DOE PROJECT MANAGEMENT NEWS

Promoting Project Management Excellence

JUNE 2022

Director's Corner

DOE Order 413.3B, *Program and Project Management for the Acquisition of Capital Assets*, requires the contractor to employ an earned value management system (EVMS) prior to critical decision (CD)-2, or upon contract award, for projects greater than $50 million. However, some projects may warrant an exemption to the use of a certified EVMS based on the project's size and complexity. In these cases, an exemption request must be submitted by the Program to the Project Management Risk Committee (PMRC) for endorsement. If endorsed by the PMRC, the applicable Under Secretary will decide whether to approve the exemption request and authorize the use of an alternative project controls methodology. You can learn more about the exemption process and alternative project controls requirements in the article on page 2.

Speaking of EVMS, the Directives Review Board (DRB) approved an update to DOE Guide 413.3-10A, *Earned Value Management System (EVMS)* in April.

The new, retitled guide, DOE G 413.3-10B, *Integrated Project Management Using the EVMS,* provides a wealth of information to help project teams improve the integration of the EVMS with project management planning, execution, and control processes. More information and best practices can be found on page 5.

Project closeout is the last in a project's lifecycle. However, closing the project requires more than just stopping the delivery of the Integrated Program Management Report (IPMR). The closure process should include a review of the project's performance and acquisition management strategy to identify lessons learned for future projects' success. Three steps to consider when ending the implementation of the EVMS are in the article on page 3.

The Project Management Career Development Program (PMCDP) Certification Review Board (CRB) is responsible for reviewing and approving Federal Project Director (FPD) certification requests as well as developing and approving PMCDP policies, training, and certification requirements. Recently, the CRB approved an update to the *Certification and Equivalency Guidelines* (CEG) which provides guidance to FPD candidates and FPDs seeking higher level certification. A summary of the CEG updates can be found on page 7.

Keep Charging!

Paul Bosco

Alternative Project Controls

Perry Barker, Office of Project Analysis (PM-20), Amber Young and Daniel Goldsmith, Office of Project Controls (PM-30)

Earned value management systems (EVMS) are an integral part of organizing, planning, scheduling, budgeting, monitoring, controlling, and managing Department of Energy (DOE) projects. Via the EVMS, a project's work scope, cost, and schedule are integrated into a single performance measurement baseline (PMB) against which progress is measured. The integrity of the PMB is maintained through a disciplined change control process to ensure information is reliable for problem identification, corrective actions, and management. EVMS is a standard adopted by the Federal Government and industry project management. DOE Order 413.3B, *Program and Project Management for the Acquisition of Capital Assets,* outlines the requirement for projects with a total project cost (TPC) greater than $50 million to deploy an EVMS prior to critical decision (CD)-2, *Approve Performance Baseline,* or upon contract award, in compliance with Electronic Industries Alliance (EIA)-748 in accordance with Federal Acquisition Regulation (FAR) 52.234-4, EVMS.

There are, however, circumstances which may warrant an exemption to the use of a certified EVMS. An EVMS is not required for use on projects executed via firm fixed price contracts where privity of contract is with the government. In addition, projects with a TPC less than $100M may request an exemption from the Project Management Support Office (PMSO) to use alternative project control methods in lieu of EVMS.

For projects with a TPC greater than $100M, there may also be circumstances that warrant a request for an exemption to the EVMS requirement and to instead use alternative project control methods. Such circumstances could include the type and complexity of work being performed, vast preponderance of fixed price subcontracts, and current systems in use by the project. In these cases, an exemption request must be submitted by the Program to the Project Management Risk Committee (PMRC) for endorsement. If endorsed by the PMRC, the applicable Under Secretary will determine whether to approve the requested EVMS exemption and to instead approve use of alternative project control methods. If there is no consensus by the PMRC on the EVMS exemption request, the Program may forward the exemption request via the Department's formal collaboration process to the Deputy Secretary.

Welcome to the new PARS

The PMRC will outline the advantages and disadvantages of the proposed EVMS exemption and alternative project control methods.

Upon approval of the EVMS waiver by the PMSO, Under Secretary or Deputy Secretary, the alternative project control methods will need to be described in the project execution plan (PEP) and described in detail to the contracting officer to be included as a contract requirement.

