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**AUDIT  
REPORT**

**THE  
U.S. DEPARTMENT OF ENERGY'S  
PROCUREMENT AND ASSISTANCE  
DATA SYSTEM**



**JANUARY 1999**

**U.S. DEPARTMENT OF ENERGY  
OFFICE OF INSPECTOR GENERAL  
OFFICE OF AUDIT SERVICES**

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## Department of Energy

Washington, DC 20585

January 19, 1999

### MEMORANDUM FOR THE SECRETARY

FROM: *Greg Friedman*  
Gregory H. Friedman  
Inspector General

SUBJECT: INFORMATION: Audit Report on "The U.S. Department of Energy's Procurement and Assistance Data System"

### BACKGROUND

The Procurement and Assistance Data System (PADS) is the Department's official computerized system maintained to collect, track, and report Department of Energy procurement and financial assistance actions. The system stores information used to (1) monitor procurement and financial assistance processes, awards, and administration; (2) provide required recurring reports to the Office of Management and Budget, General Services Administration, Department of Commerce, and Small Business Administration; and (3) satisfy Freedom of Information Act and congressional requests and other public inquiries.

The objectives of this audit were to determine whether the system (1) contained accurate, complete, and current data; (2) met user needs and regulatory requirements; and (3) met generally accepted system practices for development and operation. The review was part of the Office of Inspector General's continuing work with respect to the agency's information systems and compliance with the Government and Performance Results Act of 1993.

### RESULTS OF AUDIT

PADS did not contain material inaccuracies or omissions for data that was required by the system. However, PADS did not meet user needs or comply with current generally accepted system practices. Due to an outdated system design, it was not easy to use, particularly with regard to data entry and retrieval. Furthermore, the system did not provide users with the information they believed was needed to manage procurements. As a result, the field and program offices relied on systems that they had independently developed to meet their information needs. In addition, PADS did not comply with current generally accepted system practices of integrating the procurement information system with the financial management system.

In recent years, the Department undertook an initiative to redesign PADS. According to Department officials, that effort was unsuccessful because the contractor responsible for the initiative did not meet performance expectations. Further, we concluded that the effort was flawed because it did not sufficiently involve users and it was not part of an overall Departmental information architecture systems development approach. Accordingly, a plan is needed for



providing procurement and financial assistance information that involves users. The plan should also be consistent with the Department's Information Technology Architecture.

#### MANAGEMENT REACTION

The Director, Management and Administration, generally concurred with the recommendation. The Director stated that PADS currently meets its primary mission. However, he agreed with the need to develop a plan, as part of the Department's Business Management Information System effort to provide procurement and assistance information consistent with the recommendation.

Attachment

cc: Acting Deputy Secretary  
Under Secretary

# The U.S. Department Of Energy's Procurement And Assistance Data System

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## Overview

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### INTRODUCTION AND OBJECTIVE

The Department of Energy (Department) is the largest civilian contracting agency in the Federal Government. The Department generally fulfills its multiple missions through contractors who manage and operate its federally owned facilities. In Fiscal Year 1997, about 70 percent (\$13.8 billion) of the Department's total obligations were for its management and operating contractors.

The Procurement and Assistance Data System (PADS) is the Department's official computerized system maintained to collect, track, and report procurement and financial assistance (e.g., grant) actions. Since 1981, this system has supported both the management and procurement information needs for Department contract administration. According to Department Order 1331.1D "Procurement and Assistance Data System," the system tracks procurement and grant actions from initiation and award through retirement and contains data on obligations and awards of funds by the Department. It also stores information that is used to:

- provide an overview of Departmental procurement and grant actions, multiple categories of awards or anticipated awards, trend data, and other management information;
- monitor procurement and grant processes, awards, and administration;
- submit required recurring reports to the Office of Management and Budget, General Services Administration (GSA), Department of Commerce (Commerce), and Small Business Administration; and
- satisfy other information requirements such as Freedom of Information requests, congressional requests, and public inquiries.

