



The Department of Energy's Project Reporting and Assessment System (PARS)

Empower Filters, Pre-filters, Plus - Module 5 PARS User Basic Training

1

Welcome to the fifth of six sessions which comprise an introduction to the Department of Energy's Project Reporting and Assessment System (PARS). The analysis and reporting capabilities of PARS provide decisions makers at all levels with tools to best manage these projects over their lifecycle as well as a repository for data and documents for projects reporting to PARS in accordance with DOE Orders.



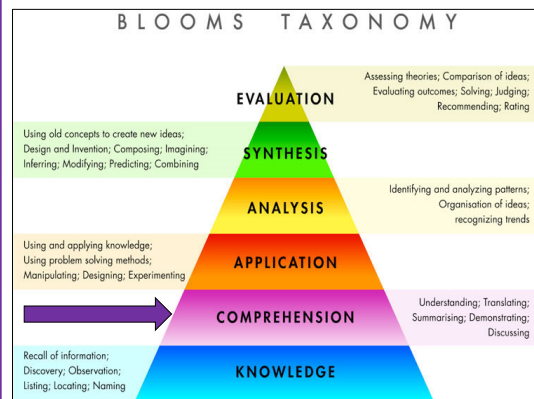
Training Objectives

- Understand the basic organization and operations of the PARS.
- Understand the document management system of PARS
- Understand user roles in PARS
- Understand Basic Layout and Organization of Encore Analytics Empower as part of PARS
- Use Empower views, charts, reports and dashboards
- **Use Empower Filters and pre-filters to organize data**
- Use DOE specific reports
- Customize Encore Analytics Empower for use each month

AT COMPLETION - EARN 6 CEU/PDUS

- Federal Employees – Will be added to your records
- Contractor Employees – Certificate will be emailed

MW2



This fifth session will focus the sixth training objective and the user gaining an understanding of both interactive and pre-filters in Empower in PARS, plus a few additional tricks from Empower. When you complete all six sessions of the PARS user basic course, you will earn 6 CEUs. Any session may be repeated as a refresher as needed in the future. There will be questions through out the training and the user will need to achieve a passing score being 70% or better to successfully complete this course.

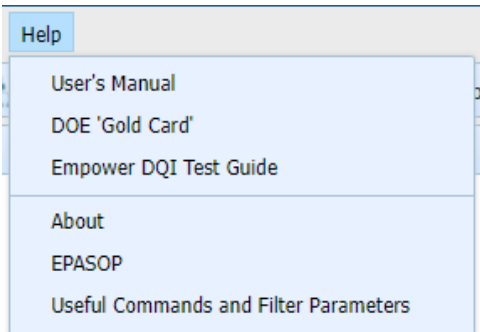
Slide 2

MW2 Need to identify how contractors will get credit?

Matthew West, 7/1/2020



Helpful Document for Interactive Filters



- As introduced in the last session, in the Empower help menu, DOE has placed the Useful Commands and Filter Parameters Document.
- It is provided here for you to take notes on and have available throughout this lesson.



- It is recommended that you keep this document readily available when using Empower

3

Use the attached Useful Commands and Filter Parameters sheet to help you get the most out of Empower. In addition to sorting as discussed earlier, filtering provide a rapid way to find the most impactful elements which are benefiting or hurting the project. This allows the user to help point out to leadership where their attention could best be focused to either reinforce what is working well or to work to address areas of concern.

This is in addition to the:



EPASOP
DOE Gold Card
Empower User Guide

Slide 3

AY3

Update file

Young, Amber, 2/20/2024

Interactive Filters

LVL	% CMP	CAM	ET	EVM	DQI	VAR	F5M	SV	CV	VAC	SPI	CPI
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
1	32.95	Jones			EPI	cC	1	↓	↓	↓	0.942	0.932

- Type filter criteria in open boxes at the top of each column
- Entering criteria in multiple filter boxes executes with an “AND” clause
- You can save a simple interactive filter as a Pre-filter
- Use “Clear Button” to clear interactive filters

4

Interactive filters work using the boxes below the column headings. This is separate from the concept of pre-filters which will be discussed later, but it is possible to save a simple interactive filter as a pre-filter. We will discuss how to make a simple interactive filter into a prefilter later in the session.