The alternative project control methods must at a minimum include a work breakdown structure (WBS), an integrated master schedule (IMS) showing critical path, schedule of values, account of planned versus actual work and cost, and credible estimate at completion (EAC), and integrate management, mitigation, and acceptance of potential risks to DOE relating to achievement of cost, schedule, and technical performance objectives. The contractor has until three months following the establishment of CD-2 to begin uploading monthly project controls data into DOE's Project Assessment Reporting System (PARS) in the form of Contractor Project Performance (CPP) data.

DOE Guide 413.3-10B *Integrated Project Management Using the Earned Value Management System*, released in April 2022, outlines the following thirteen principles of integrated project management (IPM) that are key for improving the integration of project management planning, execution, and control processes:

1. Establish a culture of shared values and accountability for project execution and self-governance.
2. Train for IPM proficiency.
3. Establish a project strategy and organization structure.
4. Establish project authorities and responsibilities.
5. Develop the schedule and establish the time-phased baseline budget plan.
6. Integrate project scope, schedule, and budget with the quality of work.
7. Authorize work for the baseline budget plan.
8. Maintain the schedule and baseline budget plan through change control.
9. Distinguish between maintaining the baseline budget plan and funds management.
10. Execute and evaluate performance against the baseline budget plan.

11. Accumulate costs for the baseline budget plan.
12. Forecast the future costs for the baseline budget plan.
13. Manage risks, make decisions, solve problems, and create opportunities by taking action.

Alternative project controls align with the IPM principles and the Integrated Project/Program Management (IP2M) Maturity and Environment Total Risk Rating (METRR). The IP2M METRR assessment may be used on any system to gauge the system's ability to support integrated project management, sufficiency of project control methods, and identify areas for improvement which support successful project performance.

The IP2M METRR assessment consists of 10 IPM sub-processes broken down into fifty-six attributes. The IP2M METRR provides insight into the maturity of a system and can be scaled for projects at all stages, with or without an EVMS, to understand the project controls areas of strength and weakness and focus management attention on areas for growth and efficiency.

Whether a compliant EVMS or an alternative project controls method is used, the integrity of the PMB must be ensured so all stakeholders may rely on the data the system is reporting for management or decision-making. The 13 IPM principles laid out above set a blueprint for successfully managing efforts for the FPD and the contractor. They encompass all of the GAO's EVM fundamental activities and also directly influence the project's ability to meet the DOE O 413.3B requirements for an EIA-748 compliant EVMS or alternative project control methods.

Integrated Project Management Using the EVMS: Your Project Is Finished, Now What?
Melvin Frank and David Kester, Office of Project Controls (PM-30)

When it comes to project closeout, ending the implementation of the earned value management systems (EVMS) is not just a matter of stopping the delivery of the Integrated Program Management Report (IPMR). The project closeout phase is the last in a project's lifecycle.

Though the process may seem overly administrative, the closeout phase looks to ensure that all work scope has been completed according to the project's performance measurement baseline (PMB) and there has been final acceptance of the product or system by the customer after it has been tested, validated, and verified. The closure process includes a review of the project's performance (i.e., successes and failures) and acquisition management strategy to identify lessons learned for future projects' success.