The Office of Procurement and Assistance Management (Procurement), within the Office of Management and Administration, has overall responsibility for maintenance and operation of the system. Specifically, Procurement is responsible for establishing and defining system requirements in accordance with Departmental computer software management policy and procedures. It is also responsible for monitoring the system's operations to ensure that functional requirements are supported. Further, Procurement develops, maintains, and distributes documentation and instructions for the preparation and submission of input and retrieval of data.

The objectives of this audit were to determine whether the system (1) contained accurate, complete, and current data; (2) met user needs and regulatory requirements; and (3) met generally accepted system

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practices for development and operation. The review was part of the Office of Inspector General (OIG) continuing audit work with respect to the agency's compliance with the Government and Performance Results Act of 1993.

## **CONCLUSIONS AND OBSERVATIONS**

PADS did not contain material inaccuracies or omissions for data that was required by the system. However, it did not fully satisfy management and procurement information needs. Specifically, the system was not easy to use and did not fully provide users with the information they believed was needed to manage procurements. As a result, the field and program offices relied on systems that they had independently developed to meet their information needs. PADS also did not comply with current generally accepted system practices of integrating the procurement information system with the financial management system and did not fully meet Commerce reporting code regulatory requirements. As a result, inconsistencies existed between PADS and other information systems.

During our review, Procurement acknowledged that PADS (1) was outdated, (2) was difficult to use, and (3) did not comply with current generally accepted system practices such as integration with the financial management system.

In recent years, the Department initiated a redesign of PADS. However, the effort was unsuccessful. Procurement officials attributed the failure of the redesign effort to poor contractor performance. However, program and field office personnel stated that they did not have an opportunity to provide input to project planning and design. Also, the project was not part of an overall Departmental information architecture that could be used as a blueprint in developing information systems to increase data sharing and reduce system redundancy.

In August 1998, the OIG issued an audit report on the *Review of the U.S. Department of Energy's Information Management Systems* (DOE/IG-0423). The audit determined that the Department had not developed and implemented an information technology architecture. It further noted that Headquarters offices needed to develop and implement their own information architectures in order to implement a Departmental architecture that would reduce system redundancy.

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Recognizing PADS' shortcomings, Procurement, in 1997, began an initiative to explore technologies and improve the data entry process. As of October 1998, this initiative was suspended because of a lack of funding.

In accordance with the Department's Strategic Plan, an integrated Departmentwide framework is to be used for planning, budgeting, evaluating, and implementing information management requirements to reduce costs and improve operations. Moreover, effective October 1, 1998, the Government Performance and Results Act of 1993 requires the Department to prepare performance plans. This planning process is designed to ensure that efforts to improve procurement and financial assistance information systems are consistent with the Department's overall strategic goals and objectives.

Accordingly, we recommend that the Director, Management and Administration, develop and implement a plan for providing procurement and financial assistance information. In developing this plan, the Director should ensure that users of procurement and financial assistance information are included in the process, and steps taken in the plan are consistent with the Department's Information Technology Architecture. The implementation plan should include relevant analyses of the costs and benefits, current information technologies, users needs, other requirements, and generally accepted system practices.

In our opinion, the matters discussed in this report should be considered by management when preparing its yearend assurance memorandum on internal controls.

*Office of Inspector General*  
Office of Inspector General

## **Procurement And Assistance Data System**

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### **PADS Did Not Meet Information Needs, Requirements, And Accepted Practices**

PADS did not fully satisfy the management and procurement information needs of the Department. It was not easy to use, particularly with regard to data entry and retrieval. Specifically, data entry was difficult because codes were used to represent much of the information that is recorded. For example, users either had to be familiar with 20 codes or refer to guidance instructions to record the type of contract award instrument. These codes described various aspects of a procurement or grant, such as the appropriate kind of award action taken by the awarding office or the type of award. Users also found data retrieval difficult. While users could obtain several standard reports from the system, they were voluminous. Furthermore, creating customized reports required specialized knowledge of the PADS' data base management system. Users had to contact Procurement representatives and ask them to create customized reports when needed.

