



U.S. Department of Energy
Office of Inspector General
Office of Audits and Inspections

Special Report

Special Inquiry on the Office of the
Chief Financial Officer's Information
Technology Expenditures



OAS-RA-L-12-01

November 2011




Department of Energy

Washington, DC 20585

November 28, 2011

MEMORANDUM FOR THE DEPUTY SECRETARY

FROM:


Gregory H. Friedman
Inspector General

SUBJECT:

INFORMATION: Special Report on "Inquiry on the Office of the Chief Financial Officer's Information Technology Expenditures"

INTRODUCTION

The Office of the Chief Financial Officer (OCFO) is responsible for ensuring the effective management and financial integrity of Department of Energy programs, projects, and resources. To achieve its mission, the OCFO develops, implements, and monitors policies and systems related to areas such as budget administration, program analysis, and strategic planning. The Office of Program Analysis and Evaluation (PA&E), within the OCFO, provides independent analysis and advice to the Secretary regarding planning, execution, measurement, and evaluation of the Department's programs and activities. PA&E is also responsible for formulating and managing the Department's strategic planning efforts and ensuring that resources are allocated effectively and meet programmatic goals.

On April 13, 2011, the Office of Inspector General (OIG) received a complaint through the OIG Hotline alleging the waste of appropriated Fiscal Year (FY) 2010 and American Recovery and Reinvestment Act of 2009 (Recovery Act) funds by senior officials within the OCFO. In particular, the complainant stated that PA&E had mismanaged over \$6 million worth of software contracts and related user licenses.

RESULTS OF INQUIRY

To address the allegations outlined in the complaint, we conducted a targeted review of the OCFO's application acquisition and implementation efforts as they related to the specific systems discussed in the complaint. During our review, we interviewed 18 officials within the OCFO and other program offices. We also analyzed documentation related to contracts, energy modeling applications, software licenses, and information technology expenditures within the OCFO.

Our review did not identify material issues or sufficient evidence to support the allegations concerning PA&E's management of software contracts and licenses. However, we did find that the software in question was costly and, that in some cases, it was not as useful or productive as expected. We also identified areas where the Department could improve its efforts to plan for and acquire software. Specific allegations and our findings in each area are discussed in detail in the remainder of the report.

Market Allocation Model

The complainant alleged that the OCFO purchased an "inferior and duplicative" Market Allocation Modeling Effort (MarkAI), at a cost of approximately \$2.4 million in contract expenses and Federal salaries/benefits, without completing a project plan, conducting an external review, obtaining qualified staff, and performing proper analysis. The complaint also indicated that PA&E planned to use the MarkAI software to identify costs and benefits of future or alternative energy investment scenarios as part of its annual budget development process.

Based on our review, we found that the MarkAI software was utilized by PA&E as one component of the budget process to better inform officials that make budget resource allocation decisions. While PA&E was able to provide documentation for approximately \$530,000 in software and contractor support costs since the beginning of 2010, the costs did not include Federal labor that was expended on implementation of the project because Federal employee salaries and benefits were not tracked by PA&E. Therefore, we were unable to substantiate the complainant's assertion that \$2.4 million was spent on MarkAI. As best we could determine, none of the funds used to support MarkAI were obtained through the Recovery Act.

Based on our review, we determined that the version of MarkAI used by PA&E was not duplicative of other modeling efforts performed by program offices. In particular, PA&E and program offices utilized the MarkAI software for different purposes and scenarios, and, therefore, the end results differed. In addition, we were informed by PA&E and program officials that similar tools used by other program offices were not capable of producing the results needed by PA&E officials. For instance, according to officials, the National Energy Modeling System used by the Energy Information Administration was most useful when looking at impacts of energy and environmental policies and determining steps needed to achieve the goals of each policy over a period of 10 to 20 years. In contrast, MarkAI provided views of similar outputs over the next 40 to 45 years, generating the optimal year in which to build a technology.

Although PA&E officials involved with the MarkAI software had a broad knowledge of program information, several program officials informed us that PA&E did not have specific knowledge of program technologies. Specifically, programs indicated that PA&E officials and contractors did not possess the necessary institutional program knowledge to effectively utilize modeling tools and achieve usable results related to those programs.

Multi-Attribute Decision Model

Officials with the OCFO were also alleged to have developed an unsuccessful Multi-Attribute Decision Model (MADA), at a cost of approximately \$2.1 million in contract expenses and Federal salaries/benefits, which contained known problems and did not have a project plan, external review, or analysis of fundamental assumptions. The MADA effort was used by PA&E to supplement information evaluated by budget

officials to make complex budget and investment decisions related to areas such as solar, renewable, and nuclear energy based on investment alternatives, program objectives, and estimates of the benefits and consequences from selected alternatives.

