



DOE PROJECT MANAGEMENT NEWS

Promoting Project Management Excellence

JULY 2021



IN THIS ISSUE:

Director's Corner	1
Design Management Plans: What Are They and How Can They Help Your Project?.....	2
Document Management in PARS – What's Missing?.....	4
The Importance of Addressing the Earned Value Management System (EVMS) when Developing the Project Execution Plan.....	7
Congrats to Our Newly Certified FPDs!	7
FY21 Q4 Training Schedule.....	8
Contact Us.....	9



Director's Corner

With the change in seasons and the arrival of summer, the focus of our series of articles addressing the project lifecycle within the framework of DOE Order 413.3B, *Program and Project Management for the Acquisition of Capital Assets*, shifts from the identification of a credible performance gap and project initiation, to Post CD-0/Pre CD-1 topics and requirements.

The foundation for project success begins at the start. A design management plan (DMP) is a key part of that foundation. It is an important Pre CD-1 requirement for all major system projects where design costs could run into the hundreds of millions of dollars. DMPs should be tailored to the specific project, but typically include the following sections: Introduction; Design Requirements; Design Management Organizational Structure; Quality Assurance Program; Design Reviews; Documentation and Records; Milestones/Schedule; and References. You can learn more about this best practice in the article on page 2.

Prior to CD-1, the Project Management Executive is required to approve the preliminary project execution plan (PPEP).

The PPEP is a living, evolving, document that establishes the policies and procedures to be followed to manage and control the project through project completion/transition to operations. An important part of monitoring and controlling a project is the development and implementation of an integrated set of policies, procedures, and practices to objectively track project performance. A compliant earned value management system (EVMS), which is required for projects with a total project cost of \$50 million or greater prior to CD-2, can provide the contractor and the department with this capability. Since the development and implementation of a compliant EVMS doesn't happen overnight, early incorporation into the PPEP is essential. Additional information can be found in the article on page 7.

In March 2010, the Deputy Secretary designated the Project Assessment and Reporting System (PARS) the department's central repository for key departmental-level project information. Information in PARS generally falls into one of the following categories: federal performance assessments, contractor performance/earned value data, and project/contractor documents. To support informed decision making and provide a historical record, project information must be timely, accurate, consistently reported, complete, and auditable. Key stakeholders, including the General Accountability Office (GAO), have access to PARS. A preview of upcoming PARS enhancements is provided in the article on page 4.

Enjoy summer. Keep Charging!

Paul Bosco

Design Management Plans: What Are They and How Can They Help Your Project?

Pete Bako, Office of Project Analysis (PM-20)

Department of Energy (DOE) Order 413.3B, *Program and Project Management for the Acquisition of Capital Assets* (Order), includes many requirements designed to promote project management best practices throughout the lifecycle of a DOE capital asset project. One of the early stage requirements that doesn't get much attention is the design management plan, or DMP. The Order states that prior to critical decision (CD)-1, all major system projects or MSPs (total project cost greater than \$750M) must develop a design management plan to establish design maturity targets at critical milestones through final design. For MSPs that often cost billions of dollars, the total cost of design can reach into the hundreds of millions. For this reason, the DMP is a critical tool used to enhance the fiscal insight and discipline for MSPs.

For MSPs, CD-1 approval packages should include a DMP and an estimate of the required amount of project engineering and design (PED) funds to execute the planning and design portion of a project (period from CD-1 to completion of the project's design). The DMP should be developed as early as possible after approval of the analysis of alternatives (AoA) to ensure that design activities, including the conceptual design, are conducted in accordance with a defined plan.

What is a DMP? The DMP is essentially a plan that documents the design planning process. It ties together all the components of design management – i.e., planning, requirements, organization, processes and procedures, milestones/schedule, and monitoring and reporting – into a functional concept. It should be scaled and tailored based on the execution strategy, size, complexity, risks, hazards, and technical maturity of the project technology and design. Though DOE O 413.3B does not specify who approves the DMP, it's usually approved by the Federal Project Director.

