
TECHNICAL HANDBOOK FOR
ENVIRONMENTAL HEALTH AND ENGINEERING
VOLUME VI - FACILITIES ENGINEERING
PART 72 - ENERGY MANAGEMENT

CHAPTER 72-1 DHHS ANNUAL ENERGY REPORT

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72-1.1 INTRODUCTION

The Indian Health Service (IHS) is required to submit to the Department of Health and Human Services (HHS) an annual fiscal year report on energy consumption. Each IHS Area office must follow the format required by DHHS in order to comply with the Congressional requirements. Each IHS Area office is responsible for obtaining the required information from the installations under their jurisdiction. The Area offices reports must be submitted to IHS Headquarters and then consolidated into an agency report which is forwarded to DHHS. These guidelines are based upon the energy reporting guidance from the Office of Federal Energy Management Programs. Questions on these guidelines should be directed to IHS Headquarters Energy Coordinator by calling extension (301) 443-7998.

72-1.2 REPORT FORMATS

The annual energy report consists of three parts outlined in paragraphs A, B, and C of this section.

- A. ENERGY CONSUMPTION AND COST DATA - IHS owned, General Services Administration (GSA) delegated, and leased facilities shall be reported separately. Area offices are to use exhibits 1,2 and 3 for their reports. If the Area office or Service Unit does not receive and pay the utility bills for leased or owned space they are not required to report this information. Examples include quarters where the tenant pays the bills directly or tribally operated facilities where the Tribe pays the bills directly.

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- B. ENERGY CONSERVATION PROGRAM SUMMARY - Each Area office shall provide a summary of their energy conservation program in the format shown in exhibit 4. This summary is for all IHS owned, GSA delegated and IHS leased space combine into one report.
- C. ENERGY PROGRAM NARRATIVE REPORT - Each Area office will prepare a narrative report outlining their accomplishments in each of the topics in this section.
- (1) Energy Consumption Reduction Goals - Provide a milestone narrative statement on the activities implementing the 20 percent energy reduction goal per gross square meter required by the year 2000 and the 30 percent reduction by the year 2005. This narrative may be an update to the energy reduction plan required by National Energy Policy and Conservation Act (NEPCA).
 - (2) Energy Savings Performance Contracts - Report information regarding energy savings performance contracting performed during the reporting period. The information should include the Area offices progress in entering into energy savings performance contracting as well as the use of the cost savings generated by these contracts. This section should identify the following:
 - a. The management responsible for implementing a program to enter into energy savings performance contracts;
 - b. The procedures used to verify anticipated and actual energy and cost savings associated with the energy savings performance contract;
 - c. The number of energy savings performance contracts currently in place;
 - d. The annual and cumulative energy and cost savings resulting from the energy savings performance contracts;
 - e. The procedures established to use on a fiscal year basis, the cost savings resulting from energy savings performance contracts;
 - f. The use of the energy and cost savings;

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- g. The problems and difficulties encountered in entering into energy savings performance contracts; and
 - h. The recommended solutions to the difficulties encountered and to establishing an incentive program in the Area offices.

- (3) Energy Efficiency and Water Conservation Project Funding - Describe all funding sources used in implementing energy efficiency and water conservation projects. This should encompass financial incentives and other services provided by utilities for efficiency investment, the Federal Energy Efficiency Fund, GSA delegated agency funding, direct agency expenditures, energy savings performance contracts, and other forms of financing to reduce the direct costs to the Government. If energy savings performance contracts were used, only a brief statement is necessary due to the detailed description given in paragraph C (2). This section should identify:
 - a. Funding sources;
 - b. Listing of projects funded under each source;
 - c. Amount of funding per project; and
 - d. Total amount of funding per source.

- (4) Energy and Water Surveys and Audits - Both NEPCA and Executive Order 12902 require Federal agencies to perform energy and water surveys, and audits. This executive order details the requirement by specifying prioritization surveys and comprehensive facility audits, and by mandating all facilities to be audited within ten years. This section should identify:
 - a. Prioritization Survey - Report on the methodology used to conduct the prioritization survey and the percentage of total building stock that was included in the survey. The results of the survey shall be summarized and presented in this section.
 - b. Comprehensive Facility Audit - Report on the completion status of comprehensive facility audits according to the corresponding Ten Year Audit Plan as

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reported in the executive order document. The Area office's plan for completing comprehensive facility audits shall be outlined; specifically discussing when, how, and by whom the audits will be completed. Indicate the percentage of square meter for which audits have been completed.

