United States Government **Department of Energy**

memorandum

AUG 10 2001

REPLY TO ATTN OF: Office of Energy Efficiency and Renewable Energy, Federal Energy Management Program (FEMP), EE-90

SUBJECT: Reporting Guidance for FY 2001 Annual Report on Federal Government Energy Management and Conservation Programs

TO: Federal Agency Energy Coordinators

This purpose of this memo is to communicate Federal agencies' requirements and due dates for annual energy efficiency reporting. The Department of Energy's (DOE) Federal Energy Management Program (FEMP) worked with the Office of Management and Budget (OMB) to streamline and consolidate the separate energy management data and reports required by Executive Order and statute in order to minimize the reporting burden placed on agencies. DOE and OMB have jointly prepared FY 2001 reporting guidance to address all of the requirements mandated by the National Energy Conservation Policy Act (NECPA), Energy Policy Act of 1992 (EPACT), Executive Order 13123, *Greening the Government Through Efficient Energy Management*, and President Bush's Memorandum of May 3, 2001 on Energy Conservation at Federal Facilities.

Information and data collected from the agencies will be used to develop FEMP's FY 2001 Annual Report to Congress and OMB's Scorecard Report to the President. These reports describe energy management activities in Federal facilities and operations and progress in implementing the requirements of NECPA, EPACT, Executive Order 13123, and the President's May 3rd directive.

For FY 2001, agencies are required to submit (1) OMB Circular A-11, Exhibit 55, (2) FY 2001 Energy Scorecard, (3) FY 2001 Federal Agency Annual Report on Energy Management, and (4) FY 2001 Agency Energy Management Implementation Plan. Guidance and/or a format for all reporting are attached, except for the Energy Scorecard. The Scorecard is being amended by OMB to include transportation-related energy data and to stress the priorities of the new Administration. It will be distributed as soon as it is finalized.

The following table provides a summary of the reports and plans with due dates on which agencies are required to submit data for FY 2001.

ENERGY REPORTING REQUIREMENT	RECIPIENT	DUE DATE
OMB Circular A-11, Exhibit 55 (Annual Energy Management Data Report). Includes energy consumption and cost data (preliminary 2001), budget request data (actual 2001, projected 2002, 2003).	OMB cc: DOE	10 Sep 01
Energy Scorecard for FY 2001	OMB cc: DOE	1 Jan 02

ENERGY REPORTING REQUIREMENT	RECIPIENT	DUE DATE
FY 2001 Agency Annual Report on Energy Management. Satisfies agency requirements for NECPA/EPACT Annual Report to Congress and E.O. 13123 Annual Report to the President. Should include updates to OMB Circular A-11 Annual Energy Management Data Report (i.e., *final* energy consumption and cost data for 2001, revisions to projections for 2002 and 2003), and required narrative.	DOE cc: OMB	1 Jan 02
FY 2001 Agency Energy Management Implementation Plan	DOE cc: OMB	1 Jan 02

The Reporting Guidance for the FY 2001 Annual Report on Federal Agency Energy Management (Attachment 1 to this memo) provides an outline for what should be included in each agency's narrative report. This guidance references more detailed guidelines and documents that are not included, but are available on FEMP's Web site at www.eren.doe/femp/resources/guidances.html .

A blank OMB Circular A-11, Exhibit 55 form (i.e., the Annual Energy Management Data Report) and instructions for completing the form comprise Attachment 2 to this memo. Since the FEMP and OMB reports require much of the same data, Exhibit 55 will fulfill the need for all quantitative information required from the agencies to fulfill both their energy reporting requirement and their budgetary requirement. Agencies should simply attach an updated version of Exhibit 55 to their annual reports. The updates should include *final* FY 2001 energy data, along with any changes to projected FY 2002 or FY 2003 data due to appropriations action or FY 2003 passback and appeals decisions in the Fall. Electronic versions of data and reports are encouraged in addition to official paper submissions. An electronic version of Exhibit 55 in Excel is available on FEMP's Web site at www.eren.doe.gov/femp/aboutfemp/report_guid.html .

Once it is finalized, the blank FY 2001 Energy Scorecard will become Attachment 3 of this Reporting Guidance. OMB will use the FY 2001 Energy Scorecard to evaluate agencies' progress toward meeting the goals of Executive Order 13123 and Executive Order 13149, *Greening The Government Through Federal Fleet And Transportation Efficiency*. The information required on the Scorecard is summary level data that agencies will have already prepared for their other reports.

Attachment 4 to this memo contains guidance for agencies to use in developing their FY 2002 Annual Energy Implementation Plan, required by the Executive Order. These plans should describe how agencies plan to apply strategies identified in the Executive Order and in the President's May 3rd directive to energy efficiency projects and activities in the coming year. The FY 2002 Implementation Plan should be prepared as a stand-alone document and submitted with the Annual Report by January 1, 2002.

A unit conversion chart comprises Attachment 5 to this memo. This should be useful reference for agencies when preparing their annual reports.

If you have any questions, please contact Rick Klimkos at (202) 586-8287. The requested information should be sent to the following DOE and OMB contacts:

Mr. Rick Klimkos
Federal Energy Management Program, EE-90
U.S. Department of Energy
1000 Independence Ave., SW
Washington, DC 20585-0121
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Mr. Robert Sandoli
Office of Management and Budget
NEOB Room 8025
725 17th St. NW
Washington, DC 20503
Robert_Sandoli@omb.eop.gov

Thank you for your coope.ation and diligence in promoting energy efficiency. With your help, I am confident that we can achieve the President's energy efficiency goals and save taxpayer dollars.