Collection of information to track and report all contracting activities was also not readily available because the Department did not have an integrated system. Users had to rely on three separate systems, including PADS, to compile and report procurement data to the Congress and others. Separate systems were needed to track subcontracts and small purchases under \$25,000. These systems were not integrated with PADS so that managers could obtain one view of the Department's procurement activity. This inhibited users in summarizing and analyzing data on all of the Department's procurement activity.

Additionally, PADS did not meet current generally accepted system practices that are intended to increase efficiency in procurement information management. Specifically, PADS:

- Was not integrated with the Department's financial management system. Such integration is needed to reduce redundant data entry into the procurement and financial management systems and to ensure consistency between the systems. For example, the Department's accounting system recorded a \$15 million contract modification that PADS did not record, which led to inconsistency in the financial information reported in the systems.
- Did not track the status of task orders. This capability is needed to manage the acquisition function.

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PADS also did not fully meet current Commerce reporting code regulatory requirements. Specifically, Commerce requires that Federal agencies report procurement information to its government-wide system. In order for the data to be consistent, Commerce requires that reporting agencies use codes recommended by the Federal Information Processing Standards. In one area, organizational codes, PADS did not totally comply with this requirement.

**Federal Requirements For Procurement And Assistance Data Systems**

Office of Management and Budget Circular A-127 requires Federal agencies to (1) establish and maintain a single integrated financial management system, which includes procurement and assistance systems such as PADS and (2) provide complete, timely, reliable, consistent, and useful financial information to decision makers and to central management agencies to carry out their responsibilities. The Circular also requires each agency to establish and maintain a single, integrated financial management system to conform with functional requirements as defined by the Joint Financial Management Improvement Program. According to the Joint Financial Management Improvement Program, agencies' acquisition systems should prepare and track the status of requisitions, small purchases, and contracts; record and validate the receipt of goods and services; and provide information to the core financial system for matching invoices and issuing payments.

**Insufficient Planning And Analysis**

Procurement acknowledges that PADS is outdated and difficult to use. As early as 1982, the General Accounting Office (GAO) reported that the Department did not adequately analyze the costs and benefits of the design and implementation of PADS. They also noted at the time that PADS would only track active procurement data and would not handle such processes as pre-procurement planning. The GAO further noted that the Department's program and field procurement offices were reluctant to rely on PADS and that some had elected to use informal systems to satisfy their procurement information needs.

A major Departmental project to redesign PADS was undertaken in 1989 and canceled in 1995. Procurement officials attributed the redesign efforts failure to poor contractor performance. However, program and field personnel stated that they did not have the opportunity to provide input to project planning and design.

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Furthermore, the redesign project did not adequately measure costs and benefits. In addition, a 1995 internal report by the Financial Information Team pointed out that the redesign project did not address the possibility of integration or communication with other systems in the Department.

In May 1998, the Department completed the definition phase of its information architecture when the "Vision" document was issued. This document should serve as a blueprint for all of the Department's system development activities. However, the Office of Management and Administration had not developed a plan to ensure that a system for procurement and financial assistance information (1) was consistent with the Department's information architecture and (2) was integrated with other Departmental systems to promote data sharing and reduce information system redundancy. Specifically, the Office of Management and Administration had not examined how to best process procurement and grant information given current technology. Office of Management and Administration officials told us that budgetary constraints have hampered the development of plans to replace PADS.

**Program And Field  
Offices Relied On Their  
Own Systems**

Due to the inability of PADS to meet their needs, Department program and field offices either used or were developing independent or informal systems to help meet information needs. These offices had established or planned to establish their own systems because they were easier to use and better met the needs of customers. For example, the Office of Fossil Energy, including its program and field offices, maintained separate databases for supporting their information needs with respect to budget development, procurement planning, and procurement execution. Also, the Office of Energy Efficiency and Renewable Energy spent over \$1 million a year to maintain and operate a system to manage its grant activity.

In December 1996, the Department published its Information Architecture Baseline Analysis, which also underscored the fact that functional duplication and redundancy of systems exists in Departmentwide systems. The Analysis identified 73 systems within the Department that are used to prepare, execute, and monitor contracts; purchase orders; grants; and other awards. It also identified eight applications considered redundant for tracking Headquarters procurement actions and requisitions.