As a foundational project management tool, the project execution plan (PEP) sets the overall project schedule and key milestones, including those for design. The DMP should include key design milestone dates, as defined in the PEP, for the submittal of all design reports (i.e., conceptual, preliminary, and final), the schedule for design reviews and approvals, and the planned dates for other major design milestones.

DMPs should be tailored to the specific project, but typically include, at a minimum, the following information:

- **Introduction**
- **Design Requirements**
- **Design Management Organizational Structure**
- **Quality Assurance Program**
- **Design Reviews**
- **Documentation and Records**
- **Personnel Training**
- **Milestones/Schedule**
- **References**



Maintaining the DMP. Throughout a project's lifecycle, the DMP should be continuously evaluated and updated to ensure that it covers the scope of activities being performed. Specifically, it should be reviewed at the start of each design phase and updated as needed during the various design phases of the project. Following design completion, design activities transition to support procurement and construction and it may be necessary to update the DMP to provide the appropriate focus on these activities. Implementation of the DMP continues throughout design, through completion of project execution and approval of critical decision (CD)-4, *Approve Start of Operations or Project Completion*, and concludes with project closeout and turnover of as-built drawings.

Continued on Page 3.

DMP Monitoring and Reporting. Design monitoring and reporting should be instituted early in the design process. When possible, earned value credit and progress assessment should use the resource-loaded and activity-based critical path method design schedule to determine design progress and performance for reporting. However, other means of monitoring and reporting are also employed. For example, production of engineering deliverables such as calculations, drawings, and specifications should be monitored weekly against the engineering production-to-plan (P2P). P2P assessment provides a more granular look at engineering performance and is particularly important early in the project when significant quantities of engineering deliverables are produced.

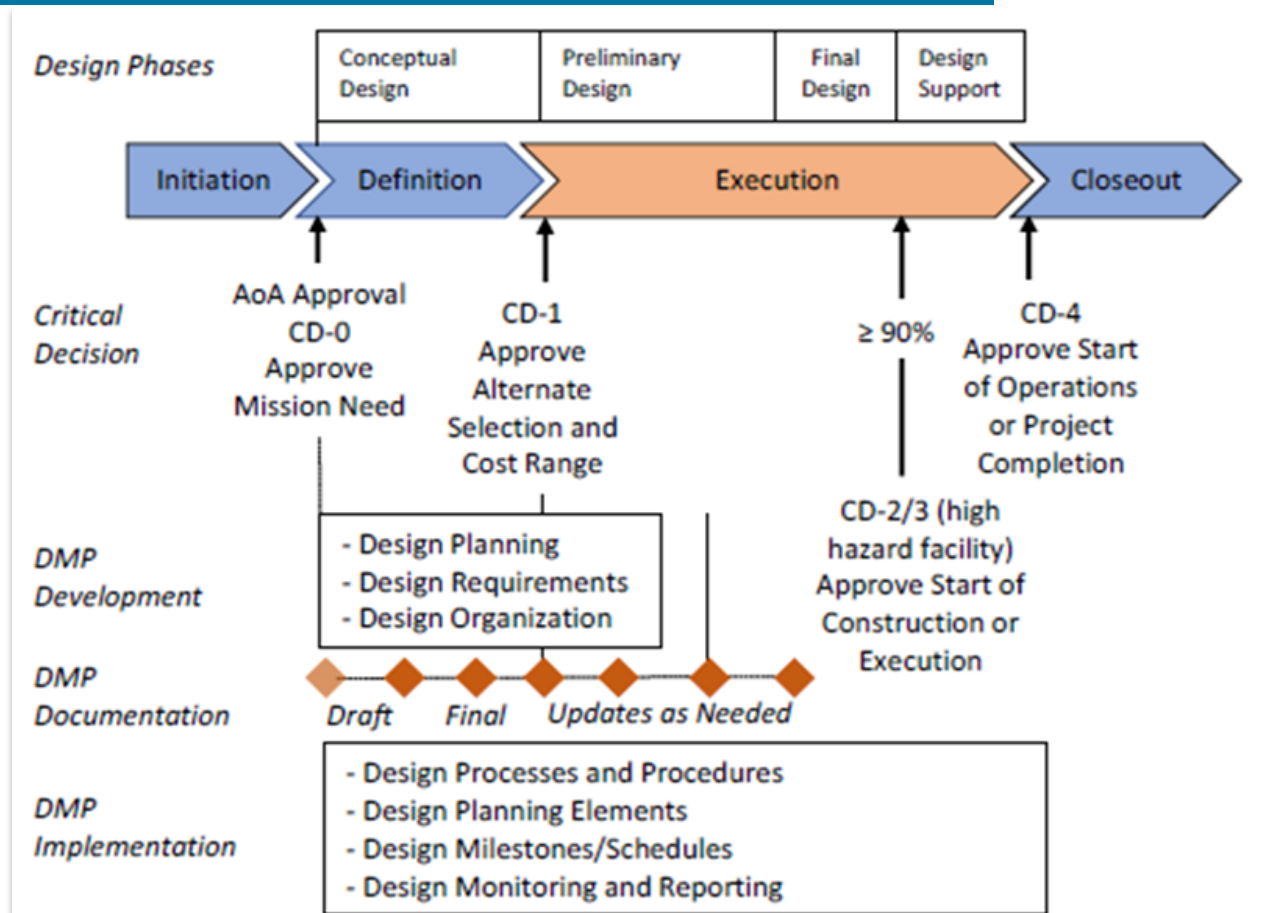
DMP Phases. Figure 1 (below), from National Nuclear Security Administration Office of Acquisition and Project Management's Standard Practice 24, *Design Management* (NA-APM-SP-24), provides an excellent visual representation of how typical DMP development, documentation, and implementation are related to a project's critical decision and design phases.