Beth Shearer

Beth Shearer
Director
Federal Energy Management Program
Office of Energy Efficiency and Renewable Energy

Attachments:

Attachment 1	Reporting Guidance for FY 2001 Federal Agency Annual Report on Energy Management
Attachment 2	OMB Circular A-11 Section 55 Instructions and blank Exhibit 55 form (a.k.a. Annual Energy Management Data Report)
Attachment 3	Federal Agency Energy Scorecard for FY 2001 (To be finalized and distributed later)
Attachment 4	Guidance for Preparing the Federal Agency Energy Management Implementation Plan for FY 2002
Attachment 5	Reporting Units and Conversion Factors for Federal Energy Management Reporting

ATTACHMENT 1

Reporting Guidance for FY 2001 Federal Agency Annual Report on Energy Management

REPORTING GUIDANCE FOR FY 2001 FEDERAL AGENCY ANNUAL REPORT ON ENERGY MANAGEMENT

This guidance document provides an outline for each agency's annual report on energy management and conservation programs, and it describes briefly the information that should be included in each section of the report. The report that agencies produce in accordance with this guidance will fulfill agencies' reporting requirements for both the Annual Report to DOE required under the National Energy Conservation Policy Act (NECPA) (as amended by the Energy Policy Act of 1992 [EPACT]) and the Annual Report to the President required under Executive Order 13123.

The main purpose of this report is to provide narrative information in support of the quantitative results and qualitative strategies related to energy use reduction and energy efficiency. Much of the quantitative information required for this report will be calculated by agencies for (1) OMB Circular A-11 to fulfill the energy data requirements in agency budget requests, and (2) Energy Scorecards. The A-11 Annual Energy Management Data Report and Energy Scorecard should be included in Section IV of agencies' Annual Reports and can be referenced where appropriate.

At the end of this guidance is a tabular summary of goals of Executive Order 13123 and NECPA/EPACT. The table may be submitted with agencies' Annual Reports as a reference for readers unfamiliar with these mandates.

A FY 2002 Agency Energy Implementation Plan should be submitted as an attachment to each agency's FY 2001 Annual Report. DOE and OMB have prepared a separate guidance document for preparation of an Implementation Plan. The outline for the Implementation Plan follows closely the outline for the Annual Report. This will enable DOE to evaluate in future years each agency's progress in implementing energy management strategies that were identified in the previous year's Implementation Plan.

OUTLINE AND INSTRUCTIONS FOR THE ANNUAL REPORT

I. **Management and Administration.** This section will describe (1) the agency's establishment of an energy management infrastructure and (2) the agency's use of management tools to implement Executive Order 13123.

A. Energy Management Infrastructure

1. **Senior Agency Official**. Identify the agency's senior energy official and describe the official's role and responsibilities.

2. **Agency Energy Team**. Identify the members of the team and describe the team's responsibilities.

B. Management Tools

1. **Awards (Employee Incentive Programs).** Describe the agency's use of employee incentive programs to reward exceptional performance in implementing Executive Order 13123.

2. **Performance Evaluations.** Describe agency efforts to include successful implementation of provisions of Executive Order 13123 in the position descriptions and performance evaluations of senior energy officials, members of the agency energy team, heads of field offices, and facility/energy managers.

3. **Training and Education.** Describe activities undertaken to ensure that all appropriate personnel receive training for energy management requirements. (Note: The number of employees trained will be reported on the agency's A-11 Data Report and Energy Scorecard. Expenditures on training will also be reported on the A-11 Data Report). Describe agency outreach programs that include education, training, and promotion of ENERGY STAR® and other energy efficient products for Federal purchase card users.

4. **Showcase Facilities.** Highlight exemplary new or existing facilities that the agency has designated Showcase Facilities in FY 2001. Describe why the facilities are considered Showcase Facilities (i.e., discuss the facility design, the improvements made in energy or water efficiency, the use of renewable energy, etc.).

II. **Energy Efficiency Performance.** This section will highlight data calculated for reporting on the A-11 Data Report and the Energy Scorecard. The purpose of the section is to provide narrative information in support of these data.

A. Energy Reduction Performance

The factors used for converting the reporting units to Btu have a significant impact on how performance toward the energy efficiency goals and other goals of E.O. 13123 are measured. "Energy use" is defined as the energy that is used at a building or facility and measured in terms of energy delivered to the building or facility. Recognizing this, OMB and DOE will use Btu based on the site conversion factors for both electricity and steam as the primary measure of performance. However, because carbon emissions are generally proportional to source energy use, reductions in source Btu will also be considered more seriously than in the past.

The conversion factor for electricity of 3,412 Btu per kilowatt hour, the rate of consumption by the end-user on site, will be used for measuring performance. The difference between the site conversion rate and the estimated source conversion rate of 10,346 Btu per kilowatt hour is attributable to transmission and conversion losses associated with electric generation. The site conversion factor for purchased steam is 1,000 Btu per pound. Generation inefficiencies and distribution losses are included in the source conversion factor of 1,390 Btu per pound. Separate tables showing agency consumption using the source conversion factors for electricity and steam, along with estimated carbon emissions, will be included in DOE's Annual Report to Congress.

1. **Standard Buildings.** Report energy use for standard buildings in units of Btu-per-gross-square-foot (Btu/GSF) for FY 1985 (the Base Year) and FY 2001. Report the percent change from FY 1985 and from the FY 2000. (Note: This information will be reported on the agency's Energy Scorecard). Discuss any extenuating factors that may be skewing the accuracy of this performance measure.

Each agency that controls its Federally-owned building space or directly pays the utilities in its leased space will report to DOE the agency's aggregate energy consumption for various fuel types (see the A-11 Data Report instructions). Reporting on leased buildings may pose some difficulty depending on the nature of the lease (partially serviced, fully serviced). In cases where an agency is responsible for paying utility bills for space that is leased, the agency is expected to report energy consumption for the leased space to DOE. If an agency is leasing from the General Services Administration, GSA is responsible for reporting.

