm energy usage. In advance of the filing deadline for the 2009 Annual Energy Report (December 1, 2009), the Director of the Operations Division and the Director of the Administrative Services Division will conduct a review of the information reported and supporting work compiled by their staff.

Recommendation 8: Determine methods for measuring the renewable energy the Department produces and include this on the Annual Energy Reports.

Response:

We agree with this recommendation. Part of the EO 111 Team's responsibility will be to review the Department's production of renewable energy and research methods for measuring the output. The EO 111 Team expects to complete this review by December 1, 2009. The Department has contacted NYSERDA for assistance in conducting this research.

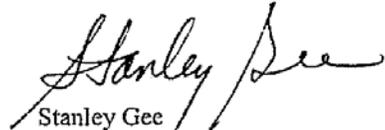
Recommendation 9: Review the current facilities to determine if they qualify to be listed as exemptions under Executive Order 111.

Response:

We agree with this recommendation. The EO 111 Team will review the 23 facilities that may be eligible for an exemption and determine if they meet the requirements as indicated in the guidance from NYSERDA.

Should you need further information, please contact Gary McVoy, Operations Division Director, at (518) 485-0887.

Sincerely,



Stanley Gee
Executive Deputy Commissioner