If you enter a Criteria in two or more boxes – this is treated as an “AND” clause. For example, if you filter on a CAM, say Jones and SV = Yellow, it will only show you CAM = Jones and SV = Yellow elements. All other will be filtered out until you clear the filters

When clearing a filter, it is recommended that you use the Clear button on the toolbar. One filter is a space – which is very hard to see or remember that you have it turned on.

We will look what you can filter on and with which filter commands over the next several slides. The filter options are on your Useful Commands and Filter Parameters handout.



Variance Required

VAR	SV Cur Trend
c	
CV	

- In the first 17 columns of the DOE sort window views, the VAR column exists. This is an indicator as to whether the CAM needs to write a Variance for this period. This is a generalization as it is not set for each contract. Look for the hard copy of the CPR/IPMR Format 5 in the DMS to see of a Variance Report is provided.
- There are five options which can go into this column and they can be filters
 - C – Cumulative cost variance narrative
 - C – Current Period cost variance narrative
 - S – Cumulative schedule variance narrative
 - s – Current period schedule variance narrative
 - V – Variance at completion.
 - This filter is case-sensitive; “c” is not the same as “C.”
- DOE thresholds likely differ from site specific threshold
- If you place a “c” and “C” in the interactive filter block (cC) you would get all of the VAR which require both a current period and cumulative cost variance narrative.
- If you want to see all with either a “c” or a “C” you would use c|C. The “|” or pipe between text or letters in this case makes it or vice and.
- “Not” clause: “!c” returns everything except “c”
- For these fields the “Not” clause will remove all blank/null values

5

First we will look at the VAR column. This is an indicator that a variance report should have been prepared for a control account. While Empower has a variance reporting system that some contractors use, DOE did not enable this function. The user should look for a Variance report in the CPR/IPMR Format 5 report. The contractor is supposed to upload this report to the DMS in PARS each month.

It must be stressed, the VAR indicator is a general indication. Each contractor generally has specific triggers in their system description based on dollars and percentage as to what triggers the need for a variance report. As DOE works with multiple contractors, the flag trips are set to the following

- C = No Dollar Threshold and 10% Threshold
- S = No Dollar Threshold and 10% Threshold
- c = No Dollar Threshold and 10% Threshold
- s = No Dollar Threshold and 1% Threshold
- V = No Dollar Threshold and 10% Threshold

Discuss each of the filter rules above



Data Quality Indicators

DQI	VAR
E	
EF	C
E	
EF	SC
EFSI	SC
EF	
E	
F	

- In the first 17 columns of the DOE sort window views, the DQI column exists, similar to VAR. This is an indicator as to whether there is a data quality flag for one of four conditions. The DQI flags are tied to all metrics in Empower
- The four options which can go into this column are
 - E – Earned Value (Cost) Data Quality Flag
 - F – Forecast/EAC Reasonableness Data Quality Flag
 - S – Schedule Data Quality Flag
 - I – Cost/Schedule Integration Data Quality Flag
- Thresholds based on DOE, DoD, NDIA
- Similar to VAR, If you place a “E” and “F” in the interactive filter block (EF) you would get all of the DQI Flags which both have an earned value and Forecast flag
- If you want to see all with either a “E” or a “F” you would use E|F. The “|” or pipe between text or letters in this case makes it or vice and. So for E|F|S, what you get?
- Always use upper case letters for DQI filtering

6

Data Quality is based on over 150 metrics, from multiple sources to include the Department of Energy EVMS Compliance metrics, the Department of Defense Compliance metrics, the NDIA PASEG and more. Some are more impactful than others and you would need to review the DQI reports to dig in to the impact each has on data quality. In the Advanced course, we will review data quality. It is possible to have data concerns to the point the user does not believe the forecast information provides reasonable information to project leadership.