Figure 1. The Five Phases of the Project Management Life Cycle
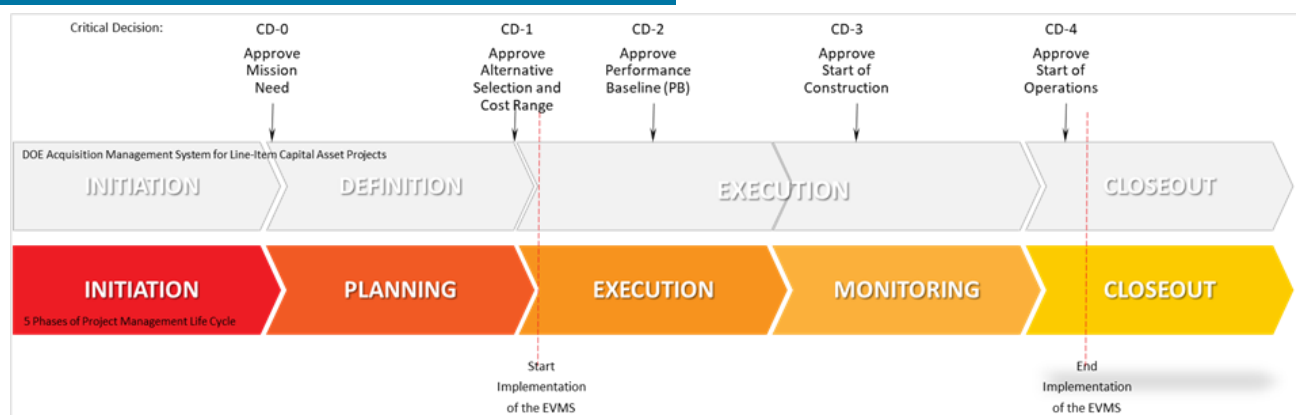
A common mistake during the closeout phase is to zero-out performance variances through retroactive changes to control account records that would change previously reported amounts for actual costs, earned value, or budgets. These final adjustments to balance actual costs with budgets by transferring reported cost underruns to areas reporting cost overruns with any remaining savings going towards the execution of additional work efforts and/or material purchases, sometimes out of scope to the contract, are retroactive changes to the PMB which confuse the management of funds with the assessment and reporting of performance. This in no way improves the integrity of the baseline nor the accuracy of performance measurement data and is not an acceptable reason for making retroactive change according to EIA-748 EVMS Guideline 30. In short, do not make retroactive changes to the PMB for the purposes of "balancing the books" at project closeout, but rather retain all performance measurement and management reserve amounts. Any actual cost savings coming from work efficiencies are not lost, per se, but will be realized through the contractor's final invoice amounts.

Maintaining accurate records and reflections of past performance is necessary to effectively review a project's past successes and failures, and to identify actionable lessons learned for future projects' success.

Consider the following three steps when closing a project and ending the implementation of the EVMS:

1. **Confirm Project Completion**
   Confirm that the Budgeted Cost for Work Performed (BCWP) value equals the Budget at Completion (BAC) value and that all activities listed in the Integrated Master Schedule (IMS) are 100% complete (i.e., each activity and milestone baseline finish date, forecast finish date, and actual finish date are the same). All project deliverables with official signoffs from the project stakeholders should be considered as part of the PMB. This includes the cost of completing any punch list items that are post CD-4.

2. **Formally Stop Project Work Efforts and Charging Practices**
   Formally release resources from the project. Notify team members, subcontractors, and any other partners of the end of the project end and confirm any final payments or obligations. Action should be taken to close all active charge numbers linked to control accounts.

3. **Conduct a Post-Mortem and Share the Results**
   A post-mortem or retrospective project review, as part of the DOE O 413.3B required Lessons Learned process and with a focus on the EVMS aspects of the project, is one of the most valuable steps of the project closure process. This is a time to review the successes, failures, and challenges of the project and identify opportunities for improvement going forward. As you execute the post-mortem, assess the project's performance in terms of scope, schedule, budget/cost, resources, and management processes. Be sure to involve senior leadership, technical subject matter experts, managers, project controls personnel, contracting officers, and the like as part of this iterative and documented last step. A designated person(s) should initiate, lead, and document the results of the post-mortem and place the results in a central location for others to access.

   Be sure to keep clear notes on the project's performance and improvement opportunities that can be easily referenced and implemented on similar projects in the future. Keep in mind that the goal of a post-mortem is not to assign blame for any mistakes. Instead, it is a learning opportunity for everyone to improve and succeed. Reflecting retrospectively and asking questions such as those listed below and questions like them should be done under the umbrella of the project's EVMS, including performing what-if analyses (i.e., structured brainstorming) to determine what did or did not go right in a given scenario. The assessment process should go beyond top-level programmatic topics.

   Typical questions to consider in project post-mortem:
   - Did the project's acquisition management strategy adequately address all the technical, management, and all other significant considerations to control the acquisition?
   - Did the project's acquisition management strategy select the right contract type and incentive structure to deliver mission results?
   - When looking back at the sequence of activities for the engineering design of a product or system, the question should be asked whether the discrete work was completed within the number of hours, budget, and duration first expected (i.e., baseline) to meet the functional requirements of the end-user?

