

DOE/IG-0439

AUDIT
REPORT

THE
U.S. DEPARTMENT OF ENERGY'S
IMPLEMENTATION OF THE
GOVERNMENT PERFORMANCE
AND RESULTS ACT



FEBRUARY 1999

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

February 4, 1999

MEMORANDUM FOR THE SECRETARY

FROM: Gregory H. Friedman
Inspector General

SUBJECT: INFORMATION: Audit Report on "The U. S. Department of Energy's
Implementation of the Government Performance and Results Act"

BACKGROUND

The Government Performance and Results Act of 1993 (Results Act) was enacted to improve Federal program effectiveness and public accountability by promoting a new focus on results-oriented management. The Results Act requires plans that define the mission, long-term goals, and shorter-term performance measures. Further, the Act envisions that there will be an apparent relationship between this information and specific activities listed in the Department's budget requests. Taken together, these elements should clearly describe the outputs and outcomes the Department expects to deliver for the resources expended.

The objectives of this audit were to determine whether the Department had implemented the requirements of the Results Act by (1) integrating the planning, budgeting, and performance measures for its programs into a unified, Departmentwide strategy; (2) developing specific, measurable, and results-oriented performance standards to which its programs and contractors could be held accountable; and (3) developing the means to collect reliable performance data and to use that data in evaluating whether performance actions produce intended results. The information in the Fiscal Year 1999 budget requests for the Offices of Environmental Management, Defense Programs, Energy Research, Energy Efficiency and Renewable Energy, and Nuclear Energy Science and Technology formed the basis of our review.

RESULTS OF AUDIT

The Department is making good progress in implementing the Results Act in some areas. The budget requests for the Offices of Environmental Management and Defense Programs generally demonstrated proper integration between the long-term strategic and the day-to-day activity-level performance data. In addition, these budget requests showed progress in the creation of measurable and results-oriented performance information.

However, the Department's implementation of the Results Act was incomplete. The budget requests for the Offices of Energy Research, Energy Efficiency and Renewable Energy, and Nuclear Energy Science and Technology did not clearly integrate the activity-level performance information with the higher-level planning information in the Department's strategic and performance plans. In addition, these budget requests did not include measurable and results-oriented performance standards to which the programs and contractors could be held accountable. Furthermore, none of the program offices had defined processes in place to ensure that all performance data collected from the contractors were reliable. Given these conditions, the Department may not have a viable, unified strategy for improving the effectiveness and efficiency of its programs.

We believe the lack of integration and measurable, results-oriented data in some program offices occurred because responsible officials generally lacked experience and clear guidance. We recommended, therefore, that the Office of Strategic Planning, Budget, and Program Evaluation within the Office of Policy, in conjunction with the Department's program offices, strengthen existing policies and guidance to ensure clear integration between the Department's strategic documents and the information on specific activities listed in the budget requests. We also recommended the modification of guidance to ensure that each performance goal or indicator, to the greatest extent practical, is expressed in a measurable and results-oriented form. Finally, we recommended the establishment of processes and procedures to collect and validate the estimated and actual cost information used as a basis for measuring the Department's performance.

MANAGEMENT REACTION

The Acting Director of the Office of Strategic Planning, Budget and Program Evaluation within the Office of Policy generally agreed with our findings and recommendations and felt that the audit would be useful as the Department continued to improve its guidance and implementation of the Results Act. Specifically, the Department agreed to improve the links between its strategic plan and budget. Management also agreed to strengthen existing guidance on performance measurement. However, the Department felt that recently adopted and existing policies and procedures would be sufficient to provide reasonable assurance that its cost estimates and actual cost data were reliable.

Attachment

cc: Acting Deputy Secretary
Under Secretary

The U.S. Department Of Energy's Implementation Of The Government Performance And Results Act

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Overview

INTRODUCTION AND OBJECTIVES

The Government Performance and Results Act of 1993 (Results Act) was created as a tool for holding Federal organizations accountable for achieving program results. One of the purposes of the Results Act is to improve Federal program effectiveness and public accountability by promoting a new focus on results, service quality, and customer satisfaction. In effect, the implementation of the Results Act is intended to change the management culture in the Federal Government from one of spending program dollars to one of results-oriented management.

Accordingly, performance measurement under the Results Act requires a change of focus from inputs to management by goals oriented toward outputs or outcomes. Output goals describe a level of activity or effort that will be produced or provided over a period of time or by a specified date. Outcome goals describe an intended result, effect, or consequence that will occur from carrying out a program or activity.