Trend Filters

SV	CV	VAC	Bcws
↓	↑	↓	
↑	↑	↑	
↑	↓	↓	
↓	↑	↑	
↓	↓	↓	8
↓	↓	↓	7
↓	↓	↓	

SV	CV	VAC
GF	GF	GD
GF	YF	YF
GF	RF	RF
GF	RF	RF
GF	RF	RF
GF	GF	GF
GF	RF	RF
GF	RF	RF
GF	GF	GF

• Several sort window views use trends – both color to show compliance to thresholds and arrows or dash to show trend from the past period. Both color and text only grid version of trend are shown

• There are both color and trend filters available for these columns

- R=Red (Unsatisfactory Flag)
- Y = Yellow (Marginal Flag)
- G = Green (Good)
- B = Blue (Better than expected)
- U = Up (Improving)
- D = Down (Worsening)
- F = Flat (No significant change)
- No Arrow – less than two periods of data

To filter on color codes, type the first letter of the color and then optionally the first letter of the direction.

• Thresholds are visible in the Options Menu – “Show Thresholds”



• If you place Y in the box, you will show all Yellow. If you place YD, you see all yellows which are worsening since the last period.

• Pipe does not allow for an “or” for this filter. You can pick one color and one trend 7

There are several sort window views that use trends to help the user see what each element is doing. The examples shown here are variances – are they greater than established thresholds to be green and are they improving, worsening, or steady. The data can be presented with colors or without for those who prefer the text only grid or cannot distinguish between colors. The text only grid helps the user see the possibilities in filtering.

You can Filter on either just a color or just a trend. You can also filter on a color and trend. For example, you could filter to see all yellows (marginal) and trending down schedule variance. These maybe activities I put a lot of short-term attention in an effort to turn them around.

For Trends – you only get to have one color and one trending (up, down, or flat) for box. You cannot use the Or “|” pipe to have green and yellow



Interactive Filter Parameters for Numbers

- **Numbers (N)**
 - Equal to: = N
 - Not Equal to: <> N
 - Greater than: > N
 - Less than: < N
 - Less or equal: <= N
 - Greater or equal: >= N
 - Range of values: N1 .. N2

State	% Spent	Complete
	10..90	
37	78.28	
92	43.71	
92	43.71	
00	42.51	
00	75.14	
00	46.07	
00	66.52	
00	69.03	

8

For any column in the sort window view that uses numbers, these are filters that are available for use. As many are common to other tools, we will focus on only one, “Range of Values” The example shows that Empower will filter out any element in the sort window view that are less than 10% Spent and more than 90% Spent. You can use this in percent complete to only consider a range – more than 5% and less than 95% for instance, as those which just started likely do not have enough track record to analyze and those over 95% may not be good to look at as there is little you can do to influence that elements outcome.

Interactive Filter Parameters for Text Fields

- Standard text fields execute with “begins with”
- Functions:
 - Wildcard Function uses: % %Design
 - Or Function uses: | Griffin|West
 - Not Function uses: ! !LOE
 - Populated fields uses: _
 - Blank or Null Values: (space)

CAM	Element Type	EVM
	WBS	NA
Griffin	CA	NA
Griffin	WP	OTHER
Sarwal	WP	PERCENT
Sarwal	WP	PERCENT
Sarwal	WP	PERCENT
Sarwal	WP	OTHER
Sarwal	WP	0-100

9

There are text fields in Empower which can also be filtered. Maybe you want to look at one or more CAM, only WP and PP, or all LOE. For each of these you can.

First off, we need to discuss the option of “begins with”. If you are looking for the CAM “West”, when you enter “W” you get all of the CAMs whose name begins with a W – West, Williams, Walters. Then when you add the “E” such that you type We it filters to all with a We in their name. You notice the pipe command for the “Or” function where you can multiple CAMs. You can also use this to make sure if the CAM name is loaded with both upper case only and lower case and First capital, you could use WEST|West|west to cover all ways it could be loaded in the data. Best if it is consistent, and this can be a good way to check if there is variation in capitalization.



The “!” means to exclude such as !LOE in the EVM column

An underscore takes out all fields without data. You could look for all elements with a VAR requirement (from prior slide). If you place a “_” in the interactive filter box for VAR, you will see all that have a VAR requirement indicated.

Last – a space in the interactive filter box, and you get all that no value. In this case,

you may want to look for any field without a CAM name for all Control accounts. In Element Type interactive filter box type “CA” and then in CAM interactive filter box place a space.

This really reinforces that when you clear filters – it is best to use the Clear button on the toolbar as you could easily miss a space in the interactive filter box.