Agencies that have been delegated responsibility by GSA for operation and maintenance of buildings they occupy are required to report, to DOE, energy consumption for these buildings during the years the buildings are under their control. An agency should *not* adjust the FY 1985 baseline to reflect the addition of buildings delegated by GSA if those buildings were not under the agency's control during the base year period. The FY 1985 consumption and square footage of any building delegated after FY 1985 is included in GSA's FY 1985 baseline. To also include this square footage and consumption in the agency's baseline would result in double reporting. The impact of delegation activity on the Btu/GSF rates of most agencies should be minimal. In cases where building delegations account for a large increase in the percentage of an agency's building inventory and its Btu/GSF is greatly impacted, this situation will be documented in the text of DOE's Annual Report to Congress.

Comparisons to a FY 1985 base year will not be possible for agencies that had no buildings under their control during the base year. Where comparisons to the FY 1985 base year are not possible, that specific item in the data table will be footnoted as "not applicable" in the report. In order to maintain accurate data and comply with the legislation, FEMP will work with relevant agencies to determine alternative approaches that would minimize double counting, but provide comparative information on Btu per GSF consumption.

2. **Industrial and Laboratory Facilities.** Identify the facility inventory subject to this goal, referencing Section IV D that lists the buildings included. Describe the performance measure(s) used (Btu/square foot, Btu/production unit, etc.). (Refer to FEMP Web site for the guidance document *Section 203 Performance Goals for Industrial, Laboratory, Research, and Other Energy-Intensive Facilities* [www.eren.doe.gov/femp/resources/guidances.html]).

   Report energy use for industrial and laboratory facilities for FY 1990 (the Base Year) and FY 2001. Report the percent change from FY 1990 and from the FY 2000. (Note: This information will be reported on the agency's Energy Scorecard). Discuss any extenuating factors that may be skewing the accuracy of this performance measure.

3. **Exempt Facilities**. Refer to Section IV E–a list of exempt facilities and an explanation of why they were exempted. (Refer to DOE's *Criteria for Exempting Facilities from the Goals of Executive Order 13123 and Guidance for Reporting Exemptions* [www.eren.doe.gov/femp/resources/guidances.html]).

Although buildings found exempt according to the criteria are not subject to the requirements of Sections 202 and 203 of Executive Order 13123, DOE will continue to collect energy consumption data for these buildings under the new reporting category of "Exempt Buildings." This ensures that accurate reporting on overall Federal energy consumption is maintained.

4. **Tactical Vehicle and Equipment Fuel Use**. Refer to the A-11 Data Report to identify the fuel use for tactical vehicles and other equipment. Discuss trends in the use of each type of fuel and methods employed to reduce fuel use.

To relieve reporting burdens on Federal agencies, GSA's Agency Report of Motor Vehicle Data (Form SF-82) was revised for collecting acquisition, fuel consumption, and fuel cost data for motor vehicles directly from vehicle fleet managers. The use of the SF-82 eliminated the need to report fuel consumption data for non-tactical motor vehicles to DOE. GSA now collects this data, including alternative fuel consumption data reported under Sections 303 and 308 of EPACT, and forwards this information to DOE for inclusion in the Annual Report to Congress. For more information on the SF-82, please contact Ms. Lois Mandell of GSA's Federal Vehicle Policy Division at (202) 501-2824.

B. **Renewable Energy.** Discuss agency's policy and efforts to encourage purchase of electricity generated from renewable energy sources. (Note: The quantitative information related to this section [see below] will be reported on the agency's A-11 Data Report and Energy Scorecard. On the Energy Scorecard, self-generated renewable energy use and purchased renewable energy use will be aggregated into a single value).

1. **Self-generated renewable energy.** Identify/estimate energy use (in BBtu) from electricity self-generated from renewable sources (photovoltaics, wind) and renewable energy thermal projects (solar thermal, geothermal).

2. **Purchased renewable energy.** Identify the renewable (i.e., wind, solar, geothermal, biomass) energy component of power purchases under competitive contract in megawatt-hours. (Note: Guidelines for counting renewable energy projects and purchases of electricity from renewable energy sources toward agency progress in reaching their goals are available on the FEMP Web site

[www.eren.doe.gov/femp/resources/guidances.html]. Information on the Federal renewable energy goals is also available on the FEMP Web site).

3. **Million Solar Roofs (MSR).** Identify the total number of qualifying solar roofs, pool covers, etc. for entering into MSR on-line registry (www.eren.doe.gov/millionroofs/register.html). Discuss where the solar roofs were installed and/or challenges in installing solar roofs at certain facilities.

C. **Petroleum.** Identify petroleum-based fuels (fuel oil, LPG/propane) used in buildings in FY 1985 and in FY 2001 and the percentage change from FY 1985. (Note: This information will be reported on the A-11 Data Report and the Energy Scorecard).

D. **Water Conservation.** Identify/estimate water consumption and cost by the agency in FY 2001 and outline any agency-specific issues related to collection of water consumption data. (Note: This information will be reported on the A-11 data report and the energy scorecard). Refer to DOE's *Guidance to Federal Agencies for Determining Baseline Water Usage* and *Guidance to Establish Water Efficiency Improvement Goal for Federal Agencies* on the FEMP Web site (www.eren.doe.gov/femp/resources/guidances.html).

III. **Implementation Strategies.** The purpose of this section is to identify and describe the use of strategies to reduce energy consumption and improve energy efficiency. It is not expected that each agency will have employed every strategy; rather, each strategy identified in Executive Order 13123 is listed as a subsection to remind agency officials of the existence of these strategies and to encourage their use where practical and life-cycle cost effective.

In each of the following subsections, present highlights for each of the strategies that were used. If certain strategies were not used, explain why not. Please provide narrative where strategies that were identified as focal points in the previous year's Implementation Plan were successful, where challenges existed in implementing strategies, and how challenges were overcome.

