



# DOE PROJECT MANAGEMENT NEWS

Promoting Project Management Excellence

MARCH 2020

## 2020 DOE Project Management Workshop

April 14–15, 2020 | Washington, DC

plus ...

## Project Controls Session.

April 16, 2020

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### Director's Corner

The PM Workshop is a highlight of the year for all of us in the Office of Project Management, and it is just around the corner. This year's lineup of topics and speakers is shaping up nicely. The articles in this month's newsletter are highlights of some topics to be discussed at the workshop. We hope you can join us to explore these and other topics further.

Inflation is an economic term that indicates the increase in price of goods and services over time, including construction. The most common index for determining the inflation rate is called the Consumer Price Index or CPI. Escalation refers to a persistent rise in the price of specific commodities, goods, or services due to a combination of inflation, supply/demand, project location, regulation, changes in technology, and other effects such as environmental and engineering changes. Properly accounting for escalation in an estimate is an important step towards ensuring its quality. The two most common escalation application methodologies are discussed on page 2.

Change is inevitable during project execution. A disciplined change control process is crucial to ensuring that the project remains in alignment with its mission need.

A disciplined process can screen out unnecessary changes that could disrupt execution while ensuring that allocated resources are used efficiently. This is done by making sure that potential changes are thoroughly vetted and properly approved prior to being introduced to the baseline. Find more information on change control, to include freeze periods, retroactive changes and the processing of simultaneous changes on page 3.

Candidates for Federal Project Director (FPD) Level III certification are required to participate in a mentoring program for a minimum of six months. Level III and IV FPDs with a minimum of two years' experience on a project with a total project cost (TPC) greater than \$100 million can serve as a mentor and earn continuous learning points (CLPs) while doing so. Additional information on requirements and how to become a mentor can be found on page 5. See page 4 for more information on FPD certification and being a Contracting Officer's Representative (FAC-COR).

With the PM workshop quickly approaching, I encourage those of you eligible for Phase 1 registration to do so immediately. Phase 2 registration will open on Tuesday, March 3, 2020. Attendance at the workshop will be limited, register as soon as possible at: <https://go.usa.gov/xdxap> Hope to see you at the workshop!

Keep Charging!

*Paul Bosco*

## Escalation: Mid-point Versus Time Phased Calculation — Pros and Cons

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

### Why Is Escalation Important?

Escalation is an important factor in the development of a high-quality cost estimate, which is a foundational component of a successful project. To be considered “high quality,” the estimate should be credible, well-documented, accurate, and comprehensive, according to the [GAO Cost Estimating and Assessment Guide, GAO-09-3SP](#). As a specific element of the accurate characteristic, the Guide further notes that “proper escalation factors should be used to inflate costs so that they are expressed consistently and accurately.” This article discusses the application of escalation in a cost estimate. This article does not address how to select the appropriate escalation rate for your project, please see DOE G 413.3-21A, *Cost Estimating Guide* for more on escalation rate determination.

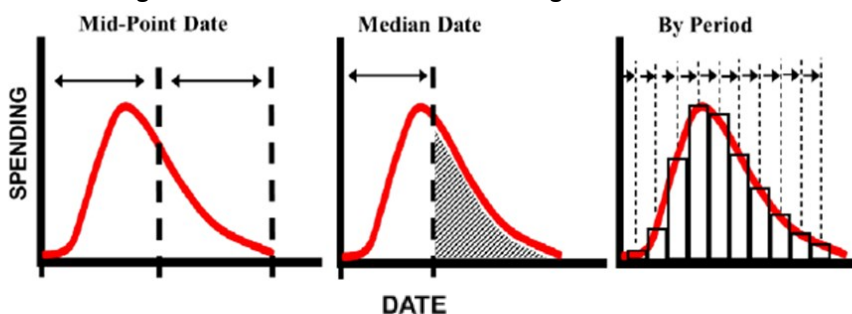
### What is Escalation?

Escalation is the provision in a cost estimate for increases in the cost of equipment, material, labor, etc., due to continuing price changes over time. It’s typically used to estimate the future cost of a project. Most cost estimating is done in current year dollars and then those current year dollars are escalated to the time when the work will be executed. As most projects are executed over several years or longer, proper application of escalation assists in determining the required spending each year over the life of the project. The term cash flow is typically used to represent this spending distributed over time.

### Escalation Application Methodologies

There are several different methods for applying escalation to a cost estimate, but the two most common are: (1) To the mid-point of construction and (2) Time-phased over the life of the project. Each method has its own set of pros and cons, which are described below. **Figure 1** illustrates three primary methods for addressing costs incurred over time (Note: the median method will not be discussed in this article, as it is not routinely used within DOE).