Gantt Filter

- Filter buttons narrow down the Activities that are displayed in the Schedule
- Slip Count – Did a Finish Variance occur during this period? = 1, otherwise 0
- SlipVal – Finish Variance (Finish (Forecast) – Baseline Finish)
- To Turn a Filter Off Select “None”



Filter Criteria

- Red – Neg float <-5 days or
3 slips in past 3 months
Slip > 30 days past BL
- Yellow – Neg float -0>= to -5 days
2 slips in past 3 months
Slip > 15 <30 days past BL
- Green – No negative float
1 slip in past 3 months
Slip < 15 days past BL
- White – All uncompleted tasks



10

These were shown in the past lesson, but remember that there are Gantt filters as well.

Task Mode – Interactive Filters

DEC 23 WBS Dollars :: D-006 DOE Forecast :: S-010 DOE Default (G)																			
LINK	HIER	Activity ID	Name	Start	Finish	Duration	% Cmp	BL Start	BL Finish	BL Duration	BL % Cmp	Actual Start	Actual Finish	Total Float	Slip	CP	RYG	Predecessors	Successors
		111111		2015-08-24	2015-10-15	19d	100	2020-04-27	2020-04-27	19d	0	2015-08-24	2015-10-15	0d	0d	T	G		
		111111		2015-08-24	2015-10-15	28d	100	2020-04-27	2020-04-27	28d	0	2015-08-24	2015-10-15	0d	0d	T	G		
		111111		2015-08-24	2015-10-15	39d	100	2020-04-27	2020-04-27	39d	0	2015-08-24	2015-10-15	0d	0d	T	G		
		111111		2015-08-24	2015-10-15	28d	100	2020-04-27	2020-04-27	28d	0	2015-08-24	2015-10-15	0d	0d	T	G		
		111111		2015-10-19	2016-01-06	11d	100	2020-04-27	2020-04-27	11d	0	2015-10-19	2016-01-06	0d	0d	T	G		
		111111		2016-01-07	2016-04-25	14d	100	2020-04-27	2020-04-27	46d	0	2016-01-07	2016-04-25	0d	0d	T	G		
		111111		2016-01-18	2016-03-18	10d	100	2020-04-27	2020-04-27	10d	0	2016-01-18	2016-03-18	0d	0d	T	G		
		111111		2015-08-24	2015-11-09	36d	100	2020-04-27	2020-04-27	36d	0	2015-08-24	2015-11-09	0d	0d	T	G		

- **Adding IMS Gantt chart fields into sort view**
 - Interactive filtering in the IMS
 - SHIFT + Click to add IMS into sort view
- **Benefits:**
 - Filtering on IMS
 - Drill on any IMS field

11

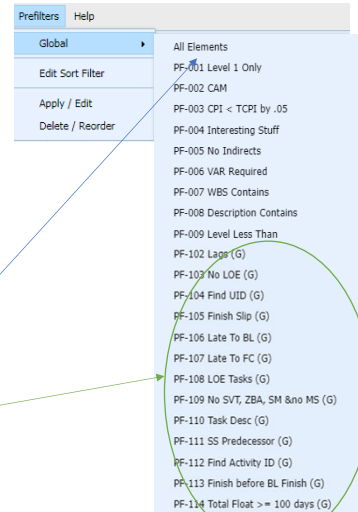
These were shown in the past lesson, but remember that there are Gantt filters as well.

Benefits include analyzing the schedule without opening scheduling tool (P6).



Prefilters (limit data in dataset)

- One significant difference between interactive and pre-filters is the dataset
 - An interactive filter does not reduce the filter set, only hides the data you are not looking at during the filter effort.
 - A pre-filter, reduces the dataset by the conditions of the filter. In other words, if you select a CAM filter, the dataset will only contain that CAMs data – not the complete set. For large projects, this can be useful to speed up analysis
- Go to Prefilter | Global or User to select pre-defined filters.
- There are both cost data and Gantt data prefilters.
 - Cost Data Prefilter
 - User can add new Prefilter (Advanced training)
 - Typically the Prefilter description denotes what fields or task are sifted
 - Gantt Data Prefilter
 - User can add new Prefilter if the Gantt chart is showing (Advanced Topic)
 - Best practice is to note Schedule Gantt Views with a “(G)” at the end of the description
- **Clearing a Prefilter – Must Select Prefilter | Global | All Elements (Cost) or All Tasks (Gantt)**



12

Pre-filters are predefined filters than limit the data loaded in to empower in the data set. If you select Level 1 Only, Empower only loads the top level records for each project (contract) you select.