A. **Life-Cycle Cost Analysis.** Outline procedures in place to ensure the use of life-cycle cost analysis in making investment decisions about in products, services, construction, and other projects to lower the Federal Government's costs and to reduce energy and water consumption. Highlight examples where life-cycle cost analysis was used in capital budgeting decisions concerning energy efficiency. Report on the successes and challenges of implementing life-cycle cost effective projects. (Under EPACT, energy conservation projects that will pay back investment costs within 10 years must be undertaken).

B. **Facility Energy Audits.** Describe the number/percentage of agency facilities audited for energy and water efficiency during FY 2001, and the total percentage of facilities audited to date. (In accordance with EPACT and Executive Order 13123, approximately 10% of facilities should be audited each year).

C. **Financing Mechanisms.** Provide narrative information related to the use of Energy-Savings Performance Contracts (ESPCs) and Utility Energy Services Contracts (UESCs). (Note: Quantitative information related to ESPCs and UESCs will be reported on the A-11 Data Report and the Energy Scorecard). Report funding requested and received for FY 2001 and funding requested for FY 2002 for the performance of energy

surveys/audits and for applied energy conservation measures (Note: This information will be reported on the A-11 Data Report).

D. **ENERGY STAR® and Other Energy-Efficient Products**. Describe steps taken to promote the purchase of ENERGY STAR® products and/or products that are in the upper 25 percent of energy efficiency as designated by FEMP. Note whether energy efficient criteria have been incorporated into all guide specifications and product specifications developed for new construction and renovation. Also note whether such criteria have been incorporated into product specification language. (See the ENERGY STAR® products and "green" products web sites by GSA [www.fss.gsa.gov/environ], DOE [www.eren.doe.gov/femp/procurement/begin.html], and EPA [www.epa.gov/uiseerko/index.html])

E. **ENERGY STAR® Buildings.** Report the number and percentage of buildings that have met the ENERGY STAR® Building criteria and have officially been designated ENERGY STAR® Buildings. (Buildings must rank in the top 25 percent in energy efficiency relative to comparable commercial and Federal buildings to be eligible for the ENERGY STAR® Buildings designation. See www.epa.gov/buildings/label).

F. **Sustainable Building Design**. Report whether sustainable building design principles have been incorporated into the siting, design, and construction of new facilities. (See www.wbdg.org for a description of sustainable building design principles).

G. **Energy Efficiency in Lease Provisions.** Describe how energy and water efficiency are considered when agencies enter into new leases or renegotiate/extend existing leases (e.g., preference for buildings with sustainable design and development, preference for certified ENERGY STAR® Buildings, etc.)

H. **Industrial Facility Efficiency Improvements.** Highlight activities undertaken to explore efficiency opportunities in energy-intensive facilities. This may include activity in the following areas: steam systems, boiler operation, air compressor systems, industrial processes, fuel switching, cogeneration, and other efficiency and renewable energy technologies.

I. **Highly Efficient Systems**. Describe new construction and/or retrofit projects for which combined cooling, heating, and power systems were installed. Report whether local natural resources were surveyed to optimize use of available biomass, geothermal, or other naturally occurring energy sources.

J. **Off-Grid Generation**. Describe the installation of new solar hot water, solar electric, solar outdoor lighting, small wind turbines, fuel cells, and other off-grid alternatives.

K. **Electrical Load Reduction Measures**. Describe agency activities undertaken to reduce electricity load during power emergencies. These activities are required under the President's Memorandum of May 3, 2001 on Energy Conservation at Federal Facilities. (See www.eren.doe.gov/femp/resources/presidential_direct.html for information on electrical load reduction measures.)

L. **Water Conservation.** Highlight activities undertaken to improve water efficiency. Discuss progress in developing and implementing Water Management Plans and Best

Management Practices for efficient use of water (See the guidance document, *Water Efficiency Improvement Goal for Federal Agencies* on FEMP's Web site [www.eren.doe.gov/femp/resources/guidances.html]).

IV **Data Tables and Inventories.** Include the items listed below in the order given.

A. OMB Circular A-11, Exhibit 55. A blank Exhibit 55 form and instructions for completing the form was issued by DOE.

B. Energy Scorecard for FY 2001. A blank scorecard was issued by DOE.

C. Goals of Executive Order 13123 and NECPA/EPACT (optional). This table was prepared by OMB/DOE and is attached to this guidance document. Agencies may wish to include this table in their Annual Reports for reference.

D. Industrial and Laboratory Facilities Inventory. This should include the following information: building name, building location (city and state), building classification last year.

E. Exempt Facilities Inventory. This should include the following information: building name, building location (city and state), building classification last year, justification for exempt status.

V. **Attachments.** Attach a FY 2002 Implementation Plan to this FY 2001 Annual Report. Consult the FEMP document *Guidance for Preparing the Federal Agency Implementation Plan for FY 2002*.

Goals of Executive Order 13123 and NECPA/EPACT

Executive Order 13123

Category	Goal	Comments
Greenhouse Gas Emissions	30% reduction by 2010	Base year is 1990. DOE will calculate agencies' progress toward this goal and report it on agencies' annual energy scorecards
Energy Efficiency		
Standard Buildings	• 30% improvement by 2005 • 35% improvement by 2010	Base year is 1985
Industrial and Laboratory Facilities	• 20% improvement by 2005 • 25% improvement by 2010	Base year is 1990
Exempt Facilities	N/A	Despite lack of quantitative goal, agencies should implement strategies to improve energy efficiency at these facilities.
Renewable Energy	• Implement renewable energy projects • Purchase electricity from renewable energy sources • Install 2,000 solar energy systems at Federal facilities by 2000 • Install 20,000 solar energy systems at Federal facilities by 2010	Installation of Federal solar energy systems will help support the Million Solar Roofs initiative
Petroleum	Reduce petroleum use	Switches to alternative energy sources should be life-cycle cost effective
Source Energy	Reduce use of source energy	Accomplish by undertaking projects that are life-cycle cost effective
Water Conservation	Reduce water consumption*	Accomplish via life-cycle cost effective measures, energy-savings performance contracts, or other financing mechanism

