

November 29, 2004

Mr. Rick Klimkos
Federal Energy Management Program, EE-2L
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585-0121

Dear Mr. Klimkos:

I am responding to a memorandum dated July 19, 2004, from Schuyler Schell, Acting Program Manager, Federal Energy Management Program, Office of Energy Efficiency and Renewable Energy, regarding "Reporting Guidance for FY 2004 Annual Report on Federal Government Energy Management and Conservation Programs." Enclosed you will find the Nuclear Regulatory Commission's (NRC) FY 2004 Annual Report on Energy Management (Enclosure 1), FY 2004 Energy Management Data Report (Enclosure 2), FY 2004 Energy Scorecard (Enclosure 3), and Energy Management Implementation Plan for FY 2005 (Enclosure 4).

The cost of electrical power from the last billing period of FY 2004 was not available from PEPCO at the time of the preparation of Enclosure 2. Therefore, we have included estimates in our report and will submit actual data once PEPCO makes this information available to NRC.

If any additional information is needed regarding this submission, please contact Mr. Ken McDow, Facilities Branch, on (301) 415-1712.

Sincerely,

/RA/
Michael L. Springer, Director
Office of Administration

Enclosures: As stated

cc: Mr. Randy Steer, OMB

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FY 2004 ANNUAL REPORT ON FEDERAL GOVERNMENT ENERGY MANAGEMENT

I. MANAGEMENT AND ADMINISTRATION

A. Energy Management Infrastructure

1. Senior Agency Official

Patricia G. Norry, Deputy Executive Director for Management Services, serves as the Senior Energy Official. Mrs. Norry's responsibilities consist of developing policies and procedures for the implementation of Executive Order (E.O.) 13123.

2. Agency Energy Team

An agency energy team was established in FY 2000 consisting of procurement, legal, budget, management, and technical representatives. The team is responsible for expediting and encouraging the Nuclear Regulatory Commission's use of appropriations, Energy-Savings Performance Contracts, and other alternative financing mechanisms necessary to meet the goals and requirements of the E.O. Members of the energy team are as follows:

<u>NAME</u>	<u>OFFICE</u>	<u>RESPONSIBILITY</u>
Thomas Martin	Office of Administration	Management/Technical
James Heck	Office of Administration	Management/Technical
Kenneth McDow	Office of Administration	Management/Technical
Jan Dambly	Office of Administration	Budget
Stephen Pool	Office of Administration	Procurement
James Leuhman	Office of Enforcement	Technical
Ed Williamson	Office of General Counsel	Legal
Larry Pittiglio	Office of Nuclear Material Safety and Safeguards	Technical/Union Representative

B. Management Tools

1. Awards

The Agency's award program will be used to reward exceptional performance in implementing the E.O.

2. Performance Evaluation

Performance plans and evaluations for the Senior Energy Official take into account programmatic responsibility for implementation of the E.O. Position descriptions and performance evaluations for the Facilities/Energy Managers incorporate appropriate provisions for implementation of the E.O. Members of the energy team who are not Facilities/Energy Managers are serving in an advisory capacity.

Therefore, their position descriptions and performance evaluations do not include such provisions. Each member of the team is familiar with the requirements of the E.O. The collective knowledge and expertise of these individuals is helping to ensure successful implementation of the E.O.

3. Training and Education

Member of the energy team attended the Department of Energy's (DOE) Interagency Task Force meetings.

4. Showcase Facilities

NRC did not designate any buildings as Showcase Facilities.

II. ENERGY EFFICIENCY PERFORMANCE

A. Energy Reduction Performance

1. Standard Buildings

OWFN gross square footage (GSF) has remained constant at 332,916 since base year FY 1989, the first year of full occupancy. Btu/GSF is as follows:

<u>Base Year (FY 1989)</u>	<u>FY 2003</u>	<u>FY 2004</u>
123,855 Btu/GSF total kwh: 11,722,807	123,483 Btu/GSF total kwh: 11,682,670	114,969 Btu/GSF total kwh: 11,208,371

The Btu/GSF consumption of base year FY 1989 compared to FY 2004 represents a 4.4 percent decrease.

TWFN gross square footage (GSF) has remained constant at 440,400 since base year FY 1996, the first year of full occupancy. Btu/GSF is as follows:

<u>Base Year (FY 1996)</u>	<u>FY 2003</u>	<u>FY 2004</u>
106,130 Btu/GSF total kwh: 13,686,249	103,583 Btu/GSF total kwh: 13,370,624	100,539 Btu/GSF total kwh: 12,978,315

The Btu/GSF consumption of base year FY96 compared to FY 2004 represents a 5.3 percent decrease.