The Results Act required Federal organizations to develop formal plans for measuring performance. It required the creation of long-range strategic plans by the end of Fiscal Year 1997 that define the organization's mission and form the basis for performance measurement. These plans lay out long-term goals that describe in general terms what the agency plans to accomplish. The Results Act also required the creation of annual performance plans by the beginning of Fiscal Year 1999 that tie the agency's long-term strategic goals to its daily activities. Performance plans are directly aligned with strategic plans and contain short-term performance goals that define the incremental progress necessary to achieve the longer-term goals. Agencies must report on their progress in an annual performance report beginning in March 2000. In turn, The Office of Management and Budget will combine information from all agencies into a Federal Government performance plan.

Office of Management and Budget Circular No. A-11 states that performance goals should describe a target level of performance and should be expressed as results-oriented, measurable objectives against which actual results can be compared. Performance goals may be quantitative standards, values, or rates. Performance indicators are used when a goal is not self-measuring and should discuss a particular value or characteristic. The term "performance measure" can refer to either a performance goal or a performance indicator. Performance measurement systems facilitate efficient program management and congressional oversight. For example, managing by goals and milestones can help agencies identify schedule slippage, which

may otherwise go unnoticed. Additionally, information in annual performance plans informs the Congress and the public of the goals for agencies' major programs and activities, how agencies will assess their performance against those goals, and the resources required to meet the goals. Given the potential uses outside the Department, performance data should be expressed in a clear and concise manner and should be tied to program activities listed in agencies' annual budget requests.

The usefulness of performance data for decision making ultimately depends on the degree of confidence that can be placed upon it. The Results Act indicates that agencies should have processes in place to verify and validate the values being measured. In keeping with this requirement, the General Accounting Office Assessment Guide to Facilitate Congressional Decision Making indicates that accurate cost information is important for determining how resources are being applied to achieve performance goals. This Guide states that agencies' procedures for verifying their performance data should be credible and specific to ensure that the information is sufficiently complete, accurate, and consistent. The Results Act also allows flexibility in its implementation and indicates that agencies should use existing procedures and processes to the greatest extent possible.

The Department of Energy has several diverse missions. These include cleanup of environmental contamination at the nuclear weapons production facilities, management and stewardship of the nuclear weapons stockpile, and scientific research on the nature of energy. Some of the Department's program offices have responsibilities similar to production operations in that they produce tangible results over pre-determined timeframes. Other programs, however, focus primarily on research that deals essentially with unexpected results over unpredictable timeframes.

When the Results Act was passed, the Congress recognized that it might take several planning cycles to perfect the performance measurement process. The Department has only recently completed its first attempt at preparing each of the planning elements required by the Results Act. Thus, it may take several more planning cycles to refine each of the elements and properly integrate the performance measurement process.

The objectives of this audit were to determine whether the Department of

Production And Research Operations In The Department

**CONCLUSIONS AND
OBSERVATIONS**

Energy had implemented the requirements of the Results Act by (1) integrating the planning, budgeting, and performance measures of its programs into a unified, Departmentwide strategy; (2) developing specific, measurable, results-oriented performance standards to which its programs and contractors could be held accountable; and (3) developing the means to collect reliable performance data and to use that data in evaluating whether performance actions produce intended results.

The Department's implementation of the Results Act was incomplete. Some program offices' Fiscal Year 1999 budget requests did not clearly integrate the activity-level performance data with the higher-level strategic planning data. This integration is a necessary part of a unified, Departmentwide strategy. In addition, some budget requests did not include measurable and results-oriented performance data to which its programs and contractors could be held accountable. Instead, some performance goals contained vague or subjective language while others omitted certain values that were necessary to properly measure results. It was important for the performance data to be written in an objective, results-oriented, and measurable form so that actual progress toward predetermined target levels of performance could be determined. Finally, we found little evidence to indicate that the Department had processes in place to ensure the reliability of data collected on both the estimated and actual costs of activities necessary to accomplish the stated performance goals.

The conditions cited above generally reflect a lack of experience by Departmental officials and a lack of consistent guidance. Earlier pilot projects conducted by certain offices within the Department may have provided them with valuable experience that other offices did not benefit from and must now obtain. Consistent, Departmentwide guidance will improve the clarity and reliability of all performance data as the Department continues its effort to implement the Results Act. Clear integration between long-term planning and activity-level execution, in conjunction with objective, results-oriented, and measurable performance data which is tied to resources, will serve to better show how performance results for specific activities serve to achieve both current and long-term objectives. Efforts to improve the integration and measurability of the performance data must be accompanied by a credible process to ensure its reliability. Without reliable data on the estimated and actual resources necessary to achieve the stated performance goals, the Department may not be able to demonstrate that it has a viable

strategy for improving the effectiveness and efficiency of its programs.