NECPA/EPACT

Energy Efficiency	20% improvement by 2000	Base year is 1985
Financing	Undertake all energy efficiency improvement projects that have a simple payback period of 10 years or less by 2005	E.O. 13123 expands this goal by mandating that any energy efficiency project that is life-cycle cost effective be undertaken
Audits	Conduct audits for energy efficiency on 10% of facilities annually	E.O. 13123 includes language supporting this goal

* FEMP has established water efficiency improvement goals as directed by the Executive Order. Agencies must implement Water Management Plans and Best Management Practices according to the following schedule:

05% of facilities by 2002
15% of facilities by 2004
30% of facilities by 2006
50% of facilities by 2008
80% of facilities by 2010

For more detail, see the FEMP guidance document Water Efficiency Improvement Goal for Federal Agencies

Attachment 2

OMB Circular A-11, Exhibit 55 and Accompanying Instructions

The four-page Exhibit 55 and six pages of instructions are contained in a separate electronic file, (Exhibit55.pdf).

Agencies are encouraged to use DOE/FEMP's electronic FY 2001 Energy Management Data Report (DataReport01.xls) for their Exhibit 55 submittal

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SECTION 55 – ENERGY USE, COSTS, AND EFFICIENCY

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55.2 How will this information be used?
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Ex-55 Annual Energy Management Data Report

55.1 What is the purpose of this information?

Executive Order 13123 requires agencies to track and reduce their energy use in buildings and facilities. The Energy Policy Act of 1992 (EPAct) required agencies to reduce their energy use per square foot of office space by 20 percent, relative to use in 1985, by the year 2000. E.O. 13123 extends those goals for office buildings to a 30 percent reduction by 2005 and 35 percent by 2010, relative to 1985. E.O. 13123 also requires improvements in industrial and laboratory facilities: 20 percent (relative to 1990) by 2005 and 25 percent by 2010. Part 3 of E.O. 13123 requires agencies to include budgetary information on energy use and efficiency in their budgets and sets out requirements for an annual report to the President on progress toward the energy efficiency goals.

55.2 How will this information be used?

OMB will review the resources your agency has requested for energy-efficiency improvements in the context of the requirements of E.O. 13123. The Department of Energy (DOE) will review and aggregate the numerical data and other information included in the report to the President to ensure the progress of each agency and to provide a government-wide picture of progress toward the mandated goals.

55.3 Do I need to report on energy use, costs, and efficiency?

If your agency controls its Federally-owned building space or directly pays the utilities in its leased space, then you must report your agency's aggregate energy consumption for each of the fuel types listed below. Reporting on leased buildings may pose some difficulty depending on the nature of the lease (partially serviced, fully serviced). If your agency leases space from the General Services Administration, GSA is responsible for reporting energy data for that space. If all of your space is leased from GSA, and if you do not pay any energy surcharges, then you do not have to report any data in this section.

If your agency has been delegated responsibility by GSA for operation and maintenance of the buildings you occupy, then you are required to report energy consumption for these buildings for any years in which the buildings are under your control.

You must provide data for three years:

- Final data for the previous year.

- Estimates for the current year.
- Estimates for the budget year for which you are planning.

55.4 When and how do I report?

Two data submissions are required. You must complete exhibit 55 with estimates for the past year, the current year, and the budget year, and submit it in September with your agency's budget submission to OMB. You should submit a revised exhibit 55 for *all three years*, with final data for the previous year, as part of your annual report to the President by January 1, 2002.

Submit the information to your agency's OMB representative, with copies to:

Agency Report Coordinator
Federal Energy Management Program (FEMP)
U.S. Department of Energy, EE-90
1000 Independence Ave., SW
Washington, DC 20585-0121
Phone: (202) 586-8287
Fax: (202) 585-3000
Email: rick.klimkos@hq.doe.gov

and

Energy Efficiency Examiner
Office of Management and Budget
NEOB Room 8025
725 17th St. NW
Washington, DC 20503
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Email: Robert_Sandoli@omb.eop.gov

We encourage you to download the report format from the Internet (www.eren.doe.gov/femp/aboutfemp/report_guid.html) and complete the report electronically.

55.5 How do I prepare exhibit 55?

You must complete the applicable twelve tables shown in exhibit 55. Part 1 consists of six tables concerning energy consumption and cost data. Part 2 consists of six tables concerning energy efficiency improvements.

The Department of Energy Federal Energy Management Program (FEMP) issues annual guidance on agency reports to FEMP and to the President. Because the FEMP reporting requirements include most of the information requested here, plus additional narrative information, you may want to refer to FEMP's reporting guidance for more details and background on the energy data we are requesting. The reporting forms here and in the FEMP guidance require the same information, except for the "Identification of Funding" section included here. You can use the forms in this section for your annual report to FEMP and the President.

If your energy or water bills have different units of measurement from the ones required here, you must convert the data. For conversion units not given in the explanations for individual sections, refer to the detailed FEMP reporting guidance, which includes conversion tables.

You may adjust the 1985 baseline data if GSA has recently delegated responsibility for some buildings to your agency; however, you should discuss any changes to your baseline information with DOE's Federal Energy Management Program before making them. FEMP's annual reporting guidance document discusses specific cases in more detail, but in general, you should not make changes to your baseline.

(a) *Tables 1-1 and 1-2.*

For each category of buildings and facilities (standard, industrial, and exempt), report how much of each of the following types of energy your agency used, or how much you spent for that type of energy. If you know both the amount consumed and its cost, report both numbers. If you know only one, report that and the Department of Energy will estimate the other value based on the average national cost of each form of energy. You must submit all data in the reporting units shown below for each energy type. For each quantity of energy consumed, round to the nearest tenth of an integer. (i.e., 1,289.3 megawatt hours). For cost data, enter the annual cost for each energy type in thousands of dollars, rounded to the nearest tenth of an integer, (e.g., $77.4 for $77,358).