2. Industrial and Laboratory Facilities

NRC is not responsible for energy management programs at industrial and laboratory facilities.

3. Exempt Facilities

NRC is responsible for implementing the E.O. to reduce energy consumption at the OWFN and TWFN building. Part 7, Section 704, of the E.O. defines exempt facilities as those in which compliance with the Energy Policy Act or the E.O. is not practical. OWFN and TWFN are not exempt facilities.

4. Tactical Vehicle and Equipment Fuel Use

NRC has no tactical vehicles and equipment in its motor pool fleet.

B. Renewable Energy

1. Self-Generated Renewable Energy

There was no self-generated renewable energy (photovoltaic, winds, solar thermal, geothermal) used at OWFN or TWFN. Energy audits conducted in FY 2000 concluded that self-generated renewable energy production at OWFN and TWFN is not economically feasible.

2. Purchased Renewable Energy

No renewable energy component was purchased under competitive contract. Renewable energy is not commercially available.

C. Petroleum

OWFN and TWFN do not use petroleum based fuel.

D. Water Conservation

The following FY 2004 water consumption and cost was obtained from the Washington Suburban Sanitary Commission usage:

<u>Building</u>	<u>Consumption</u>	<u>Cost</u>
OWFN	13,854,000 gals.	\$84,750.00
TWFN	14,793,000 gals.	\$91,501.00

III. IMPLEMENTATION STRATEGIES

A. Life-Cycle Cost Analysis

In FY 2004, the General Services Administration replaced two chillers in OWFN with two 550 ton centrifugal chillers. Additionally, a heat exchanger was replaced in the system used to cool the building without operating the chillers. During the design phase of the project, GSA conducted an analysis of commercial chillers and heat exchanger to identify and select the most energy efficient equipment.

B. Facility Energy Audits

In FY 2004, no energy audits were conducted at OWFN or TWFN.

C. Financing Mechanisms

In FY 2004, DOE officials informed NRC that the DOE, Energy Savings Performance Contract (ESPC), a financing mechanism to implement energy conservation projects, was being revised and would be available for Federal Government agencies in FY 2005.

D. ENERGY STAR and Other Energy-Efficient Products

NRC is not responsible for the construction of buildings. However, all specifications for renovation projects performed by NRC are developed to ensure that, when applicable, energy efficient equipment and systems are incorporated into the renovation design. Additionally, the building operation and maintenance contract specifications for OWFN and TWFN have been updated to ensure that all building support replacement products and components are energy efficient. The NRC's Affirmative Procurement Program for Recovered Materials provides Internet links to on-line training for Federal purchase card users on ENERGY STAR acquisitions and other energy efficient products.

E. ENERGY STAR Buildings

OWFN and TWFN have not met the ENERGY STAR building criteria.

F. Sustainable Building Design

NRC is not responsible for the design or construction of Federal facilities.

G. Energy Efficiency in Lease Provisions

NRC is not responsible for the formulation or negotiation of leases. GSA serves as the leasing agent for all NRC facilities. However, prior to the execution of new leases, renegotiations, or extension of existing leases, NRC will request the opportunity to review all proposed lease documents to ensure that they are in compliance with the Model Lease Provision of the E.O.

H. Industrial Facility Efficiency Improvements

NRC does not occupy any industrial facilities.

I. Highly Efficient Systems

No combined cooling, heating, and power systems were installed. The unavailability of cost effective technology precludes NRC from implementing this energy conservation strategy. Biomass, geothermal, and other natural energy sources are not available.

J. Off-Grid Generation

No off-grid generation systems were installed. Off-grid generation systems such as solar hot water, solar electric, small wind turbines, and fuel cells were evaluated during a preliminary energy audit and considered economically unfeasible.

K. Electrical Load Reduction Measures

NRC participates in the PEPCO Load Curtailment Program. During high demand periods, NRC, at the request of PEPCO, reduces its energy load by securing non-critical building support equipment. Additionally, an employee awareness program is in place which encourages employees to secure extraneous appliances at work stations during high demand periods.