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## **RECOMMENDATION**

The Director, Management and Administration, should develop and implement a plan for providing procurement and financial assistance information. The planning process should include users of procurement and financial assistance information and should ensure that the plan is consistent with the Department's Information Technology Architecture. The implementation plan should document relevant analyses of:

- costs and benefits,
- current information technologies,
- user needs,
- regulatory requirements,
- generally accepted system practices
- data sharing, and
- system integration.

## **MANAGEMENT REACTION**

The Director, Management and Administration, generally concurred with the recommendation but offered the following comments. PADS currently meets its primary mission: to collect procurement and financial assistance information and provide such information to the Federal acquisition and financial assistance data systems. However, PADS is old and was not designed to satisfy current financial and user needs. Rather than redesign PADS, Procurement will work with the Office of Chief Financial Officer to develop a corporate Business Management Information System (BMIS). The corporate system will provide a solution to the financial and business information needs, including procurement in the Department of Energy. The Director agreed with the need to develop a plan as part of the BMIS effort to provide procurement and assistance information consistent with the recommendation.

## **AUDITOR COMMENTS**

While PADS may generally meet the primary mission for which it was designed in the early 1980s, user needs and requirements have changed. PADS does not meet these current needs and requirements. Management's commitment to develop a plan to provide procurement and assistance information as part of BMIS is responsive to the recommendation.

## Appendix 1

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### SCOPE

The audit was performed between December 1997 and September 1998. We examined how the system was being used and managed, measured the system's data accuracy, and examined opportunities for improving the system's effectiveness.

### METHODOLOGY

To accomplish our objectives, we obtained and reviewed applicable laws and regulations pertaining to the design and implementation of information technology. We also reviewed reports by the Office of Inspector General, the General Accounting Office, and various task forces and advisory groups. We also used a structured interview document to discuss use of the system and its information with program and field office users. Officials and staff were interviewed at the Department's operations offices in Albuquerque, New Mexico, and Oakland, California. These locations were chosen because they are two of the largest procurement offices in the Department.

We also interviewed program officials and operating personnel from the Offices of Chief Financial Officer, Defense Programs, Economic Impact and Diversity, Energy Efficiency and Renewable Energy, Environmental Management, Energy Research, Fossil Energy, Management and Administration, and the Energy Information Administration. We also reviewed numerous documents related to PADS use, operation, and output. In addition, we reviewed and analyzed documents on the PADS redesign effort, including documents on user requirements, system design, and testing results. We reviewed Departmental planning documents including the 1997 Information Management Strategic Plan.

Data integrity was assessed by comparing selected system data elements to source documents in the Albuquerque and Oakland Operations Offices and the Headquarters Procurement Office. In addition, we obtained electronic media from operations personnel and used computer assisted audit techniques, including selected system queries, to assess data quality. We also interviewed officials from the Department of Commerce, the General Services Administration, and the Small Business Administration to determine whether the agency is complying with applicable reporting requirements, particularly with respect to the submission of accurate and complete data in a timely manner.

The audit was conducted in accordance with generally accepted Governmental auditing standards for performance audits and included tests of internal controls and compliance with laws and regulations to the

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extent necessary to satisfy the audit objectives. Accordingly, we assessed internal controls regarding the PADS system that were designed to ensure data reliability. Because our review was limited, it would not have necessarily disclosed all internal control deficiencies that may have existed.

## Appendix 2

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### RELATED STUDIES AND REVIEWS

*Review of the U.S. Department of Energy's Information Management Systems, DOE/IG-0423, August 1998.* The report stated that the Department had not developed and implemented an Information Technology Architecture (ITA). The OIG concluded that, without an ITA, the Department will not achieve qualitative benefits, such as reducing the number of redundant application systems and the maintenance costs associated with these different systems.

*Audit of Departmental Integrated Standardized Core Accounting System (DISCAS) Design and Internal Control Structure, AP-FS-96-02, March 1996.* The report pointed out that DISCAS was not adequately integrated into a unified automated financial management system for the Department. The report added that users are faced with obtaining information from various systems located on different computer platforms, each with different software and access procedures.

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