

December 12, 2000

Mr. Rick Klimkos  
Federal Energy Management Program, EE-90  
U.S. Department of Energy  
1000 Independence Avenue, SW  
Washington, DC 20585-0121

Dear Mr. Klimkos:

I am responding to a memorandum from Beth Shearer, Director, Federal Energy Management Program, Office of Energy Efficiency and Renewable Energy, regarding "Reporting Guidance for FY 2000 Annual Report on Federal Government Energy Management and Conservation Programs." Enclosed you will find the Nuclear Regulatory Commission's (NRC) FY 2000 Annual Report on Federal Government Energy Management and Conservation Programs (Enclosure 1), Executive Order 13123 FY 2000 Energy Scorecard (Enclosure 2), the Annual Energy Management Data Report (Enclosure 3), and the Executive Order 13123 Implementation Plan for FY 2001 (Enclosure 4).

In previous years NRC reported FY 1995 as the base year for the Two White Flint North building. While FY 1995 does represent the first year NRC occupied the administrative offices in the building, it does not represent the first year of full building occupancy. In FY 1995, space on the first floor, plaza level, was being built-out to accommodate a cafeteria, snack bar, fitness center, and credit union. Fiscal Year 1996 represents the first full year when these facilities were in operation. Therefore, the FY 2000 annual report and all reports thereafter will reference FY 1996 as the base year.

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

Sincerely,

*/RA/*

Patricia G. Norry  
Deputy Executive Director  
for Management Services

Enclosures: As stated

cc: Mr. Randy Steer, OMB

Mr. Rick Klimkos  
Federal Energy Management Program, EE-90  
U.S. Department of Energy  
1000 Independence Avenue, SW  
Washington, DC 20585-0121

December 12, 2000

Dear Mr. Klimkos:

I am responding to a memorandum from Beth Shearer, Director, Federal Energy Management Program, Office of Energy Efficiency and Renewable Energy, regarding "Reporting Guidance for FY 2000 Annual Report on Federal Government Energy Management and Conservation Programs." Enclosed you will find the Nuclear Regulatory Commission's (NRC) FY 2000 Annual Report on Federal Government Energy Management and Conservation Programs (Enclosure 1), Executive Order 13123 FY 2000 Energy Scorecard (Enclosure 2), the Annual Energy Management Data Report (Enclosure 3), and the Executive Order 13123 Implementation Plan for FY 2001 (Enclosure 4).

In previous years NRC reported FY 1995 as the base year for the Two White Flint North building. While FY 1995 does represent the first year NRC occupied the administrative offices in the building, it does not represent the first year of full building occupancy. In FY 1995, space on the first floor, plaza level, was being built-out to accommodate a cafeteria, snack bar, fitness center, and credit union. Fiscal Year 1996 represents the first full year when these facilities were in operation. Therefore, the FY 2000 annual report and all reports thereafter will reference FY 1996 as the base year.

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

Sincerely,  
**/RA/**  
Patricia G. Norry  
Deputy Executive Director  
for Management Services

Enclosures: As stated

cc: Mr. Randy Steer, OMB

DISTRIBUTION:

EDO Mail Room (G20000362 & W199900128)

ADM r/f	ADM Ticket File (00-0145)	W. Travers, EDO	J. Craig, EDO
T. Hagan, DFS	DFS R/F (00-0124)	C. Paperiello, EDO	S. Burns/K. Cyr, OGC
L. Fisher, FACB	FACB R/F	F. Miraglia, EDO	J. Funches, CFO
K. McDow, FACB	FAC: 5.09.07-19	P. Norry, DEDM	
E. Pleasant, FACB	M. Springer, ADM	L. Barnett, DEDM	
Document Name:	A Diskette: eo2000.wpd		
ADAMS Accession No.:	ML003775674		

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosures "E" = Copy with attachments/enclosures "N" = No copy \*Previously concurred.