- Could work have been completed in a shorter duration by sequencing activities in parallel?
- What was the project's original PMB value and period of performance, and were the modifications made to the PMB appropriate and efficient in hindsight?
- What were the project team size and mix? Was the resource mix correct?
- What risks (threats and/or opportunities) emerged during the execution of the project? Were the risk handling procedures effective and appropriate? Could the risk triggers have been avoided?
- Were all threats and opportunities identified in the project's risk management process and specifically the Risk Register?

- How well did the project team communicate?
- Did the project culture enable or hinder the effectiveness of the EVMS?
- How well did the project team follow prescribed Department policies and processes?
- What could be changed or improved for future projects based on the lessons learned from the completed project in the areas of scope definition, schedule, budget, resource allocation, and management processes?
- Were adequate technology/software and tools integrated and used for managing performance and reporting progress?

New Guide Released: DOE G 413.3-10B, Integrated Project Management Using the Earned Value Management System

Rob Stern and Kevin Carney, Office of Project Controls (PM-30)

In late April, the U.S. Department of Energy (DOE) Directives Review Board approved an update to DOE Guide (G) 413.3-10A, *Earned Value Management System (EVMS)*. Its replacement, DOE G 413.3-10B *Integrated Project Management Using the EVMS*, provides information for improving the integration of the EVMS with project management planning, execution, and control processes. The updated guide was developed by a team with participants from across the DOE complex, including members from the Office of Project Management (PM), National Nuclear Security Administration (NNSA), Office of Environmental Management (EM), Office of Science (SC), and the Energy Facility Contractors Group (EFCOG).

The subject guide, last updated in 2015, includes these improvements:
- Its structure highlights the proper use of the EVMS to support key project management principles.
- In addressing the requirements for EVMS compliance, it reviews DOE interpretation, application, and implementation of the Electronic Industries Alliance (EIA) industry standard, EIA-748.
- It introduces EVMS maturity attributes and environmental factors developed in the joint government and industry study conducted by Arizona State University for DOE PM.

The 32 EIA-748 EVMS guidelines, while not prescriptive, establish a framework for an adequate integrated management system by simply describing desired outcomes and integrated performance management capabilities. Figure 1 (page 6) shows the interdependency of these guidelines, across a holistic and integrated project management (IPM) process, through both the implementation and execution phases.

The ability to integrate the schedule and budget of the entire work scope, anticipate potential cost and schedule growth issues, mitigate unplanned problems, and accurately forecast final costs are hallmarks of the EVMS. These hallmarks give project stakeholders, the Federal Project Director (FPD), and contractor a means to effectively address programmatic challenges and the surrounding environment. As detailed in the guide, the FPD and contractor use the EVMS as the authoritative source to inform decision making and report performance and progress. The FPD works with the contractor to:
- implement a compliant EVMS after critical decision (CD)-1 and before CD-2,
- prepare for a certification review (CR) of the contractor's EVMS before CD-3,
- maintain a compliant EVMS through a documented self-governance program,
- review EVMS data output to obtain insight and make informed decisions with contractor project management, and
- ensure the contractor uploads contractually required information monthly into the Project Assessment and Reporting System (PARS) for projects with TPC of $50M or greater.