Why is a DMP important? With a general understanding of what a DMP is, it's time to discuss the importance of a DMP and how it can be a helpful project management tool. The DMP serves several key purposes, including:

- **Developing and providing methods to track the design process against cost and schedule baselines**
- **Identifying applicable requirements and planning their completion**
- **Promoting quality and consistency throughout the design phases (i.e., concept, preliminary, final)**

Properly developed and implemented, a DMP helps set a capital asset project off on the right foot. It provides a plan for the project team to follow in the early stages of a project. It also provides a first look at how effectively the integrated project team (IPT) works together as it measures cost and schedule performance against established design milestones. The successful IPT considers the lessons learned while working to the DMP during the design phase and implements project management improvements as it moves into the execution phase of the project. The DMP serves as a useful and effective management tool throughout the life of the project.

Figure 1. Design Management Development and Implementation



Document Management in PARS – What’s Missing?

Matthew (Zac) West,, Office of Project Controls (PM-30)

The Department of Energy (DOE)’s Project Assessment and Reporting System (PARS) stores three basic categories of information: federal performance assessments, contractor performance / earned value data, and project / contractor documents. This article focuses on the documents loaded into PARS based on DOE’s *Program and Project Management for the Acquisition of Capital Assets* directive (DOE O 413.3B), supporting guides, and standard operating procedures. The Office of Project Management (PM) will add a tool to PARS this fall to display which documents are loaded and which are missing based on the project’s current critical decision (CD). Users will see which documents are expected at a specific CD and will have an easy link to upload them to the PARS Document Management System (DMS). Figure 1 is a current developmental user interface for this new tool.

In addition to this input screen, there will be an audit report to see what documents are in PARS and which are missing. These tools will make it easier for the project teams, programs, and headquarters to ensure required documents are in PARS. Also, in Figure 1 note the column, *Requirements Source*, indicating the source document that requires the information be loaded to PARS. Documents which are not required will continue to be allowed if they are the final version. Documents loaded to PARS include those which form an auditable record to support data entered into PARS fields (such as appointing a Federal Project Director or an approved critical decision), those which help get a project to a critical decision, and those which support monthly performance reporting (such as contractor generated Integrated Program Management Report/Contract Performance Report (IPMR/CPR) Format 1 to 5 and change control logs). There are requirements for both contractors and federal members of the project to upload documents to PARS each month.

