



A monthly newsletter of the Energy Facility Contractors Group's Project Delivery Working Group

Issue 12

July 2020

Summer is here!!!

Greetings PDWG Team Members. Summer is here and has brought some pretty warm temperatures around the country. Hopefully each of us will get an opportunity to enjoy our favorite activities and make good memories with our families and friends.

In this month's issue we are pleased to provide an article titled "Estimate at Completion (EAC) — Reported Values" authored — By Dave Kester and Zac West, DOE Office of Project Controls (PM-30). We will also feature an article from ActiveCollab.com to look at "Project Manager Roles and Responsibilities."

Estimate at Completion (EAC) — Reported Values

— By Dave Kester and Zac West, DOE Office of Project Controls (PM-30)

The DOE Office of Project Management will implement a change in the July Monthly DOE Project Portfolio Status Report (MSR) concerning the reporting of the Contractor Project Manager's Estimate at Completion (EAC). The MSR is generated by the Project Assessment and Reporting System (PARS), and the change is specific to the Red/Yellow Projects section of the MSR (commonly referred to as the Red/Yellow Report) shown in Figure 1. Starting in July, the Red/Yellow Report will reflect the Contractor Project Manager's most likely Estimate at Completion (EAC) dollar value in addition to the summarized dollar values for each control account's Actual Cost of Work Performed (ACWP) and Estimate to Complete (ETC) plus the dollar value of reported project-level Undistributed Budget (UB) (oftentimes referred to as the Control Account Manager or CAM EAC). In prior periods, only the CAM EAC was reported in the Red/Yellow Report.

Legend for Red and Yellow Projects

Report Date:	Project PARS ID - Project Name	% Complete	Calculated (Note 4)	Approved Budget (\$M)	Remaining Budget (\$M)	Estimate at Completion (\$M)	Comments
"Green" if no prior BCPs, "Red" if one or more	CE/PMB Name	Original	Current	PM Forecast	PM Reported (Note 5)		
Project Name, Location	Project Owner Name	CD-2	CD-2 or latest approved BCP	PM Reported	PM Reported (Note 5)		
# months Red or Yellow	FPD Name	EVMS Certified/Not Certified (Note 3)	PM Analyzed Name				
# Issues Yellow							

Project Description	Program	PARS ID	Approved Budget (\$M)	Remaining Budget (\$M)	Estimate at Completion (\$M)	Comments
Performance Baseline (TPC) Note 1						
DOE Contingency (\$M / % Item.) Note 1						
DOE Other Direct Costs (ODC) Note 1						
Profit / Fee Note 1						
Performance Measurement Baseline (MS) Note 1						
Management Reserve (MR) Note 1						
Cumulative Earned Value (EV) Data						

Critical Decisions (CDs)	Selected Activities	Earned Value Management Terms
CD-0 Approve Mission Need	BCP Baseline Change Proposal	Budgeted Cost for Work Scheduled cumulative
CD-1 Alternative Selection and Cost Range	CE Chief Executive for Project Management	Budgeted Cost for Work Performed cumulative
CD-2 Approve Performance Baseline	CPP Contractor Project Performance	Actual Cost (ACWP) cumulative
CD-3 Approve Start of Construction/Erection	QA Oversight and Assessments	EAC Estimate at Completion
CD-4 Approve Start of Operations or Project Completion	ODC Other Direct Costs	BAC Budget at Completion
	PB Performance Baseline	ETC Estimate to Complete
	PM Office of Project Mgt, Oversight and Assessments	CAM Control Account Manager
	PMB Performance Measurement Baseline	
	PMSE Project Management Executive	
	TPC Total Project Cost	

Figure 1. Red/Yellow Report Legend

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EAC Reported Values

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In accordance with best practices, the expectation is that contractors report four cost to complete estimates for the full scope of work represented by the time-phased performance measurement baseline (PMB) from their Earned Value Management System (EVMS) or as agreed to when using alternative project controls, via monthly PARS uploads: 1) Most Likely EAC, 2) Worst Case EAC, 3) Best Case EAC; and 4) CAM EAC. These are reported on Format 1 (Figure 2) of the Cost Performance Report (CPR) or Integrated Program Management Report (IPMR) in blocks 6 and 8.e. (column 15).