Figure 1. Interdependencies of EVMS Guidelines in the IPM Process

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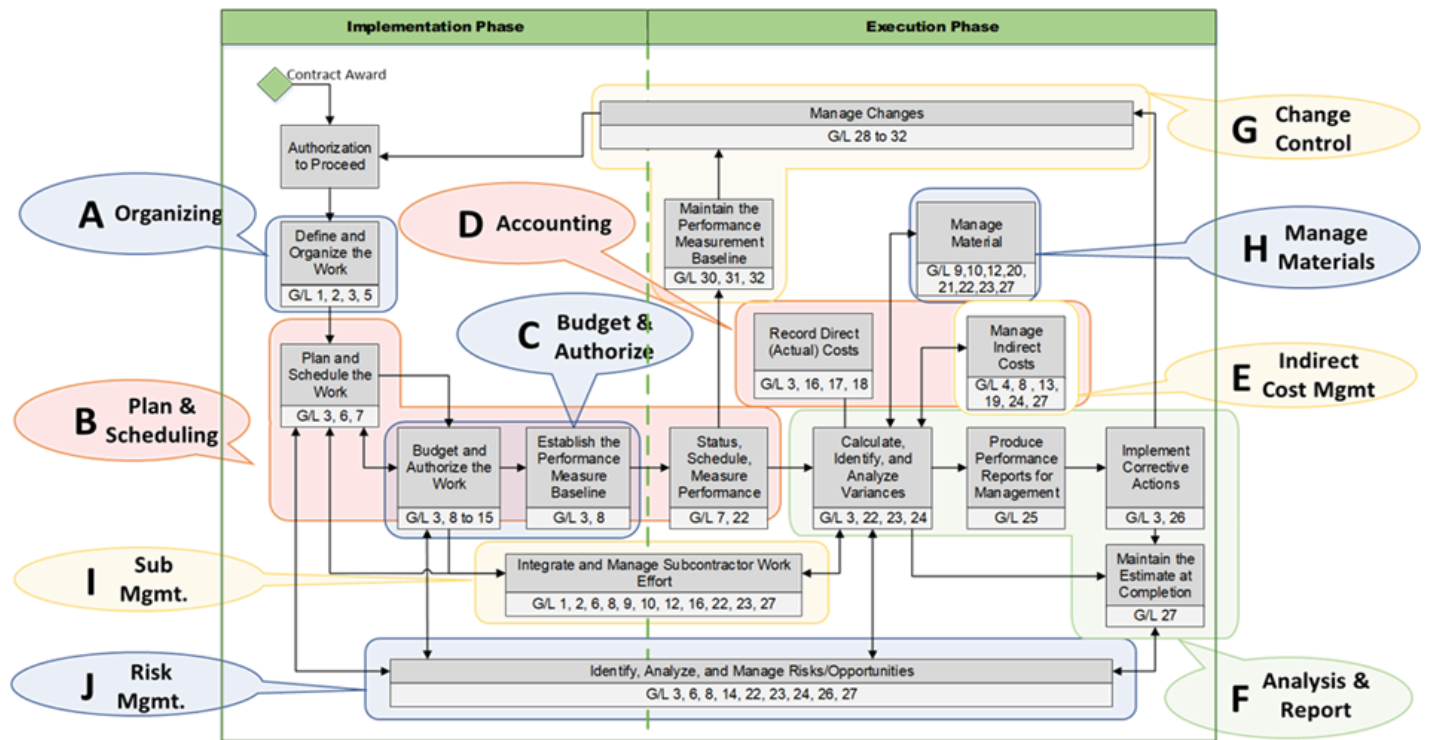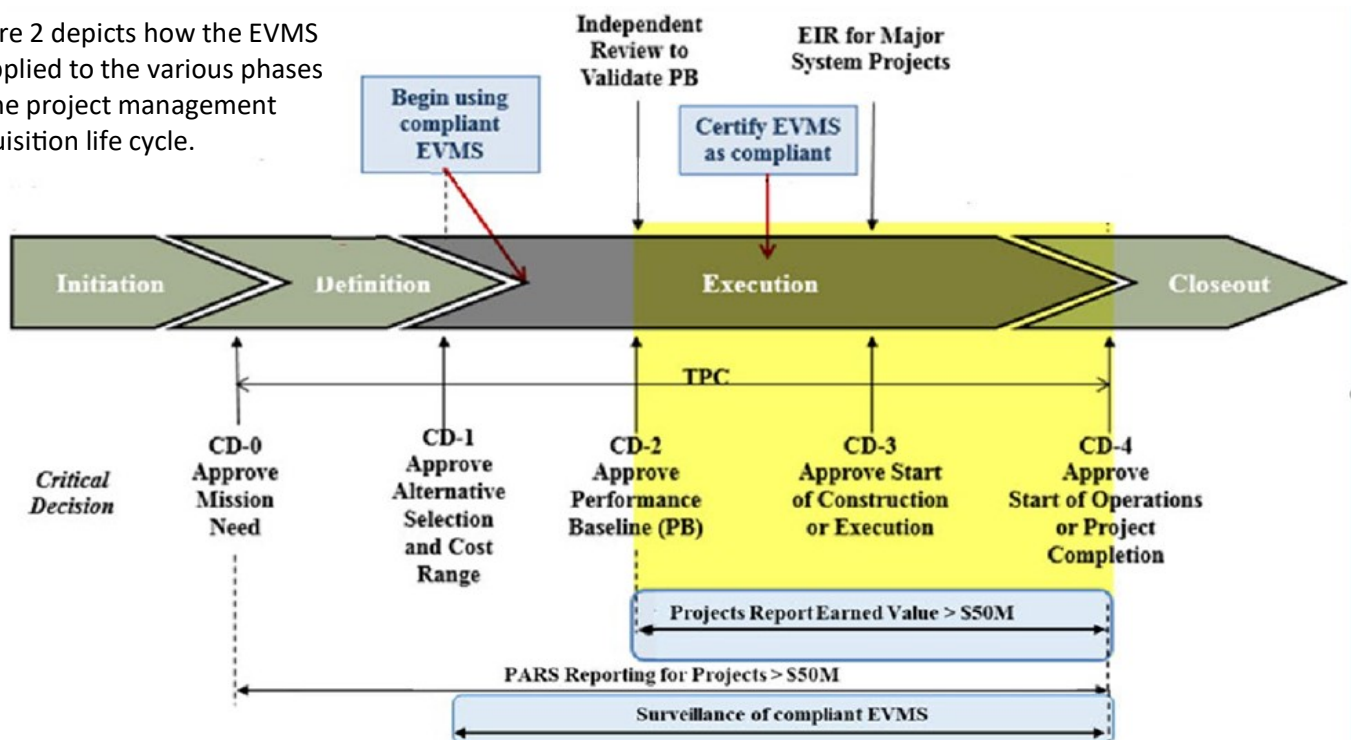
Figure 2. Typical DOE Acquisition Management System for Line-Item Capital Asset Projects