- c. Leased Facilities - Indicate the percentage of square meter which is leased. Explain the planned procedure for completing energy and water audits and projects in those buildings.
- (5) Implementation of Energy and Water Conservation Projects - Indicate the number of new audits completed and list the projects that have been initiated as a result of those audits. This section should also include a list of the projects currently underway or completed as a result of previous audits or studies. Any project underway or completed that was not specifically the result of an audit, should also be listed and stated as such. Each project listing should contain a brief description of the project, the implementation cost, and the energy and cost savings expected or realized.
- (6) Solar and other Renewable Energy - List solar and other renewable energy projects previously implemented or proposed renewable energy projects. The project description should discuss the facility in which the project was implemented, the type of technology used, and who designed the renewable energy project. Information about the project funding and savings should also be included. Indicate if they have developed a plan to achieve the goal of increasing cost effective use of solar and other renewable energy sources.
- (7) Minimization of Petroleum-Based Fuel Use - Report on activities to reduce the use of petroleum-based fuels in buildings and facilities by switching to a less-polluting and non-petroleum-based energy sources, such as natural gas or solar and other renewable energy sources.
- (8) Energy Efficient Operations/Maintenance Procedures - Describe operations and maintenance procedures used to increase energy efficiency. This includes procedures such as time-of-day scheduling of equipment or systems, occupancy controlled operations, replacement of failed equipment with

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energy efficient models, and energy efficient operation of existing building systems (for example, free cooling or heat recovery schemes).

- (9) Energy Efficiency in new Space - Indicate if IHS and/or HHS policies have been adopted to ensure that the design and construction of a facility minimizes the life-cycle cost of the facility by using energy efficiency, water conservation, or solar and other renewable energy sources. Indicate whether this policy also applies to the renovation of existing spaces or if a separate policy is in place for renovations.
 - a. List all projects completed or planned where cost effective passive solar design and active solar technologies are used, indicating the facility and the technologies used.
 - b. Provide a brief description of any new building constructed or planned for construction after 1995. The description should focus on technologies and practices used for energy efficiency, water conservation, or use of solar and other renewable energy sources.
- (10) Performance Evaluations - Describe efforts to include successful implementation of energy efficiency, water conservation, and solar and other renewable energy projects. Also, descriptions and performance evaluations of facility managers, designers, energy managers, and their superiors and others critical to the implementation of the executive order.
- (11) Incentive Awards - Report on employee incentive programs that appropriately reward employee's exceptional performance in implementing the provisions of NEPCA and EO 12902.
- (12) Procurement of Energy Efficient Products - Summarize activities to institute mechanisms, set targets, and measure progress of efforts to purchase energy efficient products whenever they meet the facility's specific performance requirements and are cost-effective.
- (13) Energy Management Training - Report on the efforts to establish and maintain a program to ensure that facilities

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managers are trained energy managers. The number of energy managers trained and the type of training should be stated in this section.

- (14) Environmental Benefits of Energy Management Activities - Report information on the environmental impacts of the energy management activities of the Area offices. Pertinent subjects may include, but are not limited to, the reduction of chlorofluorocarbons in Heating, Ventilating, and Air-Conditioning systems; the reduction of greenhouse gases resulting from specific activities; and the procedures for safely disposing obsolete fluorescent ballasts. Direct measurements or estimates of the emissions reduction of carbon dioxide, nitrous oxide, and sulfur oxide from energy management activities should be stated, as well as the method by which the measurements or estimates were obtained.
- (15) All reporting units, unit costs, conversion factors, etc., expressed in english units will be converted to metric units for an annual agency report to HHS.