There are both cost and Gantt filters. It is best to mark the Gantt filters with a (G) at the end. For the Global prefilters, this done. If you make a user prefilter, this is a good habit to get into.

Important to remember – the Clear button on the toolbar does NOT clear a prefilter. You must select the Prefilter menu and select “All Elements or if you are in a Gantt – All Tasks”

Prefilter

Encore Analytics

Sample of an Interactive Prefilter (Level 1)

Multiple Contracts) CUR-0 WBS Dollars in Thousands :: Empower Default 3

HIER	WBS	DESCRIPTION	LL	LVL	CAM	% CMP	ET	EVM	DQI	VAR	FSM	SV	CV	VAC	SPI	CPI
			✓													
0		ALPHA		1		65.17			EL	c	0	↓	↓	→	0.948	0.981
1F002383		Jeep 240z		1		8.98			FFI	scC	0	↓	↓	↓	0.942	0.842
1000		MOH-2		1	Jones							↓	↓	↓	0.942	0.932

Status Bar shows current Prefilter and Sort

:Sort: ↑ Hier::Elements: 3/3 [PF: Level 1 Only]

Late Finish (G)

HIER	UID	Name	BaselineFinish	Finish	Finish1	FinishVar	2016		2017		Filters
							October	January	April	Jul	
122	10	COM HEAT TRANSFER(ANALYSIS)	2017-03-30	2017-05-04		-35	2				
124	89	DETAIL DESIGN	2017-03-27	2017-05-14		-48	3				
124	81	COM STRUCTURAL ANALYSIS DSN SPT	2017-03-30	2017-05-15		-46	3				
122	20	DETAIL DESIGN	2017-03-27	2017-05-14		-48	3				
122	12	COM STRUCTURAL ANALYSIS DSN SPT	2017-03-30	2017-05-15		-46	3				
124	97	FAB COM DEVELOPMENT TEST HOWE	2017-03-30	2017-06-22		-84	9				

:Sort: ↑ Hier::Elements: 25/25::Tasks: 62/62 [PF: Late Finish (G)]

The status bar also shows what prefilter is turned on using the [PF: xxxxxxx]

We are not going to do review of each prefilter, only look at a couple. First is the top, a level 1 prefilter is turned on. You only see top level data in each row of the sort window. This is used in the Leadership Dashboard which turns on the “Level 1 Only” prefilter and sets up the DOE Leadership View, Contract Performance Report, and AI Report.

The Late Finish Gantt prefilter only show activities which are finishing late.

Just remember to use All Elements or All Tasks to get out of the Pre-filter and check the status bar to make sure it is off.

Drilling into a Level 1 Filtered View

In a Level 1 prefilter view – such as leadership dashboard provides, you can still drill into a project's lower level with the Drill button on the toolbar

You can drill up and down or turn drilling off on the toolbar.

HIER	PARS ID - Project Name	WBS	Description	DOE Program	Site	Status Date	Percent Complete	Variance at Completion Trend	Variance at Completion	Budget at Completion	EAC (F1)	EAC (Calc)	Contractor PM Most Likely EAC	Cost Variance	Schedule Variance	Baseline (Schedule) Execution Index
						2019-10-27	10.38		5,704,319	110,961,383	105,257,064	104,058,147	110,961,000			0.943
						2019-11-24	0.00		883,744	883,744	0	0	4,601,000			0.940
						2019-11-24	83.28		823,643	5,374,178	4,550,535	4,550,535	4,601,000			1.000
						2020-05-24	32.78		1,210,821	169,843,529	168,632,708	168,632,708	175,657,708			0.856
						2020-05-24	44.52		-29,813,417	268,918,881	298,732,298	298,732,298	312,845,438			0.850
						2020-01-26	75.80		898,510	256,677,300	255,778,790	255,778,790	270,830,754			0.991
						2020-05-24	10.69		14,917,239	157,099,985	142,182,745	142,182,745	141,333,200			0.990
						2020-06-21	50.44		13,258,382	125,753,261	112,494,880	112,494,880	118,075,695			0.876
						2020-01-26	96.74		-2,440,633	14,411,975	16,852,608	15,455,961	15,047,378			0.862
						2020-05-17	0.00		339,597,315	339,597,315	0	0	457,937,923			1.000
						2020-05-17	76.37									
						2020-06-21	54.70		3,467,942	115,962,822	112,494,880	112,494,880	118,075,695			0.876
						2020-06-21	0.00		0	0	0	0	118,075,695			1.000
						2020-06-21	0.00		9,790,439	9,790,439	0	0	118,075,695			1.000