Figure 1. Developmental User Interface

CD-0
CD-1
CD-2
CD-3A
BCP
CD-3
CD-4
Closeout
General Documents

Required Documents

Doc. Type No. *
Document Category *
Document Type *
Requirement Source *

Acquisition Strategy
Add Document

Doc. Type No.	Document Category	Document Type	Requirement Source		
2001	Project Management	Analysis of Alternatives	2016-05-26 SOP; EIR v3.5	Edit	Delete
2002	Project Management	Acquisition Strategy	2016-05-12 DOE O 413.3B Chg 2	Edit	Delete
2004	Project Management	CD-0 Approval Document	2016-05-26 SOP; EIR v3.5	Edit	Delete
2006	Project Management	Conceptual Design Report	2016-05-12 DOE O 413.3B Chg 5	Edit	Delete
2011	Project Management	Code of Record (for nuclear facilities)	2016-05-12 DOE O 413.3B Chg 5	Edit	Delete
2013	Project Management	FPD Designation Memo	2016-05-12 DOE O 413.3B Chg 5	Edit	Delete
2015	Project Management	Integrated Project Team (IPT) Charter	2016-05-12 DOE O 413.3B Chg 5	Edit	Delete

Continued on Page 5.

In addition to these new tools coming to PARS, the current SharePoint environment will be replaced with improved capability resulting in faster performance, less metadata to enter, and better search capability. The PARS search engine will be enabled to search within the documents rather than just the metadata by having all documents automatically processed by optical character recognition (OCR) tools when loaded.

The system will also be improved by pulling more metadata from the project record, requiring fewer user inputs. Figure 2 provides a view of the developmental user search interface and Figure 3 provides the new metadata requirement screen for document upload.

Search Project Documents

Type in the search bar to find a project document or click Advanced Search for more options.

Advanced Search

Attachment Title

Document Group

CD Level

CD-0 Approval Document

Monthly Report

CD-1

Jan 2021

Filename	Attachment Title	Document Group	Critical Decision	Document Date	Last Modified
<div>< < 1 > ></div>					

Figure 2. Developmental User Search Interface

Figure 3. New Metadata Requirement

Upload a new Document to Project 389

Select a Document *

Choose File testDMSDocument.docx

☐ Is this document considered CUI?

Attachment Title *

Acquisition Strategy

Document Group *

Budget/Funding Supporting Documentation

Critical Decision Level

CD-2

Document Description *

This is a document

Document Date 06/17/2021

Upload

Another enhancement will keep the document visible to users when a pending upload is waiting for validation. Each document added to PARS is reviewed to make sure the metadata is complete before it is accepted. During this process which generally takes one business day, the SharePoint tool currently does not enable users to see the document while it is in the review queue, resulting in the user uploading it to wonder if it really went into PARS.

In addition to these PARS improvements, there is an ongoing audit to identify documents missing from PARS. PM has generated a project by project list of what is currently in PARS and what is missing.

In earlier years of PARS, many documents were placed on a shared network drive and were never migrated to PARS. Over the next four months there is an effort to make sure these documents are added to PARS as well as to reach out to programs to assist with missing records. PM will provide each program with the audit records to aid with updating the records.

Continued on Page 6.

Figures 4 and 5 provide an example of the audit documents with the first listing the number of a specific type of document in the record and if it was required, and the second a listing of what documents are under each project.