FY 2005 ENERGY MANAGEMENT IMPLEMENTATION PLAN

ENERGY MANAGEMENT INFRASTRUCTURE

I. MANAGEMENT AND ADMINISTRATION

A. Energy Management Infrastructure

1. Senior Agency Official

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2. Agency Energy Team

An agency energy team was established in FY 2000 consisting of procurement, legal, budget, management, and technical representatives. The team is responsible for the development, award, and oversight of an Utility Energy Services Contract (UESC) which will be awarded to PEPCO Energy Services in FY 2001. PEPCO Energy Services will implement energy conservation measures at the One White Flint North (OWFN) and Two White Flint North (TWFN) buildings. Members of the energy team are as follows:

NAME	OFFICE	RESPONSIBILITY
Thomas Martin	Office of Administration	Management/Technical
James Heck	Office of Administration	Management/Technical
Kenneth McDow	Office of Administration	Management/Technical
Jan Dambly	Office of Administration	Budget
Stephen Pool	Office of Administration	Procurement
James Luehman	Office of Enforcement	Technical
Ed Williamson	Office of General Counsel	Legal
Larry Pittiglio	Office of Nuclear Material Safety and Safeguards	Technical/Union Representative

B. Management Tools

1. Awards (Employee Incentive Program)

Performance awards will be used to reward exceptional performance in implementing the E.O.

2. Performance Evaluation

Performance evaluation plans for facility managers include a performance element for the successful implementation of provisions of the Executive Order.

3. Training and Education

Facility managers responsible for the implementation of the Executive Order will participate in training conducted and sponsored by the Department of Energy's Federal Energy Management Program (FEMP) and the Interagency Energy Management Task Force. The NRC will continue to implement its Affirmative Procurement Program for Recovered Materials. The program, sponsored by the Federal Acquisition Institute, provides Internet links to on-line training for Federal purchase card users on "ENERGY STAR" acquisitions and other energy efficient products.

4. Showcase Facilities

NRC will request DOE to review the OWFN chiller and cooling tower installation project, which was completed in the first quarter of FY 2005, to determine if OWFN meet the criteria as a Showcase Facility.

II. IMPLEMENTATION STRATEGIES

A. Life-Cycle Cost Analysis

NRC conducted a life-cycle cost analysis and concluded that the replacement of T-12 bulbs with T-8 bulbs and electronic ballasts in OWFN represents a viable project. This project has not yet been scheduled but is tentatively planned for FY 2005 or FY 2006.

B. Facility Energy Audits

No audits are scheduled for FY 2005.

C. Financing Mechanisms

There are no plans to use a financing mechanism such as the DOE Energy, Energy Savings Performance Contract. NRC or GSA will use direct funds to implement FY 2005 energy conservation projects.

D. ENERGY STAR and Other Energy-Efficient Products

NRC will continue to implement its Affirmative Procurement Program for Recovered Materials, which promotes the acquisition of ENERGY STAR and other energy efficient products. Specifications for renovation projects will include requirements, when applicable, to ensure the installation of energy efficient equipment, systems, and products.

E. ENERGY STAR Buildings

NRC will measure the energy consumption performance of OWFN to determine if the newly installed chillers and the lighting project results in significant energy reduction for OWFN to meet the ENERGY STAR criteria.

F. Sustainable Building Design

NRC is not responsible for the design and construction of buildings.

G. Energy Efficiency in Lease Provisions

NRC is not responsible for the formulation or negotiation of leases. GSA serves as the leasing agent for all NRC facilities. However, prior to the execution of new leases, renegotiations, or extension of existing leases, NRC will request the opportunity to review all proposed lease documents to ensure that they are in compliance with the Model Lease Provision of the E.O.

H. Industrial Facility Efficiency Improvements

NRC does not occupy any industrial facilities.

I. Highly Efficient Systems

No combined cooling, heating, and power systems were installed. The unavailability of cost effective technology precludes NRC from implementing this energy conservation strategy. Biomass, geothermal, and other natural energy sources are not available.

J. Off-Grid Generation

No off-grid generation systems were installed. Off-grid generation systems such as solar hot water, solar electric, small wind turbines, and fuel cells were evaluated during a preliminary energy audit and considered economically unfeasible.

K. No renewable energy purchases are planned. Renewable energy sources are not commercially available.

L. Electrical Load Reduction Measures

NRC participates in the PEPCO Load Curtailment Program. During high demand periods, NRC, at the request of PEPCO, reduces its energy load by securing non-critical building support equipment. Additionally, an employee awareness program is in place which encourages employees to secure extraneous appliances at work stations during high demand periods.

M. NRC will continue to identify water conservation opportunities, such as managing the water irrigation system, ensuring proper operation of cooling towers, and correcting water leaks on the domestic water systems.