Energy type	*Reporting unit*
Electricity	(megawatt hours)
Fuel oil	(thousands of gallons)
Natural gas	(thousand cubic feet)
LPG/propane	(thousands of gallons)
Coal	(short ton)
Purchased steam	(billion BTU)
Other	(billion BTU)

If you were able to enter cost data for all types of energy you used, then total the annual costs and enter that number, in thousands of dollars, in the space provided.

Report the gross square footage of the standard buildings and facilities in your agency's inventory for each reporting year. Enter this number in thousands of square feet, rounded to the nearest tenth of an integer.

1. *Standard building or facility.* This category includes office and administrative buildings and any other building that does not specifically fit the criteria for an "industrial, laboratory, research, or other energy-intensive facility" or for an exempt facility. Refer to the DOE document, *Criteria for Exempting Facilities from the Goals of Executive Order 13123 and Guidance for Reporting Exemptions* for additional information.

2. *Industrial, laboratory, research, or other energy-intensive facilities.* This category includes data on buildings and facilities that by their nature have much higher energy consumption than standard office buildings. You can choose what measure of output or activity to use as a basis for computing energy efficiency. Your agency has the option of meeting the E.O. 13123 energy reduction goals in these facilities in terms of energy use per square foot like standard buildings, or in terms of some other performance ratio, such as energy use per ton of material handled, per flight prepared, or per some

other measure of productivity. Refer to section 203, *Performance Goals for Industrial, Laboratory, Research, and Other Energy-Intensive Facilities*, (www.eren.doe.gov/femp/resources/indust.html).

In tables 1-1 and 1-2, indicate the total cost for the optional unit of measure you have chosen, if any, in addition to the total consumption of each type of fuel and the total gross square feet of industrial/energy-intensive facilities.

(b) *Table 1-3. Facilities exempt from meeting the E.O. 13123 goals.*

You should refer to the DOE document, *Criteria for Exempting Facilities from the Goals of Executive Order 13123 and Guidance for Reporting Exemptions* (www.eren.doe.gov/femp/resources/criteria.html) to decide which facilities are exempt from the E.O. 13123 energy-efficiency improvement goals. Although these exempt buildings are not subject to the requirements of Sections 202 and 203 of E.O. 13123, you should still report energy consumption and cost data for them under the reporting category of "Exempt buildings," using the same method as for the standard buildings/facilities category.

(c) *Table 1-4. Tactical vehicles and other equipment.*

Table 1-4 includes information on the fuel use of non-passenger vehicles and non-vehicle engines like mobile generators. For all liquid engine fuels, report your agency's total use in thousands of gallons of each type of fuel listed in exhibit 55. If you used significant quantities of a fuel not listed, report its use in billions of BTU. (See the detailed FEMP reporting guidance for conversion tables if necessary.) Also report the actual or estimated total cost to your agency of each type of fuel for each of the reporting years.

(d) *Table 1-5. Water consumption and cost.*

If your water bills have different units of measurement from the ones required here, you must convert the data. For conversion units, refer to the detailed FEMP reporting guidance which includes conversion tables.

(e) *Table 1-6. Renewable ("green") energy purchases.*

With the advent of retail competition, Federal agencies have opportunities to purchase electricity in the competitive market from a retail supplier other than their local electric utility. In addition, Federal agencies have opportunities to purchase renewable energy from utilities as part of "green power" pricing programs. Your agency will get credit toward meeting the goals of E.O. 13123 by distinguishing "green energy" contracts from other power contracts, and reporting the portion of power attributable to renewable sources.

(1) *Purchases of renewable electricity.* Report the amount of renewable electricity you purchased from suppliers whose energy products are partially or completely derived from renewable sources. Your utility suppliers can tell you what percentage of the power is derived from renewables. Apply that percentage to both the gross usage and cost data to complete the table. For example, if you purchased 5000 MWH under a "green energy" contract where 10% of the power is from renewables, you would report 50 MWH and 10% of the total cost.

(2) *Purchased biomass or landfill gas (renewable energy sources).* For competitive purchases of natural gas from renewable energy sources, provide the annual usage (in thousands of cubic feet) and the cost. Generally this would be purchased separately from other gas, so the renewable fraction is 100 percent. But if you purchased this gas in a mix with conventional natural gas, use the percentage mix to calculate and report the amount that is actually "renewable."

(3) *Purchased thermal energy from renewable energy sources.* For purchases of any form of thermal energy from renewable energy sources, provide the annual usage (in billion BTU) and the cost.

(4) *Average annual incremental costs.* In the last line of the table, estimate the incremental (extra) cost you paid for renewable energy by multiplying the renewable quantity times the difference in unit price between conventional energy and your renewable energy contract.

(f) *Table 2-1. Direct agency obligations.*

These are obligations for energy or water efficiency incurred from appropriated funds, revolving fund accounts, or other accounts that belong to your agency; for example, obligations for purchases of compact fluorescent lights to replace incandescent bulbs, or replacement chillers paid for directly by your agency rather than through an energy savings performance contract. They do not include anything to be paid for or financed by a third party (e.g., a utility or energy-savings performance contractor). Report training data separately in table 2-5.

Provide information on the funds your agency obligated or plans to obligate for each reporting year. Enter amounts in thousands of dollars rounded to the nearest tenth of an integer.

(g) *Table 2-2. Energy savings performance contracts.*

Energy-savings performance contracts (ESPCs) are contracts that allow a private-sector energy service company (ESCO) to perform energy-efficiency improvements at a government facility using third-party financing, rather than the government paying for the work directly. The ESP contracts provide that the contractor guarantees a certain minimum level of energy savings, and based on that guarantee, the government will pay the contractor some or all of the guaranteed savings until the improvements have been paid off, including interest and maintenance. ESPCs allow agencies to undertake more and larger efficiency improvements than their budgets might otherwise allow and OMB encourages their use.

