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

CHAPTER 72-3 Indian Health Service (IHS) Metering Plan

| | |
|--|---|
| 72-3.1 INTRODUCTION | 1 |
| 72-3.2 PURPOSE | 1 |
| 72-3.3 OBJECTIVE | 1 |
| 72-3.4 SCOPE | 2 |
| 72-3.5 DEFINITIONS | 2 |
| 72-3.6 METERING CRITERIA | 2 |
| A. Electric Meters | 2 |
| B. Other Energy/Utility Meters | 3 |
| C. Costs | 3 |
| 72-3.7 RESPONSIBILITIES | 3 |
| A. Division of Facilities Operations, Headquarters | 3 |
| B. Division of Engineering Services | 4 |
| C. Area Offices | 4 |
| 72-3.8 DEVELOPMENT OF METERING PLANS | 4 |
| A. Survey of Metering Infrastructure | 4 |
| B. Metering Schedule | 5 |
| C. Annual Review | 5 |

72-3.1 INTRODUCTION

The Energy Policy Act of 2005 (EPAct 2005) mandates increased energy reduction on an annual basis. In line with this requirement, EPAct 2005 requires Agencies to measure and account for energy consumption on a building-by-building basis through metering technologies. Specifically, Federal Agencies are required to install metering and advanced metering devices by 2012, where found to be cost-effective and practicable. The IHS Metering Plan ensures a uniform approach to meet these requirements.

72-3.2 PURPOSE

This document is implemented to comply with EPAct 2005 mandates for yearly energy reduction in Federal Buildings by the year 2012. The Department of Health and Human Services (DHHS) developed a metering implementation plan in compliance with the requirements of the EPAct 2005 (Public Law 109-58), Section 103, Energy Use Measurement and Accountability. This IHS Metering Plan provides guidelines and milestones for IHS to achieve goals and directives of the DHHS Metering Implementation Plan.

72-3.3 OBJECTIVE

The guidelines in this document are developed to ensure compliance with EPAct 2005, with the specific objective of reducing energy consumption by 20 percent by 2015 based on a 2003 baseline through the use of metering and other initiatives.

72-3.4 SCOPE

The IHS Metering Plan applies to all IHS-owned and operated sites except quarters. For the Plan to be applicable, the facility must be both owned and operated by the IHS.

To comply with EAct 2005 and with the DHHS metering plan, the IHS must complete installation of basic meters and advanced meters at all applicable sites by September 30, 2012.

72-3.5 DEFINITIONS

Advanced Meter - a meter that has the capability to measure and record interval data (at least hourly for electricity), and communicate the data to a remote location in a format that can be easily integrated into an advanced metering system. EAct 2005 Section 103, requires at least daily data collection capability.

Advanced Metering Systems - a system that collects time-differentiated energy usage data from advanced meters via a network system on either an on-request or a defined schedule basis. The system is capable of providing usage information on at least a daily basis and can support desired features and functionality related to energy use management, procurement, and operations.

Standard Meter - an electromechanical or solid state meter that cumulatively measures, records, and stores aggregate kWh data that is periodically retrieved for use in customer billing or energy management. Meters that are not advanced meters are standard meters.

72-3.6 METERING CRITERIA

A. Electric Meters

There should be at least one electric meter serving each installation or separate site. Each installation/site with two or more buildings of 2,300 gross square meters (GSM) or greater requires individual meters for each of these buildings. If only one building or no building at the site meets this threshold (2,300 GSM or greater), then a single installation-level meter is satisfactory and the utility cost will be pro-rated based on GSM to allocate the cost across the buildings.

In addition, all existing buildings above 7,000 GSM that are not already monitored through an advanced metering system must be retrofitted with an individual advanced meter that is connected to and associated with an advanced metering system. Use of standard meters is permissible for existing buildings between 2,300 and 7,000 GSM.

All new hospitals, health centers, youth regional treatment facilities, clinics, and similar health care facilities regardless of

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

size; and any other building of at least 2,300 GSM must be constructed with an advanced meter that is connected to and associated with an advanced metering system.

These guidelines provide the minimum requirements for compliance with the IHS Metering Plan; however, an Area Office may exceed these requirements by installing advanced metering at any site regardless of size or function.