Figure 2 depicts how the EVMS is applied to the various phases of the project management acquisition life cycle.

The FPD and contractor project personnel should understand the requirements that are covered in this guide and proactively use EVMS data and information to effectively manage and make decisions within the DOE Order (O) 413.3B *Program and Project Management for the Acquisition of Capital Assets* set of IPM requirements.

Stay tuned as DOE PM will soon be publishing other documents that expand on the updated material; these include *EVMS Compliance Review Standard Operating Procedure* (ECRSOP), *Compliance Assessment Governance* (CAG), and *Compliance Reference Crosswalk* (CRC).

Certification and Equivalency Guidelines (CEG): REVISED
Sigmond Ceaser, Professional Development Division (PM-40)

The Project Management Career Development Program (PMCDP)'s Certification Review Board (CRB) is the governing body responsible for granting Federal Project Director (FPD) certifications and developing and approving PMCDP policies, training and certification requirements.

In January 2021, the CRB convened an integrated project team (IPT) to implement revisions to the *Certification and Equivalency Guidelines* (CEG). The CEG ensures FPDs are compliant with the certification competency and experience requirements and provides guidance to FPDs for completing the certification application. The application guidance includes equivalency options for satisfying requirements and equivalency justifications.

The CEG version 6 has been approved by the CRB. The major revisions include:

1.1 Introduction
- Specified grandfathering up to two years after CEG is implemented.
  - Must include a justification for grandfathering in the application that is submitted to the CRB.

1.2 Applicability of PMCDP Requirements
- Specified considerations for experience credit in accordance with the project management principles of DOE Order 413.3B.
- Specified considerations for crediting experience gained from projects with total project cost (TPC) equal to or less than $50M, construction components of IT projects, or cooperative agreements.
  - Must provide a formal declaration of the intent to follow DOE Order 413.3B.

1.3 Certification Levels
- Specified certification level requirements based on project TPC.
  - Crediting experience for general plant projects (GPPs) or similar small, routine infrastructure improvement projects may be included in the TPC consideration.
  - Construction portion of IT projects may be included in the TPC consideration.
  - Cooperative agreement projects may be included in the TPC consideration.