The first line of table 2-2 will show the total number of new ESPCs awarded by your agency in each reporting year. Report only new ESPCs signed during that year, in the "number/thou $" column. On the same line, in the "MMBTU" column, enter the average *annual* energy savings anticipated from the ESP contracts awarded in each year, in millions of BTU. On the second line, enter the total value of new ESPCs signed during each reporting year. The third and fourth lines show how the estimated life-cycle cost savings of all of the ESPCs you reported on the first two lines are to be split between contractor payments and savings retained by your agency. Each ESPC has a schedule of payments, and you can ask your sites to aggregate their total expected contractor payments and retained savings. Note that the data represent multi-year totals, but you report only how the savings will be split in new ESPCs signed during the reporting years. The last line is an annual figure – the total amount your agency paid or will pay to ESP contractors during each reporting year.

(h) *Table 2-3. Utility energy services contracts.*

Utility Energy Services Contracts (UESCs) are similar to ESPCs, except that the work is performed by the utilities serving your agency's sites under an "area-wide agreement," usually negotiated by GSA.

The first line of this table will include the total number of new UESCs awarded by your agency in each reporting year. Report only new UESCs signed during that year, in the "number/thou S" column. On the same line, in the "MMBTU" column, enter the average *annual* energy savings anticipated from UES contracts awarded in each year, in millions of BTU. The second line will show the total value of new UESCs signed during each reporting year. The third and fourth lines show how the estimated life-cycle cost savings of all of the UESCs you reported on the first two lines are to be split between contractor payments and savings retained by your agency. Each UESC has a schedule of payments, and you can ask your sites to aggregate their total expected contractor payments and retained savings. Note that these amounts are multi-year totals, but you report only how the savings will be split in new UESCs signed during the reporting years. The last line is an annual figure – the total amount your agency paid or will pay to UES contractors during each reporting year.

(i) *Table 2-4. Utility incentives or rebates.*

Beginning with EPAct, agencies were authorized and encouraged to participate in demand-side management (DSM) incentive programs offered by their servicing utilities (or by Administrators of public purpose programs in states that have restructured). You should report incentives received for projects accomplished in each year.

On the first line of table 2-4, enter in thousands of dollars the total amount of financial incentives received in each year from either your servicing utility(ies) or the Administrator of a public purpose program. On the same line, enter the estimated amount of energy (in millions of BTU) that will be saved annually by the projects for which you received rebates. On the second line, enter the amount of funds your agency expended on projects that received incentive payments (i.e., the expenditures that were necessary in order to receive the incentives). These funds may include direct expenditures reported in the direct expenditures table and/or savings paid to ESP or utility energy service contractors reported in previous tables.

(j) *Table 2-5. Training.*

Enter the number of Federal personnel or on-site contractors in your agency who received or are expected to receive energy management training in each year, and also enter your expenditures (or budget) during each of those years for energy management training. When counting the number of people who received training, include only people who received organized instruction, not those who received general-information items like flyers reminding people to turn out lights and turn off computers. The cost of such general information items intended to raise energy awareness among all employees can be included in the training budget entries, however.

(k) *Table 2-6. Identification of funds.*

For the budget year only, identify funds requested for the efficiency activities listed.

Attachment 3

Energy Scorecard for FY 2001

The two-page Energy Scorecard will be contained in a separate electronic file, (score01) once it is amended by OMB in include transportation-related energy data and to stress the priorities of the new Administration

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Attachment 4

Guidance for Preparing the Federal Agency Energy Management Implementation Plan for FY 2002

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Guidance for Preparing the Agency Energy Management Implementation Plan for FY 2002

The Implementation Plan should be formatted as described below. The format generally follows the outline for the Annual Report. Although the Implementation Plan will be submitted as an attachment to the Annual Report, the Plan should be considered a stand-alone document. Therefore, please do not refer to the Annual Report for Section I, Part A, or for any other part of the Plan that you feel may be redundant with the Annual Report. This Plan should be brief and should describe only activities planned for the next fiscal year.

I. **Management and Administration.** This section will describe (1) the agency's establishment of an energy management infrastructure and (2) the agency's plans to use management tools in implementing Executive Order 13123.

A. **Energy Management Infrastructure**

1. **Senior Agency Official.** Identify the agency's senior energy official and describe the official's role and responsibilities.

2. **Agency Energy Team.** Identify the members of the team and describe the team's responsibilities.

B. **Management Tools**

1. **Awards (Employee Incentive Programs).** Describe the agency's plans to use employee incentive programs to reward exceptional performance in implementing Executive Order 13123.

2. **Performance Evaluations.** Describe agency plans to include successful implementation of provisions of Executive Order 13123 in the position descriptions and performance evaluations of members of the agency energy team and facility/energy mangers.

3. **Training and Education.** Describe plans to ensure that all appropriate personnel receive training for energy management requirements. Describe plans to develop and implement agency outreach programs that include education, training, and promotion of ENERGY STAR® and other energy efficient products for Federal purchase card users.

4. **Showcase Facilities.** Describe plans to construct or renovate exemplary facilities that the agency plans to designate as Showcase Facilities. Discuss why the facilities will be considered Showcase Facilities (i.e., discuss the facility design, the improvements made in energy or water efficiency, the use of renewable energy, etc.).

II. Implementation Strategies. The purpose of this section is to describe plans to use strategies to reduce energy consumption and improve energy efficiency. It is not expected that each agency will employ every strategy; rather, each strategy identified in Executive Order 13123 is listed as a subsection to remind agency officials of the existence of these strategies and to encourage their use where practical and life-cycle cost effective. If certain strategies will not be used, please explain why not.