Prior reviews have demonstrated the importance of sound processes for validating contractor performance data. The Office of Inspector General issued report DOE/IG-0412 on the *Audit of the Contractor Incentive Program at the Nevada Operations Office* dated October 1997. This audit found that the Nevada Operations Office developed performance measures and incentives for a contractor to reduce operating costs. Nevada accepted the contractor's claim that it had saved money by reducing internal operating procedures and paid the contractor a cost reduction incentive fee of approximately \$300,000. However, when auditors attempted to validate the contractor's claimed cost savings, they found that they could not do so because budget baseline and change documents were not available. Nevada admitted that its assessment of claimed savings was subjective. It believed that when the contractor could identify an action taken to reduce cost and when the savings claimed appeared reasonable and consistent with the objectives of the performance measure, the claim was valid.

The Office of Inspector General's report DOE/IG-0404 on the *Audit of Department of Energy Contractor Occupational Injury and Illness Reporting Practices* dated May 1997 found that the Department did not have a systematic process for periodically validating the completeness and accuracy of contractor-generated data. Instead, the Department relied heavily on computerized information systems for information. Validation processes could have discovered the significant underreporting by the contractor and allowed the Department to better measure the contractor's safety performance.

Measurable, results-oriented performance data which is integrated with higher level strategies and tied to reliable cost data will also help the Department meet its annual financial statement reporting requirements. The Office of Inspector General's report IG-FS-98-01 on the *Audit of the Department of Energy's Consolidated Financial Statements for Fiscal Year 1997* dated February 1998 found that the usefulness of the Department's performance measures was limited. The audit showed that the performance measures were not always objective and measurable and did not sufficiently relate to the Department's missions, goals, or

objectives. The audit also found that performance information was not always supported, accurate, complete, or up-to-date.

/S/
Office of Inspector General

Integration Between Planning, Budgeting, And Performance Measures

Clear Integration Is Needed

The Department has not integrated the planning, budgeting, and performance measures of all its programs into a unified strategy. The information in some program offices' Fiscal Year 1999 budget requests did not clearly tie to the information in the strategic and performance plans. Budget requests cover a wide range of data and it was important to clearly show the relationship between the "corporate" level, strategic information and the day-to-day activity-level information. However, the relationship between the data on strategic goals and objectives and the data on specific activities was not always clear. The budget requests for the Offices of Energy Research, Energy Efficiency and Renewable Energy, and Nuclear Energy Science and Technology did not always show the "cascade" from higher-level strategic goals to performance goals, and down to lower-level performance indicators (referred to as "measures").

- Office of Energy Research. The high-level goals and strategies in the budget request for the Office of Energy Research generally did not clearly relate to performance data in the strategic and performance plans. For example, the budget listed five strategic goals that we compared to the Science and Technology Section of the strategic and performance plans. We found one goal discussing new insights into the nature of energy and matter that was consistent between the three documents but we were not able to make the linkage for the remaining four goals listed in the budget. Similarly, the budget listed high-level strategies that did not clearly tie to the strategies in the strategic plan.
- Office of Energy Efficiency and Renewable Energy. The relationship of lower-level performance indicators to higher level strategies was not always clear for the Office of Energy Efficiency and Renewable Energy. Although long-term "priorities" in the budget request generally tied to "strategies" in the strategic plan, some metrics data within specific priorities did not match those in the strategies. Additionally, within the budget, goals did not always tie to the higher-level priorities. For example, strategic goals for the Industries of the Future included the completion of vision documents and technology roadmaps, but these goals did not clearly link to higher-level priorities for a 5 percent reduction in energy-related wastes. In addition, the Electric Vehicle Batteries Program had both interim goals and strategic goals that did not appear to tie to any long-term priorities.
- Office of Nuclear Energy, Science, and Technology. Lower-level

performance measures in the budget request for the Office of Nuclear Energy, Science, and Technology were not always clearly linked to the higher-level goals. Although the budget listed performance measures, objectives, and goals, it was not always clear which measures were applicable to specific objectives and, similarly, which objectives applied to specific goals. Further, some higher-level goals for Nuclear Energy Research and Development, for example, did not appear to relate to overall goals for the Office of Nuclear Energy.

