

Analysis of Recommendations from EM and PM Reviews Performed in 2018



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Project Peer Reviews (PPR) of capital asset projects are implemented in accordance with DOE O 413.3B, *Program and Project Management for the Acquisition of Capital Assets*. As described in the Order's Project Management Principles, PPRs should be utilized throughout the lifecycle of a project to appropriately assess project status, and make any corrections to project direction as needed. These reviews can be a useful tool for the Federal Project Director, senior site management and senior DOE management to provide confidence that a project is proceeding in accordance with contract requirements from both a technical and a programmatic point of view. Conversely, projects that are experiencing issues can benefit from an independent review with documented recommendations for correcting deficiencies as determined by qualified subject matter experts in the various disciplines of project management.

The Office of Project Management (EM 5.22) performs a review of the trends/lessons learned from peer reviews performed during the year. The purpose of the review is to provide EM management with information on issues and trends identified during these reviews in the areas of Project Management; Scope, Design and Engineering; Cost, Schedule, and Risk; ESH&QA; and Startup Planning, and Operations Readiness at project critical decision phases. The results from the EM Project Reviews Analyses report are identified below.

Discussion:

Background

The Department's ultimate objective is to deliver every project at the Project Performance Baseline on schedule, within budget, and fully capable of meeting mission performance, safeguards and security, quality assurance, and environmental safety and health requirements. The Office of Project Management (EM-5.22) and Office of Project Management Oversight & Assessment (PM) have continued conducting Project Peer Reviews (PPRs) and External Independent Project Reviews (EIRs) in accordance with DOE order 413.3B Program and Project Management for the Acquisition of Capital Assets to evaluate and ensure that EM projects are successful and meet the Departmental requirements during FY2018.

These Project Reviews provide an independent assessment of status and of how the project is performing against "best practice", thus helping Federal Project Directors to identify any gaps in their own understanding. Additionally, these reviews provide feedback to the EM management on project success and potential issues which could adversely impact successful completion and help EM to see what management actions could be taken to enhance the success of projects. They also reveal weakness and strengths in EM project documentation and communication methods. It is an excellent way to learn from and share EM project management techniques and experience.

Discussion

Data from seven reviews was collected for this analysis. Four External Independent Reviews were conducted by the Office of Project Management Oversight & Assessment (PM) and three Project Peer Reviews were conducted by the Office of Project Management (EM-5.22). Five of these reviews were for CD2/3, *Approve Performance Baseline/Approve Start of Construction/ Execution*; one review was for CD-4, *Approve Start of Operations or Project Completion*; and one review was for CD-1, *Approve Alternative Selection and Cost Range*.

This analysis identifies the most prevalent issues within each of the five principal functional areas.

Project Management:

- Project Execution Plan was not approved or updated

- Federal Project Director was not certified at the right level
- Contractor's Earned Value Management System was not certified before CD2/3 approval
- Acquisition Strategy was not approved prior to Critical Decision

Cost, Schedule, and Risk:

- The Integrated Master Schedule failed GAO schedule assessment metrics of schedule health. There were instances of negative float, high float and high duration.
- The Integrated Master Schedule did not reflect the manner in which the project was executed, schedule had inadequate logic ties and missing scope activities.

Scope, Design and Engineering:

- Incomplete design basis, criteria, documents, and package.

Environmental, Safety & Health, and Quality Assurance:

- QA plan had not been developed/updated or provided sufficient/specific information.

Startup Planning and Operations Readiness:

No common findings were identified, however, three findings along with recommendations were provided to the projects. See the three findings below. The first one is from the CD-2/3 approval reviews, the last two were from a CD-4 approval review.

- There is a lack of detail and inconsistencies in readiness and startup plans and procedures.
- Most but not all safety programs have been written and associated procedures prepared.
- External approval activities durations from the start of MSA-3 through CD-4 activities are not adequate and should be reviewed with the approval authorities.

Among the eight common major findings, four issues were, in fact, also identified in previous year's reviews. Three of them were from the Management (Acquisition and Project Execution) area and one was from the Schedule area. See the list below. These issues appear to have continuing negative impacts on EM projects.

- Project Execution Plan was not approved or updated
- Federal Project Director (FPD) was not certified at the right level
- Management: Acquisition Strategy was not approved prior to Critical Decision
- The Integrated Master Schedule failed GAO schedule assessment metrics for schedule health. There were negative float, high float and high duration.

The rest of the four findings are new common issues identified during FY2018 reviews. Some of the findings were identified in previous years' reviews, however, they were not common findings at that time.

- Contractor's Earned Value Management System was not certified before CD2/3 approval
- Incomplete design basis, criteria, documents, and package.
- IMS does not reflect the manner in which the project was executed, such as inadequate logic ties, missing scope activities
- QA plan had not been developed/updated or provide sufficient/specific information

Conclusion

Project Reviews help the EM program to understand, in detail, the health and progress of its projects. They give the project an independent perspective that cuts across geographic lines and helps to overcome any oversights or biases that may have inadvertently been developed. Additionally, through these reviews, project managers gain a clear view of the overall status of their project at that point in time so they can manage them more effectively. When project managers have a clear understanding of the full status of their projects, developed by independent Subject Matter Experts, they are better informed and thus more capable to make good decisions about how to continue to execute their projects. That's what reviews are about: giving clear, well-validated information to decision makers, so they can make good, better informed, decisions.

Recommended Actions:

Lessons Learned:

Based on the above analyses, it is recommended that EM to take actions for improvements in the following major areas:

- Monitoring review effectiveness - The PMSO may gather feedback from project teams and senior management on the effectiveness of reviews and the value of their outputs. This feedback can then be used to refine review schedules, adjust the structure of review teams, update charge questions, Line of Inquires, etc.
- Embedding lessons learned into organizational standards - In response to the good practices and common issues seen on projects, review teams can recommend refinements to the EM and/or field office organization's project methodology and associated templates, guidelines, etc. The PMSO coordinates such updates. It might also develop supporting artifacts – case studies, training materials, etc.
- Tracking project-level review actions - Reviews provide findings and recommendations. It's usually left to the project team to act on the information and any associated recommendations. The PMSO may help track such actions and ensure the recommendations are implemented and closed in the most beneficial, timely manner.
- Federal Project Director Certification – In accordance with the requirements of DOE Order 413.3B, FPDs should have the necessary experience and qualifications to be certified at the correct level based on the size and complexity of projects.
- Project Documentation Complete and Updated – Project Execution Plans should be completed, approved or updated as necessary. Acquisition Strategy should be completed and approved prior to Critical Decision (CD)-1, *Approve Alternative Selection and Cost Range*.
- Project Schedules – Project schedules should be updated on a frequent and regular basis, and have schedule health assessment metrics performed to ensure that the schedule does not have excessive high floats, high durations or negative float.

Critical Decision(s): CD-0 to CD-4

Facility Type(s): All

Work Function(s): Project/Program Management

Technical Discipline(s): All

Discipline(s):

References:

1. DOE Order 413.3B Change 5, *Program and Project Management for the Acquisition of Capital Assets*
2. EM Project Reviews Analyses, prepared by Project, Time & Cost for EM-5.22, Office of Project Management, dated August 30, 2018.