A. **Life-Cycle Cost Analysis.** Outline plans to institute procedures to ensure the use of life-cycle cost analysis in making investment decisions about in products, services, construction, and other projects to lower the Federal Government's costs and to reduce energy and water consumption. Report on plans to implement the 10-Year Simple Payback Rule. (Under EPACT, energy conservation projects that will pay back investment costs within 10 years must be undertaken).

B. **Facility Energy Audits.** Describe the number/percentage of agency facilities that will be audited for energy and water efficiency during the next fiscal year. (Approximately 10% of facilities should be audited each year). Describe the prioritization criteria for audits (e.g., oldest facilities, most energy intensive facilities, etc.)

C. **Financing Mechanisms.** Provide narrative information related to the planned use of Energy-Savings Performance Contracts (ESPCs) and Utility Energy Services Contracts (UESCs).

D. **ENERGY STAR® and Other Energy-Efficient Products.** Describe steps to be taken to promote the purchase of ENERGY STAR® products and/or products that are in the upper 25 percent of energy efficiency as designated by FEMP. Note whether energy efficient criteria will be incorporated into all guide specifications and product specifications developed for new construction and renovation. Also note whether such criteria will be incorporated into product specification language. (See the ENERGY STAR® products and "green" products web sites by GSA [www.fss.gsa.gov/environ], DOE [www.eren.doe.gov/femp/procurement/begin.html], and EPA [www.epa.gov/uiseerko/index.html])

E. **ENERGY STAR® Buildings.** Report the number and percentage of buildings that, in the next fiscal year, are expected to meet the ENERGY STAR® Building criteria and to be officially designated ENERGY STAR® Buildings. (Buildings must rank in the top 25 percent in energy efficiency relative to comparable commercial and Federal buildings to be eligible for the ENERGY STAR® Buildings designation. See www.epa.gov/buildings/label).

F. **Sustainable Building Design.** Report whether sustainable building design principles will be incorporated into the siting, design, and construction of new facilities. (See www.wbdg.org for a description of sustainable building design principles).

G. **Energy Efficiency in Lease Provisions.** Describe how energy and water efficiency will be considered when agencies enter into new leases or renegotiate/extend existing leases (e.g., preference for buildings with sustainable design and development, preference for certified ENERGY STAR® Buildings, etc.)

H. **Industrial Facility Efficiency Improvements.** Highlight planned activities to explore efficiency opportunities in energy-intensive facilities. This may include activity in the following areas: steam systems, boiler operation, air compressor systems, industrial processes, fuel switching, cogeneration, and other efficiency and renewable energy technologies.

I. **Highly Efficient Systems.** Describe plans for new construction and/or retrofit projects for which combined cooling, heating, and power systems will be installed. Report whether local natural resources will be surveyed to optimize use of available biomass, geothermal, or other naturally occurring energy sources.

J. **Off-Grid Generation.** Describe plans for installing new solar hot water, solar electric, solar outdoor lighting, small wind turbines, fuel cells, and other off-grid alternatives.

K. **Electrical Load Reduction Measures.** Describe agency plans for implementing electrical load reduction measures to be taken during power emergencies to cut electricity consumption in buildings and facilities. (See www.eren.doe.gov/femp/resources/presidential_direct.html for information on electrical load reduction measures.)

L. **Water Conservation.** Highlight activities to be undertaken to improve water efficiency. Discuss plans to develop and implement Water Management Plans and Best Management Practices for efficient use of water (Note: See the guidance document entitled *Water Efficiency Improvement Goal for Federal Agencies* on FEMP's Web site [www.eren.doe.gov/femp/resources/guidances.html]).

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Attachment 5

Reporting Units and Conversion Factors for Federal Energy Management Reporting

REPORTING UNITS AND CONVERSION FACTORS FOR FEDERAL ENERGY MANAGEMENT REPORTING

Standard Buildings/Facilities
Industrial, Laboratory, and Other Energy-Intensive Facilities
Exempt Facilities

Fuel Type	*Reporting Units*	*BTUs per Reporting Unit*	*Joules per Reporting Unit*	*GigaJoules (GJ) per Reporting Unit*
Electricity	Megawatt Hour (MWH)	3,412,000	3,599,660,000	3.59966
Fuel Oil	1,000 Gallons	138,700,000	146,328,500,000	146.3285
Natural Gas	1,000 Cubic Feet	1,031,000	1,087,705,000	1.087705
LPG/Propane	1,000 Gallons	95,500,000	100,752,500,000	100.7525
Coal	Short Ton	24,580,000	25,931,900,000	25.9319
Purchased Steam	Billion Btu (BBtu)	1,000,000,000	1,055,000,000,000	1,055.0
Other	Billion Btu (BBtu)	1,000,000,000	1,055,000,000,000	1,055.0

Vehicles/Equipment

Fuel Type	*Reporting Units*	*BTUs per Reporting Unit*	*Joules per Reporting Unit*	*GigaJoules (GJ) per Reporting Unit*
Auto Gas	1,000 Gallons	125,000,000	131,875,000,000	131.875
Diesel	1,000 Gallons	138,700,000	146,328,500,000	146.3285
LPG/Propane	1,000 Gallons	95,500,000	100,752,500,000	100.7525
Aviation Gas	1,000 Gallons	125,000,000	131,875,000,000	131.875
Jet Fuel	1,000 Gallons	130,000,000	137,150,000,000	137.150
Navy Special	1,000 Gallons	138,700,000	146,328,500,000	146.3285
Other	Billion Btu (BBtu)	1,000,000,000	1,055,000,000,000	1,055.0

Other Conversion Factors

100 Cubic Feet(Ccf) = 748 Gallons
1 Liter = 0.264 Gallons
1 Acre-Foot = 325,851 Gallons
1 Cubic Meter = 264 Gallons