B. Other Energy/Utility Meters

Area Offices must consider the potential benefits from the application of metering to non-electrical systems (e.g., steam, water, natural gas) in their facilities and install meters where it is economically beneficial.

Renewable sources of energy (e.g., wind, photovoltaic, solar thermal, biomass, geothermal, etc.) cogeneration, combined heat and power, and other sources downstream of the facility meter must have provisions to determine the quantity of energy provided by those sources.

C. Costs

For existing buildings and Installations, the design, procurement, and installation of metering will be funded using Maintenance and Improvement funds.

Advanced metering costs for new facilities must be considered at the facility planning stages and included in the Facilities Budget Estimating System (FBES) budget estimate for the building.

72-3.7 RESPONSIBILITIES

The responsibilities for developing and implementing the IHS metering plans are described below:

A. Division of Facilities Operations, Headquarters

- Coordinates with other Government agencies and other organizations to aid in implementation.
- Advocates budget funding levels to support metering and other energy initiatives to achieve the ultimate objective to reduce energy consumption.
- Continually evaluates progress and promulgate guidance, training, or other support as appropriate to facilitate implementation.
- Reports implementation and progress to the DHHS Office for Facilities Management and Policy as promulgated in the DHHS Metering Implementation Plan.

B. Division of Engineering Services

- Will develop design guidance and equipment specifications for metering program planning, equipment and hardware, and software and tools in support of metering objectives by August 30, 2007.
- Will issue plans for facility managers and information technology staff regarding how to address the metering system's communications requirements by September 30, 2007.
- Includes the requirement for an advanced meter and advanced metering system as an integral part of the building's electrical system in the contract documents for all planned, designed, or under-construction buildings that meet the metering criteria.

C. Area Offices

- Appoint a person responsible for this metering planning and implementation.
- Develop an Area Office metering plan.
- Assess the requirements for and availability of staff to support on-going metering programs in all phases (i.e., operations, maintenance, and data analysis).
- Consider the various options for providing support requirements (i.e., subscription services, Area Office centralized metering programs, dedicated on-site staff, etc.) and include requirements in Area Office annual budget.
- Perform operation and maintenance of the metering infrastructure for each facility by properly trained staff or through a service contract.
- Provide funding for the planning, design, procurement, and installation of metering for existing buildings.

72-3.8 DEVELOPMENT OF METERING PLANS

A. Survey of Metering Infrastructure

To comply with the EAct 2005, Area Offices must conduct a survey of existing meters, metering systems, and metering capabilities (e.g., energy management and control system (EMCS) capabilities) in all buildings and identify current uses/status of the metering systems as well as current funding allocations for metering. By March 5, 2007, the Area Offices must provide the IHS Energy Officer with the results of the survey.

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

The IHS Energy Officer will provide spreadsheets, including instructions for their use, to be used by Area Offices for reporting the results of the survey.

B. Metering Schedule

To comply with the EPCAct, Area Offices must analyze the collected data and metering criteria to determine which buildings currently have or require installation of standard or advanced meters and develop a prioritized metering schedule by April 30, 2007.

In buildings that meet the metering criteria, installation of standard meters and advanced meters by each Area Office must meet the cumulative percentages indicated in the below table.

| FY | Standard Meters | Advanced Meters |
|------|------------------------------------|------------------------------------|
| | Cumulative GSM of Electric Metered | Cumulative GSM of Electric Metered |
| 2007 | 10 % | 5 % |
| 2008 | 20 % | 15 % |
| 2009 | 40 % | 25 % |
| 2010 | 60 % | 60 % |
| 2011 | 85 % | 85 % |
| 2012 | 100 % | 100 % |

This table indicates the DHHS metering implementation goal that the IHS is required meet or exceed. An update to this table reflecting actual installation progress and revised goals (as necessary) will be a part of the IHS annual reporting requirements to DHHS for inclusion in an annual report to Congress per the section "Performance Measures" in "Guidance for Electric Metering in Federal Buildings."

C. Annual Review

Area Offices must annually review and update, as necessary, the Area Office metering schedule to reflect actual implementation schedule, construction of new facilities, disposal of existing facilities, changed conditions and assumptions, etc. The Area Office must also provide an updated survey and schedule to the IHS Energy Officer by 15 July of each year.