OFFICE	FACB	C:FACB	D:DFS	D:ADM	DEDM
NAME	KMcDow* <b>KXM</b>	LFisher* <b>LXF</b>	THagan* <b>TFH</b>	MSpringer	PGNorry

DATE	11/ 27 00	11/ 27 /00	12/ 08 /00	12/8/00	12/12/00
------	-----------	------------	------------	---------	----------

OFFICIAL RECORD COPY

This document should be placed in ADAMS:

This document should be made available to the PUBLIC:      AGA      11/14/00

This document is NON-SENSITIVE:      (Initials)      (Date)

Enclosure 1

FY 2000 ANNUAL REPORT ON FEDERAL GOVERNMENT ENERGY MANAGEMENT AND CONSERVATION PROGRAMS

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 the development, award, and oversight of a 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
Louis Fisher	Office of Administration	Management/Technical
William Foster	Office of Administration	Budget
Thomas Martin	Office of Administration	Management/Technical
Kenneth McDow	Office of Administration	Management/Technical
Brian Kildee	Office of General Counsel	Legal
Stephen Pool	Office of Administration	Procurement
James Luehman	Office of Nuclear Reactor Regulation	Technical
John Voglewede	Office of the Chief Information Officer	Management

Robert Willcoxon

Office of the Chief Financial  
Officer

Budget

Thomas Wolf

Office of Nuclear Regulatory  
Research

Technical/Union  
Representative

- 2 -

## 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

Members of the energy team attended the Department of Energy's (DOE) Interagency Task Force meetings and training on Super Energy Performance Contracts.

### 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 1999</u>	<u>FY 2000</u>
120,150 Btu/GSF total kwh: 11,722,807	123,640 Btu/GSF total kwh: 12,064,076	120,930 Btu/GSF total kwh: 11,799,649

The Btu/GSF consumption of base year FY 1989 compared to FY 2000 represents a .6 percent increase.

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 1999</u>	<u>FY 2000</u>
106,130 Btu/GSF	110,440 Btu/GSF	105,199 Btu/GSF
total kwh: 13,686,249	total kwh: 14,242,056	total kwh: 13,565,046

The Btu/GSF consumption of base year FY 1996 compared to FY 2000 represents a .9 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.

## 3. Million Solar Roofs

No solar roofs were installed.

# C. Petroleum

OWFN and TWFN do not use petroleum based fuel.

D. Water Conservation

The following FY 2000 water consumption and cost was obtained from the Washington Suburban Sanitary Commission and will be used as the baseline water usage:

<u>Building</u>	<u>Consumption</u>	<u>Cost</u>
OWFN	10,412,000 gals.	\$61,717.00
TWFN	12,315,000 gals.	\$78,946.00

III. IMPLEMENTATION STRATEGIES

A. Life-Cycle Cost Analysis

In FY 2000, preliminary energy audits were conducted at OWFN and TWFN to identify potential energy conservation projects. A simple payback analysis was performed to determine if proposed projects warranted further consideration. In FY 2001, NRC will conduct comprehensive, investment grade energy audits to identify energy conservation projects. To determine which proposed projects are most cost effective, NRC will ensure that the following DOE approved life-cycle analytical software tools are used during the comprehensive audit:

- The Building Life-Cycle Cost Program
- The Facility Energy Decision System
- The Lighting Technology Screening Matrix

B. Facility Energy Audits

In FY 2000, two preliminary energy audits were conducted at OWFN and TWFN. This represents 100 percent of the NRC facilities inventory which require energy audits. Comprehensive energy audits for OWFN and TWFN will be conducted in FY 2001.

C. Financing Mechanisms

In FY 2000, NRC entered into an Interagency Agreement and Memorandum of Understanding with DOE to facilitate the award of a Super-Energy Savings Performance Contract (SESPC). DOE's Mid-Atlantic Region contractor, Environmental Resources, Inc. (ERI), conducted a preliminary energy audit at OWFN, a Federal building, to identify potential energy conservation measures (ECMs). The E.O. prohibits leased buildings from participating in the SESP program. Therefore, TWFN, a leased building, was excluded from the preliminary audit. ERI identified the following ECMs at OWFN as potential financible projects:

- energy management system upgrade
- lighting upgrade
- plug load management

- water saving toilets
- solar window film

DOE regulations do not permit implementation of water conservation projects under the SESPC program. Therefore, the water savings toilets were deleted from ERI's proposal. The financial analysis of the remaining projects resulted in a 20 year maximum finance term and a negative cash flow each year, making the project not self-funding.