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EXHIBIT 1
ENERGY CONSUMPTION AND COST DATA
TOTAL AREA IHS OWNED

IHS AREA:		REPORTING FY:	
PREPARED BY:		TITLE:	
PHONE NUMBER:		DATE SUBMITTED:	

Energy Type	Reporting Units	Annual Consumption	Annual Cost (1000 \$)	Unit Cost (\$)	Total Btu
Electricity	kWh			/kWh	
Fuel Oil	Gal/1000			/Gal	
Natural Gas	ft ³ /1000			/1000ft ³	
LPG	1000 Gals			/Gal	
Purchased Steam	MMBtu			/MMBtu	
Other	MMBtu			/MMBtu	
TOTALS					

Gross Square Feet	Btu/Gross Square Feet	\$/Gross Square Feet

Conversion Factors: Electric: (kWh) (3415 BTU/kWh) = BTU' s
 Fuel Oil: (Gal) (140,00 BTU/Gal) = BTU' s
 Natural Gas: (ft³) (1150 BTU/ft³) = BTU' s
 LPG/Propane: (Gal) (41,000 BTU/Gal) = BTU' s

CONCURRENCE:

 Area Facilities Engineer

 Area Associate Director, OEHE

Date _____

Date _____

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EXHIBIT 2
ENERGY CONSUMPTION AND COST DATA
TOTAL AREA GSA DELEGATED

IHS AREA:		REPORTING FY:	
PREPARED BY:		TITLE:	
PHONE NUMBER:		DATE SUBMITTED:	

Energy Type	Reporting Units	Annual Consumption	Annual Cost (1000 \$)	Unit Cost (\$)	Total Btu
Electricity	kWh			/kWh	
Fuel Oil	Gal/1000			/Gal	
Natural Gas	ft ³ /1000			/1000ft ³	
LPG	1000 Gals			/Gal	
Purchased Steam	MMBtu			/MMBtu	
Other	MMBtu			/MMBtu	
TOTALS					

Gross Square Feet	Btu/Gross Square Feet	\$/Gross Square Feet

Conversion Factors: Electric: (kWh) (3415 BTU/kWh) = BTU's
 Fuel Oil: (Gal) (140,00 BTU/Gal) = BTU's
 Natural Gas: (ft³) (1150 BTU/ft³) = BTU's
 LPG/Propane: (Gal) (41,000 BTU/Gal) = BTU's

CONCURRENCE:

 Area Facilities Engineer

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Date _____

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EXHIBIT 3
ENERGY CONSUMPTION AND COST DATA
TOTAL AREA LEASED SPACE

IHS AREA:		REPORTING FY:	
PREPARED BY:		TITLE:	
PHONE NUMBER:		DATE SUBMITTED:	

Energy Type	Reporting Units	Annual Consumption	Annual Cost (1000 \$)	Unit Cost (\$)	Total Btu
Electricity	kWh			/kWh	
Fuel Oil	Gal/1000			/Gal	
Natural Gas	ft ³ /1000			/1000 ft ³	
LPG	1000 Gals			/Gal	
Purchased Steam	MMBtu			/MMBtu	
Other	MMBtu			/MMBTu	
TOTALS					

Gross Square Feet	Btu/Gross Square Feet	\$/Gross Square Feet

Conversion Factors: Electric: (kWh) (3415 BTU/kWh) = BTU's
 Fuel Oil: (Gal) (140,00 BTU/Gal) = BTU's
 Natural Gas: (ft³) (1150 BTU/ft³) = BTU's
 LPG/Propane: (Gal) (41,000 BTU/Gal) = BTU's

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EXHIBIT 4
ENERGY CONSERVATION PROGRAM SUMMARY

IHS Area _____
 Preparer _____
 Title _____

FY _____
 Phone _____
 Date of Report _____

DIRECT AGENCY EXPENDITURES

1	Direct expenditures on facility energy efficiency improvements Annual Expenditures (Thous. \$)	Current FY	
		Next FY	
	Annual Savings Anticipated from Expenditures	MMBTU	
		(Thous.\$)	
2	Number of Energy Savings Performance Contracts (ESPCs) Awarded		
		Annual Savings Anticipated from ESPCs	MMBTU
			(Thous.\$)
3	Utility Incentives Received	(Thous.\$)	
	Funds Spent in Order to Receive Incentives	(Thous.\$)	
4	Annual savings anticipated from DSM activities	MMBTU	
			(Thous.\$)
5	Current year expenditure for energy management training	(Thous.\$)	
	Number of personnel trained		

CONCURRENCE:

 Area Facilities Engineer

 Area Associate Director, OEHE

Date _____

Date _____