Figure 1— Three Methods of Addressing Cash Flow



### Mid-point of Construction

This method uses the mid-point of the construction as the point in time to which base costs (typically current year or budget year) are escalated. It is best suited to Class 5 and 4 cost estimates (0% - 15% maturity level of project definition) for which cost and schedule information is limited. It typically establishes separate mid-points for each major work breakdown structure (WBS) element (e.g., procurement, construction, commissioning, etc.) and escalates to each, accordingly.

#### Pros

- Simplest approach and requires no knowledge of the actual project spending pattern
- Can be used when cost and schedule information is limited

#### Cons

- Does not accurately capture cost impact of high-dollar activities occurring late in the project
- Not very reliable if either cash flow or escalation rates are inconsistent over time

### Time-Phased (By Period)

This method breaks the spending into time increments, typically by year. For each year of spending, the escalation rate for that given year is applied to determine the escalated cost. The escalated costs from each year are then aggregated over the duration of the project to determine the total escalated cost. This method is suited to any Class estimate, but particularly Class 3 (10% - 40% maturity level of project definition) or better estimates for which cost and schedule information is fairly detailed.

#### Pros

- More accurate than mid-point method
- Best addresses asymmetric spending patterns as well as variable index trends

#### Cons

- More complex and requires specific knowledge of the spending pattern
- Requires fairly detailed cost and schedule information

Each escalation method has its own particular strengths and weaknesses. The method selected should take into account the unique circumstances of the project being estimated since every project is different as is the amount and quality of data available for each. Regardless of the method employed however, it is important that the process be well-documented since someone external to the project may need to review and understand this calculation and its results.

If you have any questions on escalation, please contact your respective PM-20 Project Analyst.

\*ACE International Recommended Practice No. 58R-10, dated May 25, 2011.

## Change Control – Freeze Period, Retroactive Changes, and the Processing of Simultaneous Changes

Doug Fisher, Consolidated Nuclear Security (CNS)

Changes in projects are inevitable. Both the government and contractors may initiate changes to the performance measurement baseline (PMB). As such, the PMB reflects the initial approved project baseline plus all the approved baseline changes for accomplishing the work. Revisions to project plans must be documented and formally controlled to ensure that only authorized changes are introduced to the baseline. The change control process must be able to accommodate both routine changes as well as changes with a significant impact. When changes occur, maintaining the accuracy and validity of the PMB is critical, since the PMB forms the basis for cost, schedule, and technical decisions, actions, and performance reporting to the project.

In addition, incorporating authorized changes in a timely, logical, and consistent manner through the use of a planning horizon to restrict freeze period changes, maintains the integrity of the PMB and thus its effectiveness as a baseline against which to manage and control performance.

### Freeze Period Changes

Guideline 29 of EIA-748, the industry standard for earned value management systems (EVMS), speaks to maintaining a project baseline and reconciling budgets through the use of a disciplined change control process to maintain the integrity of cost and schedule data when incorporating authorized revisions to a project’s scope, schedule, and budget. This includes the use of freeze periods intended to restrict adjustments to the time-phased PMB. Restricting baseline changes during a freeze period maintains a stable and measurable work plan for ongoing work, allows for meaningful variances, and ensures that planned resources will be available as scheduled. A freeze period covers the current accounting period plus

one month, with the current accounting period being the current month in which work is occurring. To prevent unauthorized freeze period changes, it is recommended that projects use a rolling six-month planning horizon or rolling wave that looks beyond the freeze period for a defined period of time, e.g., four months. Implementing a six-month planning horizon or rolling wave review to evaluate upcoming scope and perform necessary changes to include converting planning packages to work packages and re-planning future work prior to entering the planning horizon is a best practice for forward planning and maintenance of an accurate and stable baseline.

### Retroactive Changes

Guideline 30 of EIA-748 focuses on controlling retroactive changes. Contractors are required to maintain the accuracy of performance measurement data by controlling retroactive changes. This ensures earned value management (EVM) data will be reliable for making schedule or cost projections through controlling retroactive changes to data by limiting changes to specific circumstances and conditions.