2.2.2 Federal Project Director or Acting FPD Experience
- Specified appointment documentation.
  - Must be formally designated in project documents (e.g., PME appointment memorandum, critical decision (CD) approval documents at CD-0 or beyond, etc.).

2.3.3 Deputy Federal Project Director (DFPD)
- Specified appointment documentation.
  - Must be formally designated in project documents (e.g., Project Execution Plan, appointment memorandum, appointment e-mail, CD approval documents, etc.).
  - Can be in the form of a memo.

Section 3 Work and Experience (WE) Requirements (Level (L) I)

- WEL1.1 competency: Overlapping project management experience may count towards the three-year requirement if the projects vary in cost, complexity, project phase, and project status.
  - 25% of time on each overlapping project can be counted towards an experience credit of up to 12 months.
  - Considered at the CRB's discretion.

Section 3 Work and Experience Requirements (Level I)

- WEL1.2 Two overlapping projects may be used to meet the year full-time equivalent (FTE) requirement, but each project must be at least six continuous months in duration if the projects vary in cost, complexity, project phase, and project status.
  - 25% of time on each overlapping project can be counted towards an experience credit of up to 12 months.
  - Considered at the CRB's discretion.

Section 4 Work and Experience Requirements (Level II)

- Removed requirement to hold and maintain a Level 2 FAC-COR certification.

Appendix A – PMCDP Curriculum Map
- Interactive map of required and elective curriculum courses for competency fulfillment.

**Appendix B – Revised PMCDP Competency Model**
- Restructured the competency model to include the courses that satisfy the competencies and the respective behavioral indicators.

Appendix C – Revised Appointment Memoranda Examples
- FPD, Acting FPD, and Deputy FPD.

Appendix D – Contractors in PMCDP Training
- Specified procedures and roles and responsibilities for providing training to support contractor personnel, who as part of their job must comply or support DOE Order 413.3B.
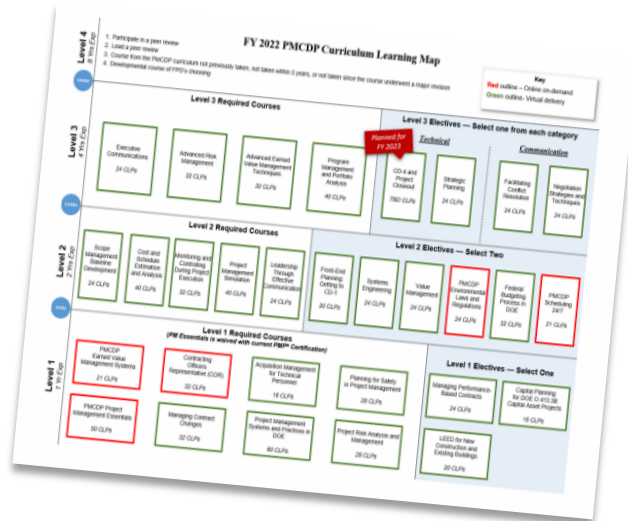
CEGv6 is hosted in the following locations:
- PM-MAX (CEGv6)
- Learning Nucleus (CEGv6)
- ESS PMCDP Module (CEGv6)

Please direct questions or concerns to PMCDP.Administration@hq.doe.gov.

Project Leadership Institute

The U.S. Department of Energy (DOE) Project Leadership Institute (PLI) is a program designed to cultivate a diverse network of successful DOE project delivery practitioners—those capable of delivering major high-risk projects. The PLI program participants contribute to building a culture of project management excellence across DOE.

The PLI offers webinars that are open to any individuals who are interested. The webinars for 2022 include:

Critical Analytical Thinking (CAT) Case Study
June 8, 2022 | 10:00am-11:30am PT

Professor Haim Mendelson,
The Kleiner Perkins Caufield & Byers Professor of Electronic Business and Commerce, and Management, Stanford Graduate School of Business

Critical Analytical Thinking (CAT) is a key aspect of leadership. In this webinar, we'll learn about it through the analysis of a case study that we'll discuss together. This is a hands-on webinar that will require your active participation.

Design Thinking
July 14, 2022 | 10:00am-11:30am PT

Julie Stanford, *Adjust Lecturer, Computer Science, Stanford University*

Julie has taught extensively at Stanford School and Department of Computer Science on design thinking. She specializes in rigorously applying the design thinking process to help clients redefine the problem they are solving and design the right solution. Julie has worked with a variety of clients, including the Department of Defense.