In some cases, the language describing the goals and measures in many of the budget requests was highly technical and difficult to comprehend. This was true for some of the data in the Defense Programs budget request as well. However, with additional explanations from management, we found that the measures related directly to activities at the contractor level. Additionally, some of the terminology used in the various documents was not consistent, as noted in the above use of "priorities" as opposed to "strategies." Given that this effort was in its early stages, we took no exception to the complexity in some of the data. However, we would expect that future efforts to refine performance data in the budgets would result in the use of clearer, simpler, and more consistent language. It should be noted that some of the lack of clarity in the data might stem from the fact that much of the Department's mission work is classified so the specifics of certain projects may be intentionally omitted. Thus, some difficulty in tying specific, activity-level performance measures to strategic data may be expected.

The Results Act requires Federal agencies to link strategic and performance goals to budgets. The Department's framework for implementing this requirement is contained in its Strategic Management System. The purpose of this framework is to link strategic planning, performance results, and resource allocation into a unified strategy. Strategic and performance plans discuss corporate level objectives and strategies while budget requests discuss in greater detail the program specific performance goals and measures that support them. The Fiscal Year 1999 budget requests provided the means for the Department to show, in detail, how strategic and performance planning tied to the ongoing activities within a given program office.

The lack of clear integration between strategic goals, performance goals, and the activity-level performance data occurred because of the

Integration Into A Unified Strategy

**Lack Of Experience
And Guidance**

inexperience of Departmental officials in establishing performance criteria. Some officials also indicated that they lacked consistent guidance. Pilot projects conducted by certain offices within the Department may have provided them at a relatively early stage with valuable lessons in implementing the requirements of the Results Act. Two programs that had experience with pilot projects are discussed below.

The budget requests for the Department's two largest offices, Environmental Management and Defense Programs, serve as examples of proper integration between strategic and performance plans and the budget requests. These two budget requests showed a logical "cascade" from higher level strategic goals to performance goals, to lower level performance indicators. Each of the objectives and strategies in the budget request tied directly to those in the Departmental strategic plan. In addition, each objective and strategy included a listing of performance data containing goals, measures, and supporting activities that for the most part tied to bullets under each strategy in the strategic plan.

The integration was generally clear because objectives and strategies in the budgets were, essentially, word-for-word repetitions of the language in the strategic and performance plans. Additionally, detailed performance data directly followed the goal that it supported so that there was no confusion as to which measures applied to each goal. As other Departmental elements gain experience, they may also benefit by following examples provided by the Offices of Environmental Management and Defense Programs.

Management generally agreed with the need for clearer integration between high-level planning, budgeting, and performance measures. The Offices of Energy Research and Nuclear Energy Science and Technology indicated that their future efforts would include closer coordination with the Office of Strategic Planning, Budget and Program Evaluation. The Office of Energy Efficiency and Renewable Energy provided us with examples of how they might improve the links between their strategies, goals, and performance measures.

The Office of Strategic Planning, Budget and Program Evaluation within the Office of Policy and International Affairs, in conjunction with Departmental program offices, should strengthen existing policies and guidance to:

RECOMMENDATIONS

1. Ensure that data on goals, objectives, and strategies in program budget requests clearly tie to the data in the Department of Energy's Strategic and Performance Plans. To the greatest extent practical, terminology should be consistent between these three sets of documents.
2. Ensure that program budgets include clear roadmaps such that each performance indicator or goal is clearly linked to the higher-level goal, objective, or strategy that it supports.

**MANAGEMENT
REACTION**

The Department concurred and added that part of the problem in clearly linking strategic plan level goals and objectives to budget-level performance goals and objectives was that the strategic plan structure was not completely compatible with the budget structure. In preparation for its next strategic plan update prior to the Fiscal Year 2001 budget submission, the Department plans to establish a structure that would make it easier to clearly link the strategic plan and the budget.

Management's proposed actions are responsive to the recommendations.

**AUDITOR
COMMENTS**

Measurable, Results-Oriented Performance Data

Some Data Not Measurable And Results-Oriented

Some budget requests did not include measurable and results-oriented performance standards to which programs and contractors could be held accountable. Some performance goals were not measurable because they contained vague or subjective language or because certain values necessary to properly measure results were omitted. In some cases, supporting data tended to focus on operating processes rather than results.

