

# THE NATIONAL ACADEMIES

*Advisers to the Nation on Science, Engineering, and Medicine*

**February 2004**

**Progress in Improving Project Management at the Department of Energy: 2003 Assessment—*Summary***

## **BOARD ON INFRASTRUCTURE AND THE CONSTRUCTED ENVIRONMENT**

### **Background**

In 1997, the National Research Council (NRC) was directed by Congress to assess the processes and procedures of the U.S. Department of Energy (DOE) for managing large projects. Congressional concerns about cost and schedule overruns on several large DOE projects prompted this request. Since the study began in 2000, a series of reports has been issued providing findings and recommendations about how DOE could improve its project management capabilities. This report is the culmination of that series and presents an assessment of progress in improving project management at DOE during the past three years. This study was carried out by the NRC ad hoc Committee for Oversight and Assessment of U. S. DOE Project Management, which has performed all of the studies in the series.

### **Findings and Recommendations**

This assessment focused on three charges: specific changes implemented by DOE to achieve improvement; progress made in improving project management capabilities; and the likelihood that such improvements will be permanent.

***Specific Changes.*** There has been progress during the past three years at DOE in organization, management practices, personnel training, and project review and reporting. Considerable opposition, however, has existed internally and externally to the implementation of some of these changes. In particular, while Order O 413.3 defined DOE project management policies and procedures in 2000, requirements for implementing program and project management were not issued until 2003. Nevertheless a number of improvements have appeared including, among others, issuance of the Order and its supporting manual; formation of the Office of Engineering and Construction Management and the Office of Program Analysis and Evaluation; formation of project management support offices; and increased focus on strategic planning and budgeting.

***Progress.*** DOE has made substantial progress in defining mission requirements and long-term plans that forecast and justify the need for new projects. It also has expended considerable effort in the development of the Project Management Career Development Program (PMCDP), although future funding remains uncertain. Nevertheless, DOE

invests too little in development of project management staff, and there are too few qualified project managers for the number and complexity of DOE projects.

***Permanence.*** Evidence that these changes will become a permanent part of the DOE culture is not strong at this time. While it is unlikely that such things as Order O 413.3 will be rescinded, the Committee is concerned that they will be circumvented. DOE's past performance is not comforting, and the absence of metrics to measure progress does not suggest a change. Commitment to improved project management at the highest levels has been the hallmark of successful transformations by industrial organizations. A consistent level of commitment throughout DOE has not been seen by the Committee.

There are several factors that have contributed to DOE's slow pace of improving project management. Among these are concerns by DOE personnel and contractors about the level of management from DOE headquarters; slow implementation of the PMCDP; inadequate numbers of professional project directors; and the absence of a champion for project managers and process improvement. Overcoming these impediments will require the attention of senior management.

Among the concerns the Committee has about DOE's commitment to make its efforts to improve project management permanent are:

- Momentum towards improvement was attributable to a number of influential DOE managers, most of who are no longer there. The recent appointment of a Associate Deputy Secretary responsible for capital acquisition and project management, however, is a positive step in restoring this momentum.
- There has been internal opposition to project manager training.
- Efforts continue to exempt certain sites and projects from the critical management review process and to raise the cost level of projects subject to review.
- While the congressionally mandated program of external independent review has been instituted, some project directors continue to deny its value.

While many people within DOE support improved project management, they need a champion to back them up. The deputy secretary is DOE's chief operating officer. As such, he has the responsibility for assuring that projects are planned and executed effectively. The deputy secretary should be the champion for project management improvement—to develop it as a core competency, to assure an adequate and qualified project management staff, and to assure that disciplined execution of projects is given a high priority—or should appoint someone to perform this role. The current process is not working. While new policies and procedures demonstrate substantial progress at DOE, the Committee is not confident these changes will last without a strong champion to implement and solidify them across DOE.

**For further information;**

Copies of *Progress in Improving Project Management at the Department of Energy: 2003 Assessment* are available from the National Academy Press; call (800) 624-6242 or (202) 334-3314 (in the Washington metropolitan area), or visit the NAP Web site at [books.nap.edu/catalog/10931.html](http://books.nap.edu/catalog/10931.html).

Support for this project was provided by the U.S. Department of Energy. Any opinions, findings, conclusions, or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the sponsors. More information about the Board on Infrastructure and the Constructed Environment can be found at <http://www7.nationalacademies.org/bice/>.

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