The Contractor CAMs and Project Manager are required to provide the most accurate EACs possible at the control account and project-levels respectively, through assessments of factors

that may affect the cost, schedule, or technical outcomes. Such assessments are expected to include consideration of known or anticipated risk and opportunity areas, and planned risk reductions or cost containment measures. While only the Contractor Project Manager's Most Likely EAC dollar value will be reported in the Red/Yellow Report, the Best and Worst case EAC dollar values will be available in the Empower Analytics tool and other PARS reports for comparison. The Contractor Project Manager (or authorized representative) is required to enter the range of Best, Worst, and Most Likely EAC dollar values each month into PARS using either the EV_CPR Header Table when following the Access format, or the IPMR Header Table when following the comma separated values (csv) format. Currently 35% of Contractor Project Managers do not enter these values. When this occurs, the Red/Yellow Report will annotate that no value was reported in PARS. The ACWP, ETC, and UB dollar values comprising the CAM EAC is contained in the data extracted from the contractor's EVMS. Note that the dollar values uploaded into PARS via the Access or csv format files should be the same as the dollar values reported on the CPR/IPMR Format 1 Report generated by the contractor and placed in the PARS Document Management System.

Another best practice, and equally important to the Contractor Project Manager's EAC reporting, is that the Federal Project Director (FPD) provide an independently generated EAC dollar value for the

Figure 2. CPR/IPMR Format 1 Report

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Project Manager Roles and Responsibilities (8 Key Roles)

— by Marja Mrsic, ActiveCollab.com

“A project manager is like a doctor who leads the trauma team and decides the course of action for a patient — both at the same time. Without the right kind of authority to efficiently handle all the project management issues, development teams can easily get into trouble.” — *Scott Berkun, the author of "Making Things Happen"*

How did it all start? In the late 1980s, Microsoft was launching an ambitious project and had run into a problem: there were way too many players involved. There were teams from marketing, engineering, and the business end, and no one knew how to coordinate all of them.

So, Microsoft came up with what was then an ingenious solution. They picked one person to take charge who would be given significant authority to organize and coordinate their new project. Once Microsoft appointed a dedicated leader, everything went smoothly and the teams were much happier with their work dynamics. The end result of this new strategy was Excel.

Eventually, Microsoft made this new role a staple for all their projects. Thus, the project manager was born.

EAC Reported Values

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project in the “Forecast of the Total Project Cost (TPC)” field as part of his/her monthly assessment of the Performance Baseline (PB). The primary component for consideration in the FPD’s EAC is the PMB, which often accounts for upwards of 75% of the PB Total Project Cost (TPC). Along with his or her assessment of the PMB, the FPD must consider the other elements that comprise the TPC including remaining contractor MR, Government Contingency, Government Other Direct Costs, and Contractor Fee. The results of the FPD’s monthly EAC assessment should be documented in PARS using the FPD toolbox and the FPD narrative.

Please contact PM-30 for any questions regarding this article or PARS.

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WHO are project managers and what are they like?

Good project managers are people with an excellent entrepreneurial mindset. This allows them to think about a project beyond the basic skill set needed to manage it. It is the project manager’s job to direct teams and team members to the finish line. At the end of the day, the project’s success or failure rests solely on the project manager’s shoulders, and he or she is the one responsible for the end result.

Project managers keep knowledge and information flowing seamlessly. They need

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Project Manager Roles and Responsibilities

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both technical know-how and first-hand knowledge of the tasks they assign to others to keep the project moving forward.

But technical know-how does more than enable project managers to communicate ideas effectively to all those involved. Good project managers use their technical understanding to win team members' respect. Since project managers influence more decisions than anyone else in the company, their primary task is to use what they know to not just win employees' respect, but keep it throughout the project and into the future.

