

FY 2005 ANNUAL REPORT ON FEDERAL GOVERNMENT ENERGY MANAGEMENT

I. MANAGEMENT AND ADMINISTRATION

A. Energy Management Infrastructure

1. Senior Agency Official

Timothy F. Hagan, Director, Office of Administration, serves as the Senior Energy Official. Mr. Hagan'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 (NRC) 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>
Sharon Stewart	Office of Administration	Management/Technical
James Heck	Office of Administration	Facilities/Energy Manager
Kenneth McDow	Office of Administration	Facilities/Energy Manager
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

A Facilities/Energy Manager has 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

One White Flint North (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 2004</u>	<u>FY 2005</u>
120,150 Btu/GSF total kwh: 11,722,807	114,969 Btu/GSF total kwh: 11,208,371	115,576 Btu/GSF total kwh: 11,277,398

The Btu/GSF consumption of base year FY 1989 compared to FY 2005 represents a 3.9 percent decrease.

Two White Flint North (TWFN) 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 2004</u>	<u>FY 2005</u>
106,130 Btu/GSF total kwh: 13,686,249	100,539 Btu/GSF total kwh: 12,978,315	99,285 Btu/GSF total kwh: 12,810,893

The Btu/GSF consumption of base year FY 1996 compared to FY 2005 represents a 6.8 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 buildings. 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. Non-Fleet Vehicle and Equipment Fuel Use

NRC has no non-fleet vehicles or equipment.

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 2005 water consumption and cost was obtained from the Washington Suburban Sanitary Commission usage:

<u>Building</u>	<u>Consumption</u>	<u>Cost</u>
OWFN	9,456,000 gals.	\$ 87,732.00
TWFN	11,904,000 gals.	\$105,809.00

III. IMPLEMENTATION STRATEGIES

A. Life-Cycle Cost Analysis

In FY 2005, the General Services Administration (GSA) identified the need to install a Direct Digital Control (DDC) System at the OWFN building. The DDC will manage, monitor, and control HVAC equipment to ensure optimum operation and energy reduction. As part of its funding justification and design requirements, GSA will conduct a life-cycle cost analysis to determine the expected useful life of a DDC system and the projected payback period.

B. Facility Energy Audits

In FY 2005, no energy audits were conducted at OWFN or TWFN.

C. Financing Mechanisms

In FY 2005, NRC did not use any financing mechanisms to implement energy conservation projects.

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 the new lease at the NRC's Warehouse, located in Rockville, Maryland, NRC reviewed the lease documents and recommended the lease be in compliance with the Model Lease Provision of Executive Order 13123.

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 commercially available.

J. Distribution Generation

No distribution generation systems were installed. Distribution generation systems such as solar hot water, solar electric, small wind turbines, and fuel cells were evaluated during a preliminary energy audit in FY 2003 by PEPCO Energy Services and an independent contractor 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.