The MADA project was established in July 2009 by PA&E to support decisions related to resource allocation and to analytically justify the Department's budget submission to Congress. MADA utilized data from MarkAI, as well as other programmatic information such as cost projections and barriers to project success. We found that expenditures for MADA totaled approximately \$785,000 in software and contractor support costs used during the initiative. Similar to MarkAI, PA&E officials were unable to provide us with Federal employee salaries and benefit costs attributable to the MADA project. Therefore, we could not substantiate the allegation that \$2.1 million was spent for this modeling effort. None of the funds used to support MADA were obtained through the Recovery Act.

Contrary to the complainant's assertion, we did not identify significant issues with project planning prior to implementation of MADA. Specifically, PA&E officials provided us with documentation used to support project planning efforts, including a budget decision support analysis, portfolio analysis summary, timeline, proposed project plan, an alternatives review, and a proposed development/implementation plan. In addition, PA&E officials informed us that they were not aware of any known problems with the selected software during their planning process.

Despite these project planning efforts, we noted that the MADA project was only utilized during a one-year pilot program before officials determined that without additional resources it could not produce reliable data to assist in budget recommendations. Specifically, PA&E officials determined that there were issues associated with assumptions related to future energy policies and technologies loaded in the system and made the decision to suspend usage of the software. Officials stated that while the assumptions were not able to support energy decisions as planned, the software could still be utilized for energy calculations. However, we determined that the software was not used at the time of our review.

Excess Software Licenses

Unneeded software licenses were also alleged to have been procured but never used. Specifically, the complainant indicated that OCFO officials purchased licenses for Microsoft's SharePoint software without a need or requirement at a cost of \$500,000 per year for several years. The SharePoint software was used to store large volumes of Recovery Act data that could be accessed by officials throughout the Department. Additionally, the complainant believed that OCFO management authorized the procurement of multiple copies of @Risk software licenses without a clearly defined plan for how it would be used to support tasks and duties. Similar to MarkAI, the @Risk software was utilized by PA&E to help analyze various energy investment scenarios when developing the Department's annual budget.

The complainant's allegation regarding the OCFO's acquisition of excess user licenses related to SharePoint software was partially substantiated. Specifically, in 2009, PA&E requested that the Office of the Chief Information Officer (OCIO) purchase SharePoint licenses using Recovery Act funds, but had not conducted an evaluation to support the initial selection. Rather, the PA&E official with prior knowledge of the software made the determination to procure SharePoint. In particular, when the Department's Recovery Act work began, PA&E required a system that could manage and store the large amounts of data being received from recipients. While the Department's iPortal system did not have adequate capability at that time, numerous modifications have since been made and the system currently has capabilities that duplicate those offered through SharePoint. As a result of the iPortal capability, the OCFO's use of the SharePoint software was discontinued after one year, and the unused licenses were reallocated by the OCIO to other organizations within the Department. To date, the OCIO has spent \$880,000 on the licenses. We noted that the Department continued to maintain both SharePoint and iPortal and had not performed an analysis to determine potential areas of duplication or opportunities for consolidation.

We did not identify issues with the acquisition of @Risk software. The total cost to acquire the software was approximately \$9,000. This software was used by PA&E to assess the probabilities of various outcomes associated with energy questions being analyzed in the context of budget analysis options.

Performance Manager Module

Finally, the complainant expressed the belief that PA&E had transitioned from a fully-developed performance measures tracking system to a more complex, expensive Performance Manager Module (PMM) that cost \$1 million and provided little additional benefit. The PMM application was used by the Department to track performance measures and other information pertinent to its Annual Performance Report (APR).

We did not substantiate allegations that the Department spent \$1 million to acquire the PMM, or that it provided little additional benefit. In particular, we found that the Department did not pay any acquisition costs for PMM as it was provided by the Department of Treasury through a Memorandum of Understanding. We determined that annual expenditures for maintenance of PMM ranged between \$98,000 and \$135,000 or \$18,000 to \$55,000 more than the previously used system, Joule. Furthermore, PA&E officials stated that annual costs for the two systems were generally comparable and an upgrade to the Joule system would have been cost-prohibitive and significantly increased the OCFO expenditures. PA&E officials also noted that one of the significant improvements resulting from the implementation of PMM was that it streamlined the APR process and required less manual labor to track and report on the Department's performance metrics.

We did substantiate that PMM was initially a more complex application, and users indicated that supplementary steps were required to input data, creating a more

cumbersome process. However, the application provided enhancements that included additional features, such as a "bulk loading" of performance metrics, which alleviated many of the initial user complaints.

SUGGESTED ACTIONS

To address the issues noted within this report and increase the overall efficiency of the Department, we suggest that the Chief Financial Officer, in conjunction with the Chief Information Officer and program officials, as appropriate:

1. Examine the use of document storage applications, such as SharePoint and iPortal, for consolidation opportunities; and,
2. Ensure that requirements and needs are fully analyzed prior to software acquisition.

Management reviewed a draft of this report and concurred with the suggested actions. We appreciate the cooperation received from your staff during our review. Since we are not making formal recommendations, a response is not required.

cc: Associate Deputy Secretary
Chief of Staff
Acting Chief Financial Officer
Chief Information Officer

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