What do project managers DO? (8 key roles and responsibilities)

1. Activity and resource planning

Planning is instrumental for meeting project deadlines, and many projects fail due to poor planning. First and foremost, good project managers define the project's scope and determine available resources. Good project managers know how to realistically set time estimates and evaluate the team or teams' capabilities.

They then create a clear and concise plan to both execute the project and monitor its progress. Projects are naturally unpredictable, so good project managers know how to make adjustments along the way as needed before the project reaches its final stages.

2. Organizing and motivating a project team

Good project managers don't get their teams bogged down with elaborate spreadsheets, long checklists, and whiteboards. Instead, they put their team's front and center. They develop clear, straightforward plans that stimulate their teams to reach their full potential. They cut down on bureaucracy and steer their teams down a clear path to the final goal.

3. Controlling time management

Clients usually judge a project's success or failure on whether it has been delivered on time. Therefore, meeting deadlines is non-negotiable. Good project managers know how to set realistic deadlines, and how to communicate them consistently to their teams. They know how to effectively do the following: Define, Sequence, and estimate the duration of activities/Develop and Maintain a schedule

4. Cost estimating and developing the budget

Good project managers know how to keep a project within its set budget. Even if a project meets a client's expectations and is delivered on time, it will still be a failure if it goes wildly over-budget. Good project managers frequently review the budget and plan ahead to avoid massive budget overruns.

5. Ensuring customer satisfaction

In the end, a project is only a success if the customer is happy. One of the key responsibilities of every project manager is to minimize uncertainty, avoid any unwanted surprises and involve their clients in the project as much as is reasonably possible. Good project managers know how to maintain effective communication and keep the company's clients up-to-date.

6. Analyzing and managing project risk

The bigger the project is, the more likely there are to be hurdles and pitfalls that weren't part of

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Project Manager Roles and Responsibilities

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the initial plan. Hiccups are inevitable, but good project managers know how meticulously and almost intuitively, identify and evaluate potential risks before the project begins. They know how to then avoid risks or at least minimize their impact.

7. Monitoring progress

During the initial stages, project managers and their teams have a clear vision and high hopes of producing the desired result. However, the path to the finish line is never without some bumps along the way. When things don't go according to a plan, a project manager needs to monitor and analyze both expenditures and team performance and to always efficiently take corrective measures.

8. Managing reports and necessary documentation

Finally, experienced project managers know how essential final reports and proper documentation are. Good project managers can present comprehensive reports documenting that all project requirements were fulfilled, as well as the projects' history, including what was done, who was involved, and what could be done better in the future.

Do you need a project manager?

No matter how large or demanding projects are, you need someone who will reliably and consistently maintain efficiency and productivity. Not only has research shown that 89% of high performing organizations include a project manager, but also that the profession is consistently one of those most in demand. Project management is indispensable to successful businesses, and business owners need leaders with the right vision, the right skills, and the right know-how to face the biggest challenges and ensure projects are completed successfully and according to schedule.

Project managers are integral parts of almost every kind of organization — from small agencies with only one project manager guiding a handful of projects to multinational IT companies that employ highly specialized project managers placed in charge of ambitious projects. If one of these describes your business or any kind of enterprise in between, then the answer is definitely yes.

About the author: Maja is a former content writer. After finishing her Master's Degree in English language and literature, she pursued her career in content and technical writing in digital marketing.



In addition to the views expressed in this article, there are additional Project Manager Qualities when managing Department of Energy projects:

- ☑ **Expert knowledge of codes, standards, regulations, policies, procedures and practices governing scope performance**
- ☑ **Self-discipline to consistently implement the governing items identified in the bullet above**
- ☑ **Confidence to adhere to 413.3B irrespective of peripheral pressure**

— from the [ActiveCollab.com blog](https://www.activecollab.com/blog)

It is Not One World — What We Do and How We Do it Matters!