If you are interested in participating in the free webinars, please register at 2022 PLI Webinar Registration or contact pli_scpdteam@lists.stanford.edu.

PMCDP FY22 Q3-Q4 Training Schedule

The training schedule is posted on PM-MAX. Save the direct link to the Project Management Career Development Program PMCDP Training Schedule to your favorites: https://community.max.gov/x/BgZcQw

Course Title	LN Code	Dates	CLPs	Details
Acquisition Management for Technical Personnel	000145	June 21-30, 2022	24	(Tue/Thurs) 12-4pm EST Webinar
Systems Engineering	001049	July 12-14, 2022	24	10:30am-4:30pm EST Webinar Daily
Planning for Safety in PM	001035	July 12-21, 2022	28	(Tue/Thurs) 1-3pm EST Webinar
Federal Budget Process in DOE	001034	July 18-21, 2022	32	10:30am-4:30pm EST Webinar Daily
Program Management Portfolio Analysis	001025	July 25-29, 2022	40	10:30am-4:30pm EST Webinar Daily
Project Risk Analysis	001028	July 25-29, 2022	28	10:30am-4:30pm EST Webinar Daily
Facilitating Conflict Resolution	001558	August 1-10, 2022	24	(Mon/Wed) 12-4pm EST Webinar
Value Management	001027	August 2-5, 2022	24	10:30am-4:30pm EST Webinar Daily
Front-End Planning	003176	August 9-25, 2022	20	(Tue/Thurs) 12-3pm EST Webinar
Executive Communications	001031	August 23-25, 2022	24	10:30am-4:30pm EST Webinar Daily
Managing Performance-Based Contracts	001951	August 30-September 1, 2022	24	10:30am-4:30pm EST Webinar Daily
LEED For New Construction/ Existing Buildings	001936	September 6-8, 2022	20	10:30am-4:30pm EST Webinar Daily
Advanced EVMS	002689	September 12-15, 2022	24	10:30am-4:30pm EST Webinar Daily
Project Management Simulation	001029	September 19-23, 2022	40	10:30am-4:30pm EST Webinar Daily
Advanced Risk Management	001042	September 26-30, 2022	32	10:30am-4:30pm EST Webinar Daily

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Find up-to-date information and resources anytime!

All PMCDP Course Descriptions and Course Materials can be found in the Course Catalog on **PM·MAX**
Save the direct link to your favorites: **https://community.max.gov/x/UAT3Rw**

Or, download the Interactive Curriculum Map: **https://community.max.gov/x/sQd1Qw**

Have a question, found a bug or glitch in a PMCDP online course, or want to provide feedback? Submit your questions through: **PMCDPOnlineCourseSupport@hq.doe.gov**.

Contact Us!

The Office of Project Management welcomes your comments on the Department's policies related to DOE Order 413.3B. Please report errors, omissions, ambiguities, and contradictions to: PMpolicy@hq.doe.gov. Propose improvements to policies at: https://hq.ideascale.com.

If you have technical questions about PARS, such as how to reset your password, please contact the PARS Help Desk at: PARS_Support@Hq.Doe.Gov. And, as always, PARS documentation, Frequently Asked Questions (FAQs) and other helpful information can be found at: https://pars2oa.doe.gov/support/Shared%20Documents/Forms/AllItems.aspx.

The current PARS reporting schedule is located on PM-MAX at the following link: https://community.max.gov/x/m4lIY.

Need information to apply for FPD certification? The Certification and Equivalency Guidelines (CEG) can be found here: https://community.max.gov/x/IQd1Qw.

Can't put your finger on a document or information you were told is available on PM-MAX? Looking for information on DOE Project Management? Submit your questions and queries to: PMWebmaster@doe.gov.

To reach the Professional Development Division team:

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Sigmond Ceaser — Alternate Delivery Platforms, PMCDP Review Recommendations Lead, PMCDP Curriculum Manager, Sigmond.Ceaser@hq.doe.gov

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If you would like to contribute an article to the Newsletter or want to provide feedback, contact the Editor at DL-PM-40.