On occasion, corrections to previously reported EVMS data may be required. Changes should be incorporated only into the current period. Since the impact of any retroactive change must be recorded and reported in the current period’s data, current period data may show negative values. These changes must be documented with adequate justifications and approved prior to the adjustments being made. There are generally two types of retroactive change scenarios:

1. Customer directed changes for termination of work in progress, stop work orders suspending or cancelling scope and all single point adjustments; and
2. Internal retroactive changes for baseline changes routine accounting adjustment, rate changes effecting actual costs, data entry corrections, and de-earning the budgeted cost of the work performed. *Continued on page 4.*

CLOSED PERIOD	PLANNING HORIZON/ROLLING WAVE					
	FREEZE PERIOD (FP)		CHANGES INCORPORATED			
REPORTING PERIOD	CURRENT PERIOD	+1 PERIOD	+2 PERIODS	+3 PERIODS	+4 PERIODS	+5 PERIODS
	PMB CHANGES LIMITED		PMB CHANGES IMPLEMENTED FOLLOWING FP			

Retroactive changes to previously reported amounts for actual costs, earned value, or budgets must be strictly controlled, as they alter the record of past performance to improve forecasting future performance. Any retroactive changes must be approved in accordance with the EVM system description requirements prior to making the change.

**Challenge of Implementing Multiple Baseline Change Proposals in a Period**

Implementing multiple baseline changes during a period can present a challenge since changes in one baseline change package can impact changes in another baseline change package. To address this challenge, contractors must employ an integrated baseline change approach to ensure the impacts of each baseline change proposal are assessed as part of the entire project.

This approach begins with assessing each baseline change and its individual effects on the baseline plan. Once complete, these individual baseline changes are ‘stacked’ and combined into a single baseline change where the process of evaluating the total impact on the baseline is conducted.



While assessing the stack, and in the event of multiple baseline changes touching the same activity, a reconciliation must occur to determine which change takes precedent. The process of implementing multiple baseline changes into a PMB, although tedious and challenging, ensures the accuracy and validity of the PMB.

**Conclusion**

Excessive re-planning by a project is often viewed as having a “rubber baseline”. An inability to control changes to a baseline plan by allowing frequent freeze period or retroactive changes can erode confidence in a contractor’s EVMS. Any EVMS that exhibits evidence of a rubber baseline risks losing its status as a compliant system.

Baseline change control will be presented and discussed at the Project Management Workshop during the Project Controls session on April 16, 2020. Join us to explore this topic more or contact the Office of Project Controls (PM-30) team for more information.

**What FPDs Need to Know about FAC-COR**

*Linda Ott, Office of Professional Development (PM-40)*

The Federal Acquisition Certification for Contracting Officer’s Representatives (FAC-COR) program is for acquisition professionals in the Federal government performing contract management activities and functions. CORs play a critical role in ensuring that contractors meet the commitment of their contracts. CORs facilitate proper development of requirements and assist contracting officers in developing and managing their contracts. The program, administered through the Federal Acquisition Institute (FAI), establishes training and experience requirements for those acquisition professionals. The FAC-COR applies to all executive agencies, except the Department of Defense (DoD). A COR appointment, made by a warranted contracting officer, requires FAC-COR.



The FAC-COR contains three levels of certification that allows for appropriate training and experience for CORs managing a range of various contracts from low-risk and simple to high-risk and complex acquisitions.

It is expected that the Federal Project Director (FPD) will be appointed COR for contract vehicles of moderate to

high complexity and risk, which requires FAC-COR Level II certification.

FPD candidates will complete the following FAC-COR Level II training requirements in pursuit of the FPD Level I certification.

**Training**

- CLC 222** Online Training for Contractors Representative
- CLE 028** Market Research for Technical Personnel
- CLM 031** Improved Statement of Work

FPDs can use the PMCDP course, *Acquisition Management for Technical Personnel*, in place of CLE 028 and CLM 031 to meet the training requirements.

In addition to the training, FAC-COR Level II requires documenting one year of COR experience and providing evidence of your original COR appointment. (Remember, COR appointment is by the contracting officer.)

If the FPD candidate has not had COR duties in the past, the FAC-COR is awarded at entry level. FAC-COR Level II becomes attainable after completing one year of relevant experience.

Application for FAC-COR certification is accomplished through [FAITAS](#) after completing the required training. Go to [fai.gov](#) to learn more about the program.

## FPD Mentoring

Sigmond L. Ceaser, Office of Professional Development (PM-40)

Federal Project Director (FPD) mentoring is a continuous process for building a professional relationship that fosters communication concerning FPD careers, competencies, behaviors, and organizational missions. A mentoring relationship allows a mentor to teach, guide and help shape the professional growth and learning of the mentee and to serve as a positive role model. The mentee is afforded the opportunity to seek guidance and constructive feedback on his or her professional development.