- Office of Energy Efficiency and Renewable Energy. Some goals for the Office of Energy Efficiency and Renewable Energy's Electric Vehicle Battery Program were not inherently measurable because they contained vague language such as: making electric vehicles an "attractive and preferred option." Thus, these goals should have been clearly linked to measurable performance indicators. However, performance indicators were not always clear, measurable statements of performance but instead consisted of extensive listings of activities, which were sometimes process oriented. These activities included completing tests and continuing evaluations of various technologies being developed by the contractors at the Department's laboratories.
- Office of Nuclear Energy Science and Technology. Some objectives and goals in the Office of Nuclear Energy Science and Technology budget request did not appear to be supported by any performance indicators even though they too were not self-measuring. For example, one goal of the Nuclear Energy (NE) Facilities Program was to ensure cost-effective, environmentally compliant operation of NE sites. However, there were no indicators discussing how the office planned to measure the cost-effectiveness of the contractors' operations at its sites.

Although the Office of Energy Research had measurable performance data and specified targets for its major construction projects and facilities upgrades, most of its funding was for basic research. Officials in Energy Research indicated that, generally, one cannot predict the results of basic research projects and thus, one cannot specify target levels to be achieved. For the same reason, they indicated that milestones cannot be set beforehand. Energy Research performance measures for basic research, therefore, related to the quality of science as determined by numbers of awards and publications for scientists, user satisfaction, and peer reviews.

To serve as viable measures, the indicators discussed above should be established at the initiation of a project so that they become the basis for

evaluating contractor performance. However, the Office of Inspector General's report DOE/IG-0407 on the *Audit of the Department of Energy's Scientific and Technical Information Process* dated June 1997 showed that contractors at the locations audited did not have some of these indicators established as deliverables at the outset of the projects. Furthermore, the Department had neither a systematic process in place to collect the information from the contractors nor a mechanism to compare actual accomplishments against expectations. Thus, the Department was not in a position to know whether it received value for its investment in research and development. The Department agreed with the recommendations to identify these deliverables when contractor assignments or work authorizations were issued and to establish a process to track the deliverables on a life-cycle basis. However, we did not test to determine whether these recommendations had been fully implemented at the time of this review.

Some Data Not Tied To Resources

We also noted program areas where the ties between resources and performance goals could be strengthened. Measurable goals should include all values necessary to calculate performance and should display the amount of funding sought to achieve the goals. Generally, the budget requests for these programs tied resources to listings of activities, but the listings did not clearly relate to a measurable goal. The budget requests for the Offices of Nuclear Energy Science and Technology, and Energy Efficiency and Renewable Energy serve as two examples where the Department could refine its performance data to show a clearer link between resources and performance goals.

- Office of Nuclear Energy Science and Technology. Goals in the budget request for the Office of Nuclear Energy Science and Technology did not always clearly show the resources needed to meet them. For example, Nuclear Energy Research and Development had goals related to such things as managing facilities in a safe and environmentally sound manner and preserving the nation's nuclear science and technology for the next century. Resources, on the other hand, related to sub-programs such as Light Water Reactors, Advanced Radioisotopes, and TRA Landlord subprograms. It was not clear how the requested resources served to accomplish the goals.
- Office of Energy Efficiency and Renewable Energy. The budget request for the Office of Energy Efficiency and Renewable Energy

included performance goals for hybrid and electric vehicles and for completing industry vision statements, roadmaps, and implementation plans. However, it did not discuss the resources needed to meet each goal. Although the "Performance Summary" included detailed listings of numerous contractor activities under various categories that were tied to resources, it was not always clear how each of these categories of activities tied to the performance goals.

Measurable, Results-Oriented, And Tied To Resources

Performance goals and indicators should be expressed in an objective, measurable, and results-oriented form and should establish a target against which actual performance can be compared. Measurable goals should include all values necessary to calculate performance and should be tied to resources. Performance indicators are used when goals are not self-measuring. Given that Congress and the public may also use this information, performance data should be expressed in a clear and concise manner.

Lack Of Clear, Consistent Guidance

The lack of measurable, results-oriented performance data in some budget requests occurred because of the lack of experience with Results Act requirements and clear, consistent guidance. Departmentwide guidance is necessary to improve the clarity of all performance data as the Department continues its effort to implement the Results Act. Clear integration between long-term planning and activity level execution, in conjunction with measurable, results-oriented data tied to resources, may serve to better show how performance results for specific activities serve to achieve both current and long-term objectives.