One note about the Level 1 Only prefilter, as it is used for folks looking at several project, there is a tool to let them drill into lower levels of the project, when needed. If you select a project and use the Drill button on the toolbar, it will take you to the next lower level of that project. You can keep drilling into the project until you reach the lowest level. When done drilling down use the Off button to stop drilling and return to the Level 1 Only view you had before you started to drill down.

Drilling can be used all views, not just with prefilters, but this Level 1 example is one that frequently gets used. One example of drilling in elsewhere is you see an element with issues and it is level 3 with the lowest level being 6. If you select the level 3 and use drill, it helps you get to the levels below it that roll up to make that level 3.

Slide 14

AY4 Roland to send slide for children

Young, Amber, 2/22/2024

Build your own Prefilters

Encore Analytics

We will discuss the easy to build pre-filters in the basic course and focus on the hard ones in the advanced course

In this example we create a Level 1 Only prefilter that only returns project over 50% complete

15

In past sessions and this, we have said you can build your own views, charts, reports, dashboards, and prefilters. We have already looked at dashboards and now will take a look at prefilters. We will look at the others in the final session.

Where Dashboards were simple to build, prefilters are either easy and hard, depending on what you want to do. There are easy if the prefilter just records interactive filters you have applied and hard if you building them from scratch. For the basic course we only focus on the easy option here and discuss the hard option under the advanced course. To demonstrate the easy option, we want to set up a prefilter that is both Level 1 Only for Projects over 50% complete. To do that:


1. Turn on the Level 1 Only prefilter
2. Go to % Complete interactive filter box and place a >50 in it
3. Click on Prefilter – Edit Sort Filter to have a box pop up. (on slide)
4. Because we turned on the interactive filter, you will notice that there are two filter items in the box. One is ElemLevel = 1 and the other is PctCmp >50. (these column names are the internal name used by Empower and not the alias that DOE uses to better align with standard vocabulary)
5. Now name the prefilter with a logical name (Level 1 Only >50% is the one the

instructor chose)

6. Verify the Filter order is correct – first level 1 and then 50%. In many cases it will not matter, but you can re-order the filter items.
7. You can add a description in the lowest box to help describe what and why.
8. Then select Save as
9. You will now have a User Folder with your prefilter.

This works for simple interactive filters, or ones that do not include OR / NOT (i.e. “Troop|Smith” for only Troop and Smith or “!LOE” for “not LOE”) clauses.

For the advanced course, we will consider the many options you can build using all columns (over 600) and doing the coding to make sure you get the test correct. For the easy one, the system filling in the coding and all the user does is rename, add a description, make sure the filter order is correct and save with a logical and unique name. It is also recommended that you not build more than about 20 to 25 so the pull down menu will fit better on your screen which you open the User option.