FPD mentoring:

- Establishes lines of communication to enable timely information sharing (lessons learned) and assistance when needed;
- Creates a positive environment promoting professional and individual growth through the enhancement of institutional and FPD competencies; and
- Expands familiarization with the Department of Energy (DOE) mission through increased understanding of DOE Order 413.3B, *Program and Project Management for the Acquisition of Capital Assets*, leadership, and the political environment.

Level III FPD certification candidates are required to document six months of experience being mentored by a Level III or IV FPD who has a minimum of two years' experience on a project with a total project cost (TPC) greater than \$100 million. Six months mentoring a certification candidate will earn a mentoring FPD 30 Continuous Learning Points (CLPs).

Other approved mentoring relationships will be awarded 1 CLP for every documented hour engaged (up to 15 CLPs per year).



To participate in mentoring, log into [Learning Nucleus](#) directly or through [Employee Self Service \(ESS\)](#). Then:

- Enter the “Mentoring” module from your LN dashboard.
- Complete a mentor or mentee profile or both and be certain to include FPD as a capability and also include your certification level in the brief description of yourself.
- Find your matches and make a selection.
- Begin your mentoring journey!



The mentoring module provides access to mentoring activities, best practices, job aids, and an interactive discussion forum. Additional information regarding the Project Management Career Development Program (PMCDP) mentoring requirement can be found here: <https://community.max.gov/x/uAd1Qw>.



**Congratulations to our newly certified FPD  
for obtaining both Level I and Level II certifications!**

**Crissy Kuhl (EM)**

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### PMCDP FY20 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	Length	CLPs	Planned Delivery Timeframe	Delivery Mode	Location/ Platform	Training POC	Instructor
Project Risk Analysis and Management	001033	3.5 Days	28	March 3-6, 2020	Classroom	Oak Ridge, TN	Peter Rivera	Sean Casey
Front -End Planning	003176		20	Tues./Thurs. 1pm-3pm March 10-April 9	Desktop	Adobe Connect	N/A	Sean Casey Ed Worth
Strategic Planning	001043	3 Days	24	March 10-12, 2020	Classroom	Lemont, IL	Sandra Geib-Ingram	Marvin Gunn
LEED for New Construction and Existing Buildings	001936	2.5 Days	20	March 16-18,2020	Classroom	Richland, WA	Pamela Weichel	Jason Kliwinsky
Managing Contract Changes	002102	4 Days	32	March 23-26, 2020	Classroom	Aiken, SC	Leatrice Green	Jerry Zimmer
Advanced Risk Management	001042	3.5 Days	28	March 30-April 2, 2020	Classroom	Idaho Falls, ID	Tina Wagoner	Chris Gruber
Cost and Schedule Estimation and Analysis	001044	5 Days	40	April 6-10, 2020	Classroom	Richland, WA	Pamela Weichel	Sean Casey
Project Risk Analysis and Management	001033	3.5 Days	28	April 20-23, 2020	Classroom	Aiken, SC	Leatrice Green	Sean Casey
Leadership through Effective Communication	002366	3 Days	24	May 11-13, 2020	Classroom	Richland, WA	Pamela Weichel	Mac Bogert
Cost and Schedule Estimation	001044	5 Days	40	May 11-15, 2020	Classroom	Aiken, SC	Leatrice Green	Sean Casey
Planning for Safety in Project Management	001035		28	Wed. 1pm-3pm May 27-July 1, 2020	Desktop	Adobe Connect	N/A	Dana Krupa
Performance Based Management Contracting	001951	3 Days	24	June 2-4, 2020	Classroom	Oak Ridge, TN	Peter Rivera	Ralph Tennant
Advanced Risk Management	001042	3.5 Days	28	June 15-18, 2020	Classroom	Aiken, SC	Leatrice Green	Chris Gruber
Acquisition Management for Technical Personnel	000145		16	Mon./Wed. June 22-July 15, 2020 12pm-4pm	Desktop	Adobe Connect	N/A	Jerry Zimmer

## Find up-to-date information and resources anytime!

All PMCDP Course Descriptions and Course Materials can be found in the Course Catalog on [Save the direct link to your favorites: https://community.max.gov/x/UAT3Rw](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](mailto: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](mailto: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](mailto: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](mailto: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](mailto:Linda.Ott@hq.doe.gov), 202-287-5310



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**Ruby Giles** — PMCDP Budget Manager, PMCDP Training Coordinator and

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