ERI was asked to prepare a financial proposal for the lighting upgrade and the plug load management ECMs. Even though this small project was self funding, it resulted in an 18 year finance term to accommodate the overhead of ERI. This long payoff for such a small project was not acceptable to the NRC. Therefore, the Interagency Agreement and Memorandum of Understanding were canceled.

In FY 2000, PEPCO Energy Services, Inc., the GSA Area-Wide Utility Energy Services contractor conducted a preliminary energy audit at TWFN, a leased building, to identify potential ECMs. PEPCO identified the following ECMs as potential financible projects:

- variable frequency drives on cooling towers
- power improvement devices on motors
- lighting upgrade
- occupancy sensors
- water saving toilets

NRC FY 2001 strategy is to authorize PEPCO to perform a preliminary and comprehensive energy audit of OWFN, perform a comprehensive energy audit of TWFN, and implement self-funding projects after the General Services Administration (GSA) and PEPCO finalize the terms and conditions of the GSA area wide utility contract.

#### 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. Water Conservation

In FY 2000, no activities were undertaken to improve water efficiency. In FY 2001, NRC will consider installing water saving toilets, as recommended in DOE's Water Management Plans and Best Management Practices.

## EXECUTIVE ORDER 13123 IMPLEMENTATION PLAN FOR FY 2001

### ENERGY MANAGEMENT INFRASTRUCTURE

#### 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 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
Louis Fisher	Office of Administration	Management/Technical
William Foster	Office of Administration	Budget
Thomas Martin	Office of Administration	Management/Technical
Kenneth McDow	Office of Administration	Management/Technical
Brian Kildee	Office of General Counsel	Legal
Stephen Pool	Office of Administration	Procurement
James Luehman	Office of Nuclear Reactor Regulation	Technical
John Voglewede	Office of the Chief Information Officer	Management
Robert Willcoxon	Office of the Chief Financial Officer	Budget
Thomas Wolf	Office of Nuclear Regulatory Research	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 plans to award a contract to implement the following recommendations from an energy audit of TWFN conducted by PEPCO Energy Services in FY 2000: install T-8 light fixtures, occupancy sensors, variable drives on cooling tower motors, and power improvement devices on selective pump motors and on air handler unit motors. In FY 2001 PEPCO will perform an energy audit of OWFN. After the audit, NRC will award a contract to PEPCO to implement cost effective energy conservation recommendations.

Upon completion of these projects, an evaluation of the energy efficiency of the buildings will be conducted to determine if they qualify for ENERGY STAR building certification. If OWFN or TWFN obtains the ENERGY STAR building certification, NRC will request DOE to designate the building(s) as a showcase facility.

## II. IMPLEMENTATION STRATEGIES

### A. Life-Cycle Cost Analysis

NRC will conduct comprehensive, investment grade energy audits to identify energy conservation projects. To determine which proposed projects are most cost effective, NRC will ensure that the following DOE approved life-cycle analytical software tools are used during the comprehensive audits:

- The Building Life-Cycle Cost Program

- The Facility Energy Decision System
- The Lighting Technology Screening Matrix

B. Facility Energy Audits

The OWFN and TWFN building will be audited for energy and water efficiency. This represents 100 percent of NRC facilities which require energy audits.

C. Financing Mechanisms

NRC plans to implement energy conservation projects using the GSA Area-Wide Utility Energy Services Contract.

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

Upon completion of energy conservation projects, which are expected to be completed in FY 2001, NRC will measure the energy consumption performance of OWFN and TWFN to determine if the facilities meet the ENERGY STAR criteria.

F. Sustainable Building Design

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