Communication Tower Collapse in Fordland, Missouri

On April 19, 2018, an incident occurred in Fordland, Missouri, where one employee was killed. The project involved the reinforcement of the KOZK 1,891-foot-tall guyed communication tower along Highway FF just north of Fordland, Missouri. The location of the tower is shown in Figure 1 (905 State Highway FF Fordland, MO 65602). The tower was initially designed and erected by Kline in 1971. Currently, Missouri State University (MSU) contracted Tower Consultants, Inc. (TCI) to design the required structural modifications necessary to support the transmission line replacement. TCI's scope of work involved creating construction documents, reviewing submittal drawings, observing the construction process including producing progress reports and assisting MSU in the bidding and contractor selection process. MSU selected Steve Lemay, LLC (Lemay) to serve as the contractor.

The Occupational Safety and Health Administration's (OSHA) Regional Administrator, Region VII, asked the Directorate of Construction (DOC) in OSHA's National Office in Washington, D.C., to provide technical and engineering assistance to the OSHA Kansas City Area Office in its investigation of the tower collapse in Fordland, MO. At your request an engineer from DOC, Dr. Bryan Ewing, P.E., accompanied by Chester Ray, visited the incident site on April 23, 2018, and August 1, 2018. We also reviewed photographic evidence, witness interviews, construction documents, industry standards and engineering reports in preparation of this report. Attached is our report. After reviewing the documents and conducting independent structural analysis, we conclude the following:

- 1) TCI's suggested diagonal replacement procedure was flawed in that it compromised the effectiveness of the integrated surrounding braces and the load bearing capacity of the tower legs. A single diagonal brace could not be removed without affecting the integrity of the redundant brace because the braces share two common bolts at the diagonal/redundant connection.
- 2) The cause of the communication tower collapse was the weakening of the compressive strength of the tower legs by removing the bolts at the connection of the diagonals to the horizontal redundant. The compromised redundant effectively doubled the unbraced length of the tower leg which reduced the compressive capacity of the tower leg.
- 3) Lemay used an undersized come-a-long while removing the diagonal braces.
- 4) Lemay failed to provide the design of the required temporary frame for diagonal replacement above or below a guy level. TCI failed to confirm the use/design of a temporary frame as TCI is required to approve the adequacy of the temporary frame prior to diagonal replacement according to TCI's construction documentation.



— View the complete report at [OSHA.gov](https://www.osha-slc.gov)

Just for Fun: July's Notable Events and Famous Birthdays

1 — Postage stamps went on sale for the first time (1847), paycheck tax withholdings began (1943), actor Dan Aykroyd (1952) and Olympic track champion Carl Lewis (1961) were born, ZIP codes went into use (1963), actress Pamela Anderson was born (1967), and China regained control of Hong Kong from Great Britain (1997).

2 — President James A. Garfield was shot and died 80 days later (1881), Supreme Court Justice Thurgood Marshall (1908) and racing legend Richard Petty (1937) were born, pioneering aviator Amelia Earhart disappeared (1937), and **President Johnson signed the Civil Rights Act into law** (1964).



3 — Idaho became a state (1890), TV personality Montel Williams (1956) and actor Tom Cruise (1962) were born, and rock stars Brian Jones (1969) and Jim Morrison (1971) died.

4 — America declared its independence from Great Britain (1776), President Calvin Coolidge (1872), football executive Al Davis (1929), former N.Y. Yankees' owner George Steinbrenner (1930) and TV personality Geraldo Rivera (1943) were born.

5 — Circus founder P.T. Barnum was born (1810), the Salvation Army was formed (1865), the bikini made its debut (1946), and singer Huey Lewis was born (1951).

6 — The first MLB All-Star game was played (1933), President George W. Bush and actor Sylvester Stallone were born (1946), and **Forrest Gump opened in theaters** (1994).



7 — Hawaii was annexed into the U.S. (1898), and Beatles drummer Ringo Starr (1940) and figure skating champion Michelle Kwan (1980) were born.