Figure 4. Sample of Document Audit in PARS				
PARS ID	XXXX			
Project Name	XXXXXXXXXX			
DOE Project #	XXXXXXXXXX			
CD	CD3A			
TPC	XXXXXXXXXX			

docCTN	Doc. Type	# of Documents in DMS	Required?	Meets Requirement?
2001	Analysis Of Alternatives (AoA) Report	0	X	No
2002	Acquisition Strategy	0	X	No
2003	Acquisition Strategy Endorsement (DOE-PM)	0	X	No
2004	CD or BCP Approval Memo	7	X	Yes
2006	Conceptual Design Report	0	X	No
2011	Code Of Record Documentation	0	X	No
2012	External Independent Review (EIR)	2	X	Yes
2013	FPD Appointment Memo with PM Career Development Program Certification	1	X	Yes
2014	Independent Project Review with Recommendation Status	3		Not required
2015	Integrated Project Team (IPT) Charter	0	X	No
2017	Lessons Learned Report	0	X	No
2019	Mission Validation Independent Review	0	X	No
2020	Mission Need Statement (MNS)	1	X	Yes
2021	Mission Need Statement Recommendation (MNS) (Office Of Project Management)	0	X	No
2022	Monthly Status Report [Contractor]	1	X	Yes
2029	Project Execution Plan (PEP) [Federal]	2	X	Yes
2030	Project Management Plan (PMP) [Contractor]	0	X	No
2032	Project Peer Review With Recommendation Status	0	X	No
2034	Project Transition to Operations Plan			
2035	Quarterly Project Review or Monthly Equivalent [Federal]	0	X	No
2038	Tailoring Strategy	0	X	No
2039	Technical Independent Project Review	0	X	No

Figure 5. Sample Listing of All Documents within PARS for a Particular Project

docCTN	Doc. Type	Required?	DMS File Name	Project Attachment Title Metadata Tags
2004	CD or BCP Approval Memo	X	Approval Memo signed by Deputy Secretary She	CD-1 Approval Document, FPD Designation Memo
2004	CD or BCP Approval Memo	X	S2 Approval.pdf	CD-0 Approval Document
2004	CD or BCP Approval Memo	X	Action Memo signed by Acting Under Secretary	CD-3A Approval Document
2004	CD or BCP Approval Memo	X	Approval Memo signed by Acting Under Secreta	CD-3 Approval Document
2004	CD or BCP Approval Memo	X	Signed Action Memo_MM-11-20-18 (002).pdf	CD-3A Approval Document
2004	CD or BCP Approval Memo	X	SPR LE2 CD-3BC Approval Memo.pdf	CD-3A Approval Document
2004	CD or BCP Approval Memo	X	Approval Memo_SPR-LE2 CD-3CD - Signed.pdf	CD-3A Approval Document
2012	External Independent Review (EIR)	X	SPR-LE2 EIR Report and Transmittal Memo (3-23	EIR Final Report
2012	External Independent Review (EIR)	X	SPR-LE2 EIR Report Final (3-23-2021).pdf	EIR Final Report
2013	FPD Appointment Memo with PM Career Development Program Certification	X	Approval Memo signed by Deputy Secretary She	CD-1 Approval Document, FPD Designation Memo
2014	Independent Project Review with Recommendation Status			
2014	Independent Project Review with Recommendation Status			
2014	Independent Project Review with Recommendation Status			
2020	Mission Need Statement (MNS)	X	2015-05-22 LE2 Signed Mission Need Statement	Mission Need Statement
2022	Monthly Status Report [Contractor]	X	SP-LE2-1stqtr17.pptx	Monthly Project Report (MPR), QPR/Deep Dive Report
2029	Project Execution Plan (PEP) [Federal]	X	Execution Plan signed by Deputy Secretary shen	Project Execution Plan (PEP)
2029	Project Execution Plan (PEP) [Federal]	X	PEP_SPR-LE2_Rev 7_signed 2018-12.pdf	Project Execution Plan (PEP)
6306	Independent Cost Estimate (ICE)	X	Exit Brief for ICR-ICE.pptx	ICE/ICR Report
6306	Independent Cost Estimate (ICE)	X	SPR-LE2 CD-3AB ICE Report w Transmittal Mem	ICE/ICR Report
6306	Independent Cost Estimate (ICE)	X	SPR LE2 CD3-BC ICE Report and Transmittal Men	ICE/ICR Report
6306	Independent Cost Estimate (ICE)	X	SPR LE2 CD-23 ICE Report - Final.pdf	ICE/ICR Report
6307	Independent Cost Review (ICR)	X	Exit Brief for ICR-ICE.pptx	ICE/ICR Report

PARS will continue to be considered a moderate system, allowing it to contain documents which are controlled unclassified information (CUI, OUO, UCNI, FOUO, SBU). While any user can upload a controlled-type documents, the programs will continue to select who has access to view these documents.