Program offices may also benefit by following examples set by the Offices of Defense Programs and Environmental Management. These offices have demonstrated significant progress in creating clear, measurable, and results-oriented goals and indicators linked to resources. Often the performance data showed resources targeted for a specific facility or site, which helps identify the contractor responsible for the intended results. For example, one performance measure in the Defense Programs budget tied a target of three to four subcritical experiments at the Nevada Test Site to an estimate of \$82.5 million for Fiscal Year 1998. This performance measure related directly to contractors' work activities. Under the "Performance Summary" for Albuquerque, the Environmental Management budget request showed

that 24 site closures would be completed at the Department's Pantex site during Fiscal Year 1998 at an estimated \$4.2 million. Generally, site-specific performance goals tied directly to Environmental Management's "corporate" performance goals. This level of clarity and conciseness in both these budget requests offered a good indication of expected performance for the resources requested.

Management generally agreed with the need for measurable, results-oriented performance data. The Office of Energy Efficiency and Renewable Energy explained their proposals for showing clear and concise goals tied to resources and indicated that they planned to better categorize their goals and measures under the Fiscal Year 2000 budget request. The Office of Nuclear Energy Science and Technology indicated that guidance in creating measurable, results-oriented data would be beneficial.

RECOMMENDATION

The Office of Strategic Planning, Budget and Program Evaluation within the Office of Policy and International Affairs, in conjunction with Departmental program offices, should enhance existing guidance to require each performance indicator or goal, to the greatest extent practical, to be expressed in a way that is:

- a) output or outcome oriented;
- b) clear and concise, and avoids subjective language;
- c) measurable such that actual progress in meeting higher-level goals can be determined; and
- d) tied to projected resources.

MANAGEMENT REACTION

The Department concurred, indicating that measuring performance was a relatively new discipline for many program offices. The Department believed that its Fiscal Year 2000 performance measures had improved significantly but expected that it would require several planning cycles to perfect its performance data. Management agreed to improve and strengthen existing guidance on performance measurement.

Management's comments are responsive to the recommendation.

AUDITOR COMMENTS

Reliable Performance Data

Contractor Cost Data Not Validated

There was no indication that the Department had a defined process in place to ensure that all performance data collected from the contractors were reliable. Specifically, there was little evidence that the Department validated the data on the estimated and actual costs used to measure performance despite the requirements in the Results Act. Validation of all performance data is important because of the two-party relationship between the Department and its contractors. Contractors execute the projects and the budgets, while the Department provides direction and oversight.

- Office of Environmental Management. The Office of Environmental Management funds environmental restoration and waste management activities throughout the Department. Although funding levels for these activities were monitored by the Albuquerque Operations Office, we found no process for project managers to validate any of the estimates of project costs prepared by the contractors or any of the costs incurred by the contractors. Given that we noted some instances where the cost data in the budget did not tie to project estimates at the Operations Office, validation of this data may serve to eliminate some of these differences.
- Office of Defense Programs. We attempted to obtain cost detail supporting a \$49 million budget estimate for various Stockpile Maintenance projects under the Office of Defense Programs, but the project manager was not sure how the estimate was derived or how the money was to be spent. Other officials similarly unfamiliar with their cost data stated that their budget estimates came directly from the contractors and acknowledged that their cost management processes could be improved. In fact, one manager candidly expressed little confidence in the contractor's cost data and indicated that there was a great need for cost validation under his project.

Processes To Verify And Validate Measured Values

The Results Act indicates that agencies should have processes in place to verify and validate their measured values. Values used by the Department for performance measurement generally consist of technical goals and milestones for various projects and costs. Accurate cost information is important for determining how resources are being applied to achieve performance goals. It is important that the validation process extend to both actual and estimated costs because performance measurement involves comparing actual achievement against planned goals. Accordingly, reliable data on both actual costs and budget

estimates are necessary for proper performance measurement.

**Current Efforts
Not Directed
Toward Cost Data**

There were a variety of reasons why project managers did not validate the cost data. For example, some managers did not believe that they had sufficient resources to conduct validations of cost data. Others concentrated only on monitoring funding relative to amounts appropriated at the start of the fiscal year. While monitoring funds available may be beneficial, it does not provide any basis for assessing the reliability of the original estimates or costs incurred. Without reliable data on both technical progress and costs, decision makers cannot determine whether a strategy is realistic and cost-effective. Thus, the viability of the Department's strategy for improving the effectiveness and efficiency of its programs may be jeopardized. By making cost validation more effective, the Department should be able to better assure the Congress and the public that its program results are based on sound information and analysis.