8 — The first passport was issued in the U.S. (1796), and actor Kevin Bacon (1958) and country music star Toby Keith (1961) were born.

9 — Sewing machine inventor Elias Howe (1819), football star O.J. Simpson (1947), actor Tom Hanks (1956) and singer Courtney Love were born (1964).

10 — Brewer Adolphus Busch (1839), tennis champ Arthur Ashe (1943) and singer/actress Jessica Simpson (1980) were born, and Classic Coke was re-introduced after New Coke flopped (1985).

11 — President John Quincy Adams was born (1767), the Old Farmer's Almanac was first published (1792), former VP Aaron Burr killed Secretary of the Treasury Alexander Hamilton in a duel (1804), actor Yul Brynner (1915) and boxer Leon Spinks (1953) were born, and the Skylab space station fell to earth (1979).

12 — Comedians Milton Berle (1908) and Bill Cosby (1937), fitness guru Richard Simmons (1948) and actress Cheryl Ladd (1951) were born, the Etch-A-Sketch went on sale (1960), and Olympic figure skating champ Kristi Yamaguchi was born (1971).

13 — Guglielmo Marconi patented the radio (1898), the first World Cup soccer tournament was held (1930), actor Harrison Ford was born (1942), **the Live Aid famine-relief benefit concert was held** (1985), and the Black Lives Matter movement began (2013).



14 — Bastille Day occurred in France (1789), dynamite was first demonstrated (1867), famous outlaw Billy the Kid was killed (1881), and President Gerald R. Ford was born (1913).

15 — Artist Rembrandt was born (16060), vulcanized rubber (1844) and margarine (1869) were patented, and singer Linda Ronstadt (1946), wrestler/politician Jesse Ventura (1951) and actor Forest Whitaker (1961) were born.

16 — Football coach Jimmy Johnson (1943), and actor Will Ferrell (1967) were born.

17 — The first dental school in the U.S. opened at Harvard U. (1867), actor James Cagney was born (1899), the air conditioner was invented (1902), actors Donald Sutherland (1934) and David Hasselhoff (1952) were born, and Disneyland opened (1955).

18 — **South African President Nelson Mandela** (1918), astronaut/politician John Glenn (1921) and golfer Nick Faldo (1957) were born.



19 — The Rosetta Stone was found (1799), and the revolver was invented (1814).

20 — Guitarist Carlos Santana was born (1947), and Apollo 11 landed on the moon (1969).

21 — Author Ernest Hemingway (1899), actor Don Knotts (1924), former Attorney General Janet Reno (1938) and actor Robin Williams (1952) were born.

22 — Actor Danny Glover and musician Don Henley (1947), and actors Willem Defoe (1955) and David Spade (1965) were born.

23 — The ice cream cone was invented (1904), and actor Woody Harrelson (1961), infamous intern Monica Lewinsky (1973) and actor Daniel Radcliffe (1989) were born.

24 — Aviator Amelia Earhart (1897), basketball star Karl Malone (1963), baseball star Barry Bonds (1964) and singer/actress Jennifer Lopez (1970) were born.

25 — **Football star Walter Payton** (1954) and Louise Joy Brown, the first test-tube baby (1978), were born.



26 — Singer Mick Jagger (1943), actor Kevin Spacey (1959) and actress Sandra Bullock (1964) were born.

27 — Bugs Bunny made his debut (1940) and baseball star Alex Rodriguez was born (1975).

28 — The First World War began when Austria-Hungary declared war on Serbia (1914), cartoonist Jim Davis was born (1945), and Animal House opened in theaters (1978).

29 — **Walt Disney's "Steamboat Willie," featuring Mickey Mouse, premiered** (1928), and NASA was created (1958).



30 — Auto maker Henry Ford (1863) and "The Governator" Arnold Schwarzenegger (1947) were born, and Medicare was signed into law (1965).

31 — Actor Wesley Snipes (1963) and author J.K. Rowling (1965) were born.