PM looks forward to implementing these new capabilities this fall to help ensure the documents supporting a project are captured at the correct time over the project's lifecycle. With the audit, the PM team looks forward to working with the programs to improve the capabilities of PARS by making all required documents available to appropriate users.

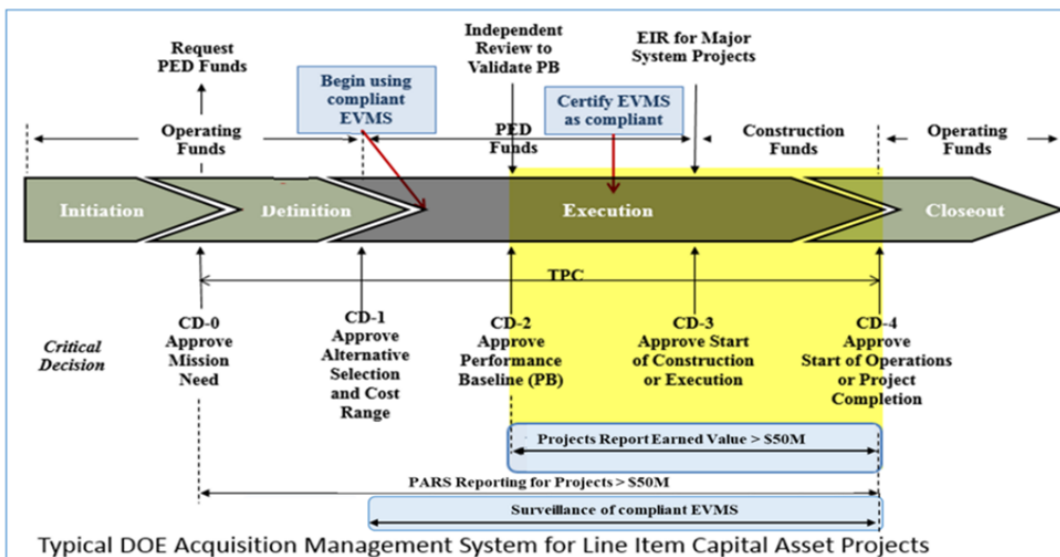
The Importance of Addressing the Earned Value Management (EVMS) when Developing the Project Execution Plan

Kevin Carney and Mel Frank, Office of Project Controls (PM-30)

The project execution plan (PEP) is the governing document that establishes the means to execute, monitor, and control capital asset projects which are subject to Department of Energy (DOE) Order 413.3B *Program and Project Management for the Acquisition of Capital Assets* (Order). The Federal Project Director (FPD), with inputs from the contractor, develops and maintains the PEP throughout the acquisition lifecycle. The PEP is a living document that should be updated to reflect changes in requirements and strategy. It serves as a primary communication tool to ensure that everyone (i.e., stakeholder, customer, and contractor alike) is aware and knowledgeable of how project objectives (derived from the mission needs statement) will be accomplished.

The preliminary PEP is part of the critical decision (CD)-1 approval package and later updated as part of the CD-2 approval package. The PEP should provide an explanation of the management systems and processes needed to support the project's management and oversight approach of which a cornerstone element and approach is the earned value management system (EVMS). Per the Order, capital asset projects with a total project cost (TPC) of \$50M or greater are required to effectively plan and manage scope, schedule, and budget objectives using an EVMS compliant with the industry standard EIA-748. Since use of a compliant EVMS is required prior to CD-2, the PEP should describe how the EVMS will be implemented and integrated with the acquisition plan.