The importance of cost validation to meeting performance objectives is demonstrated by a recent report. The Office of Inspector General's report DOE/IG-0410 on the *Audit of Environmental Restoration at the Los Alamos National Laboratory* dated July 1997 showed that Los Alamos did not budget and track costs in a way that would allow the Department to determine whether performance objectives were met. The Department and Los Alamos agreed to an overall performance objective that stated that Los Alamos would expeditiously and cost effectively remediate contaminated sites. To meet this objective, Los Alamos budgeted for environmental remediation on a site-by-site basis. However, unbeknownst to the Department, Los Alamos replaced half of the sites originally budgeted for with substitutes. Further, Los Alamos tracked and reported costs in the aggregate rather than on the site-by-site basis as originally requested. Thus, it was virtually impossible to determine whether the money spent on remediation activities met the original objectives. A defined process to validate both budget estimates and costs incurred may have allowed the Department and Los Alamos to better focus on the cost data required for meeting its performance objectives.

Although we found no indication that the Department validated any of the project estimates that formed the basis of the budget requests, we found some processes for validating costs incurred. One process for validating costs dealt with a "production" related project with

determinable milestones and outputs, while the other process dealt with research related projects. Other programs could benefit by adopting cost validation and analyses processes similar to these that follow.

The Transportation Safeguards Division in Albuquerque indicated that it conducted periodic reviews of the contractor's procurements to validate reports on project costs incurred. Management acknowledged, however, that this process could be improved by auditing other categories of costs incurred by the contractor. In addition, a manager in the Office of Energy Efficiency and Renewable Energy stated that his office analyzed project management costs by project across several Departmental field offices. Management claimed that this effort resulted in shifting work to field offices with the lowest project management costs per project and eliminated the majority of costs paid to one contractor for project management assistance. Despite these examples, however, more can be done to validate this data as well as the cost estimates in the budget requests.

In contrast to the lack of a defined process to validate costs, there appears to be a consistent approach in much of the Department to collecting data on progress against project milestones and verifying performance results. Departmental officials met with contractor personnel on a regular basis to review progress against predetermined project milestones. Both milestones and project goals were laid out in contractor operating plans and project goals were generally consistent with the data in the budget requests. Verification of contractor progress may have been done by visual inspection or demonstration of finished "products." This approach to gathering data had been in place for a number of years, which is consistent with the Results Act's stipulation that existing processes should be used to the greatest extent possible.

Management generally agreed with the need for cost validation procedures. Officials in the Offices of Defense Programs and Field Management indicated that it was important for the field project management personnel with the most knowledge of the day-to-day operations of the contractors to have the responsibility for the validation process.

The Office of Strategic Planning, Budget and Program Evaluation within

RECOMMENDATION

the Office of Policy and International Affairs, in conjunction with the Offices of Field Management and Chief Financial Officer (CFO), should require that project managers adopt processes and procedures to collect and validate the estimated and actual cost information used as a basis for performance measurement.

**MANAGEMENT
REACTION**

Although the Department agreed with the basic premise of this recommendation, it believed that recently adopted policies and procedures, in conjunction with those already in place, were adequate to provide reasonable assurance as to the reliability of cost information.

With respect to estimated costs, the Department indicated that it issued draft Fiscal Year 2000 budget validation guidance on December 15, 1998, which placed the responsibility for validating contractor budgets on field CFO staffs and program offices. The guidance included steps to ensure that cost estimates are documented and current, to review cost elements (including escalation factors and overhead costs), and to review cost allocations for consistency with cost accounting standards. It also included steps to determine if goals, funding, and long-range plans are consistent with the strategic plan. The Department added that budget validation is now a critical performance measure.

With respect to actual costs, the Department indicated that managers attest to the adequacy of performance information in their management representation letters supporting financial statements and that the OIG conducts annual audits to determine the adequacy and accuracy of the Department's financial statements. In addition, contractor systems that accumulate costs are subject to approval by the Department and must meet accepted accounting practices.

The Department also indicated that the CFO issued a memorandum instructing field CFO staffs to take a more active role in performance-based contracts to provide additional assurance that costs can be tied to the performance being measured.

**AUDITOR
COMMENTS**

The Department's recently issued draft budget validation guidance does not state that validation will apply to costs associated with specific performance goals and indicators and does not require participation by individual project managers directly responsible for the projects being measured. In addition, the efforts listed above aimed at validating actual

costs do not reflect a disciplined approach to managing individual projects and their costs. Management representations and Office of Inspector General audits pertain to corporate-level accounting data which represents the consolidation of a multitude of site-level and programmatic transactions into a single set of accounting data. This consolidation includes all operations and field offices, laboratories, and power marketing administrations. The audit is performed to gain assurance that the amounts reported, which often total hundreds of millions of dollars, are not significantly misstated. Additionally, while approval of accounting systems that accumulate costs is worthwhile, even a perfectly adequate system can accumulate unreliable cost data.

The CFO memorandum dated October 30, 1998, "Field CFO Roles in Contract Performance Incentives" relates to the formulation and tracking of performance incentives and includes a provision for field CFOs to "participate actively in any groups that have a role in validating costs related to incentives." However, it does not define "active participation" or "validating costs" and it appears to apply only to incentive fees.

The Department's response does not address our concerns about validating estimated and actual cost data. Program office project managers should be directly involved in efforts to manage both the progress and separate cost elements of individual projects because they have the most knowledge of the work conducted by the contractors. Thus, the Department should develop a plan that requires project managers to adopt processes and procedures to collect and validate estimated and actual cost data used as a basis for performance measurement.

Appendix 1

SCOPE

Audit fieldwork was performed from March through September 1998. Our review included five of the Department's largest program offices and spanned all four of the business lines in the strategic and performance plans. The program offices included in this review were the Offices of: (1) Environmental Management under the Environmental Quality business line; (2) Defense Programs under the National Security business line; (3) Energy Research under the Science and Technology business line; (4) Energy Efficiency and Renewable Energy under the Energy Resources business line; and (5) Nuclear Energy Science and Technology, which was included in all four business lines.

METHODOLOGY

We met with Headquarters program officials in Washington D.C. and Germantown, Maryland, to discuss and obtain documentation supporting their strategic planning and budget preparation efforts relative to each program listed above. In addition, we met with officials in the Office of Strategic Planning, Budget and Program Evaluation within the Office of Policy and International Affairs. Discussions focused on responsibilities throughout the Department for implementing the requirements of the Results Act.

We also met the program officials at the Department's field locations, including the Albuquerque Operations Office in Albuquerque, New Mexico, the Rocky Flats Field Office in Golden, Colorado, and the Savannah River Site in Aiken, South Carolina. Discussions centered on information about specific activities selected for review and processes for assessing contractor performance relative to those activities. We also met with contractor officials at the Los Alamos National Laboratory in Los Alamos, New Mexico, and the Sandia National Laboratories in Albuquerque, New Mexico, to determine the extent to which their work projects and milestones tied to Departmental goals and measures.

Our objectives focused on performance measurement at the program and contractor level. To reach this level of detail, it was necessary to use the Fiscal Year 1999 congressional budget requests for each of the five program offices listed above. These budget requests generally listed long-term strategic goals as well as shorter-term performance goals and measures that often discussed detailed activities at specific sites conducted by specific contractors. We judgmentally selected a total of 30 activities from the 5 budget requests for review. The selection process was aimed at identifying activities which, because of their significance, would likely be included in the Department's strategic and performance plans. We did

not select these activities with any intent to project results onto a larger population.

Although we looked at whether the Department's strategic and performance plans integrated with the detailed performance data, our review was not aimed at these higher-level plans and how well they satisfied the requirements of the Results Act. In fact, we aimed this review at the detailed measures partly to avoid duplicating the results of other reviews that tended to focus at the higher levels. For example, the General Accounting Office (GAO) conducted a review of the linkages between higher level strategic and performance plans and found that the Department could improve these linkages by reducing certain superfluous plans, clarifying how subordinate plans link to Department-level plans, and better aligning the program organization structure with the business line structure. The GAO review also attempted to review the linkages between annual performance goals and budgetary resources, but detailed budget requests containing this information were still in the process of being formulated. Our review began after these Fiscal Year 1999 budget requests had been finalized.

The audit was made in accordance with generally accepted Government auditing standards for performance audits, which included tests of internal controls and compliance with laws and regulations to the extent necessary to satisfy the objectives of the audit. Internal controls were assessed with respect to the Department's processes for implementing the requirements of the Results Act. Because the review of internal controls was limited, it would not necessarily have disclosed all internal control deficiencies that may have existed. Our tests of compliance with laws and regulations focused on the requirements contained in the Results Act and regulations aimed at the implementation of these requirements. We did not rely on computer-generated data in developing this audit because mechanisms to collect performance data within the Department consisted primarily of meetings and direct observations.

An exit conference was held with the Acting Director of the Office of Strategic Planning, Budget, and Program Evaluation on November 10, 1998.

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