Refer to PM Newsletter article from December 2020 titled [Authorization to Plan and Budget vs. Authorization to Proceed Through the Critical Decision \(CD\) Gate Life-cycle Process \(A Critical Insight into Budgets vs Funds\)](#) for related clarification.



An EVMS enables the schedule and budget integration of the entire work scope. It accurately represents status, highlights technical/schedule/cost issues and risks that can potentially be mitigated through management attention, and provides credible estimates at completion for cost and schedule; all to aid informed decision-making at all levels of management. These hallmarks of a compliant EVMS provide the FPD, Program Office, and contractor with a consistent method to effectively deal with programmatic challenges and the surrounding environment. Finally, after the PEP is approved, it is important that the FPD and contractor project manager continually affirm their joint commitment to the use of the EVMS by the project team; this will ensure an authoritative source to inform decision-making and report performance and progress.

For assistance in addressing EVMS in the PEP, refer to applicable guidance on PM-MAX (<https://community.max.gov/x/ao5tQw>) or contact the Office of Project Management, [Project Controls Division \(PM-30\)](#).

Congratulations to our newly certified FPDs!

Level I

Laura Hedrick (EM)

Joshua Mengers (EM)





PMCDP FY21 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>

FY21 Q4				
Course Title	Dates	CLPs	LN Code	Details
Managing Contract Changes	July 12-15, 2021	32	002102	10:30am-4:30pm EDT Webinar Daily
Leadership through Effective Communication	July 13-15, 2021	24	002366	10:30am-4:30pm EDT Webinar Daily
PM Simulation	July 19-23, 2021	40	001029	10:30am-4:30pm EDT Webinar Daily
PM Systems and Practices in DOE	July 20-August 12, 2021	60	001024	Tues/Thurs, 8 Sessions 12:00p.m - 4:00p.m. EDT Webinar
Facilitating Conflict Resolution	August 3-12, 2021	24	001558	Tues/Thurs, 4 Sessions 12:00p.m - 4:00p.m. EDT Webinar
Acquisition Management for Technical Personnel	August 9-18, 2021	16	000145	Mon/Wed 4 Sessions 12:00p.m - 4:00p.m. EDT Webinar
Project Risk Analysis and Management	August 23-27, 2021	28	001033	10:30am-4:30pm EDT Webinar Daily
Planning for Safety in PM	August 26-September 16, 2021	28	001035	Thurs, 5 Sessions 1:00p.m - 3:00p.m. EDT Webinar
Advanced EVMS	September 7 -10, 2021	24	002689	10:30am-4:30pm EDT Webinar Daily
Monitoring and Controlling During Project Execution	September 13 -17, 2021	32	000450	10:30am-4:30pm EDT Webinar Daily
Program Management Portfolio Analysis	September 13 -17, 2021	40	001025	10:30am-4:30pm EDT Webinar Daily
Advanced Risk Management (Pilot)	September 20 - 24, 2021	28	001042	10:30am-4:30pm EDT Webinar Daily
LEED	September 27 -29, 2021	20	001936	10:30am-4:30pm EDT Webinar Daily

Find up-to-date information and resources anytime! PM axi

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 send citations of 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 in PM-MAX at the following link <https://community.max.gov/x/m4IIY>.

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. Check out the links below for information related to FPD Certification and Certification and Equivalency Guidelines.

To reach the Professional Development Division team:



Linda Ott — Division Director for Professional Development, PMCDP Program Manager, FPD Certifications Manager, PM Newsletter Editor, Linda.Ott@hq.doe.gov, 202-287-5310



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



Ruby Giles — PMCDP Budget Manager, PMCDP Training Coordinator and Training Delivery Manager, Course Audit Program, Ruby.Giles@hq.doe.gov

If you would like to contribute an article to the Newsletter or have feedback, contact the Editor at Linda.Ott@hq.doe.gov.