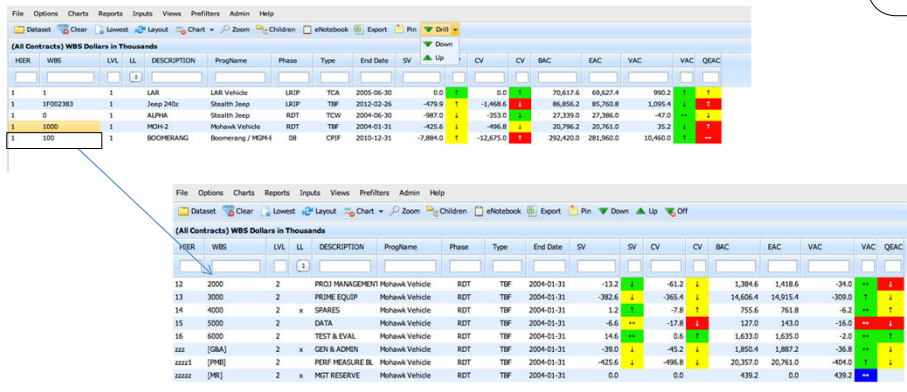


Cross Project Filters

- Select "(All Contracts)" in Open Dataset.
- Use Open Dataset Prefilter, if desired.

▼ Down ▲ Up ⏏ Off

Use "Drill" to navigate levels.



The screenshot shows two views of a project data table. The top view shows a summary table with columns: HIER, WBS, LVL, LL, DESCRIPTION, ProgName, Phase, Type, End Date, SV, CV, CV, BAC, EAC, VAC, VAC, QEAC. The bottom view shows a more detailed table with columns: HIER, WBS, LVL, LL, DESCRIPTION, ProgName, Phase, Type, End Date, SV, CV, CV, BAC, EAC, VAC, VAC, QEAC. A callout box points to the 'Drill' button in the top view.

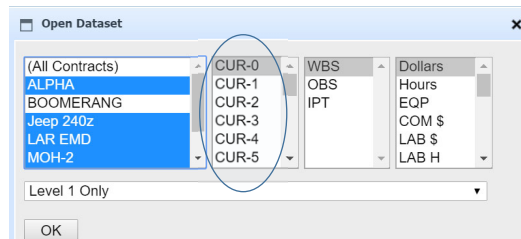
16

When you select all projects via the "All Contracts" option in the Dataset or even just two or more using the "CTRL + Mouse Click)" you are able to apply a prefilter against more than one project. You can group and sum these as well to look at logically linked projects. One example would be that you have 5 sub-projects that are part of an over all parent project and you want to see them in aggregate. You can group by a column, select sum and look at the summary line for that grouping. You can also drill into a specific projects as was discussed prior. We will go over this in more detail over the next few slides. (BETTER TO HAVE SCREEN CAPTURE)



Select Multiple Projects

Contract	Most Recent Period
ALPHA	Jun 2023
BOOMERANG	Dec 2017
Jeep 240z	Feb 2019
LAR EMD	Jun 2010
MOH-2	Jan 2023



CTRL + Select for multiple contracts

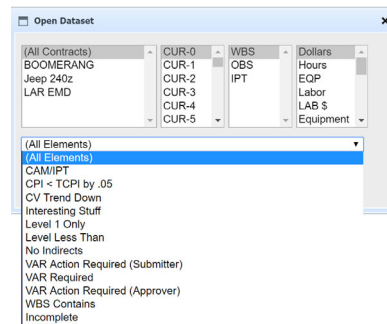
When selecting multiple contracts with varying “most recent periods”, Empower will normalize the time-phased data by aligning all selected contracts with the most recent period of selected contracts. For example, Jun 2023 is the most recent period of data for the selected contracts, so the data for all other selected contracts not stuated for Jun 2023 will slide right to align with Jun 2023. CUR-0 is the most current data for each of the selected contracts.

To select more than one project, either use “All Contracts or CTRL + Select (mouse click) for each you want to select. If you use an Apple computer - use the command rather than control button.





Dataset Fields

- **Contract** – Contract Names are unique (PARS ID)
- **Periods** – End of Month Dates, Cur-X
- **Structures** – WBS, OBS, IPT, Resource
- **Units** – Dollars and EOC
 - Dollars in whole units
 - Hours in ones
 - EQP – Monthly Hours/Available Hours
 - Indirects – Overhead, G&A and COM
 - EOC- Labor, Material, ODC, Sub..
- **Prefilter** – subset of data based on Prefilter selected



18

Pick the dataset options you would like to select and also consider that you can apply sort window prefilters here as well (not Gantt prefilters)

Portfolio (Group By)

- Select a View that has the field you want to group by.
- Use the Group button on the toolbar to get the Group By box
- Select the field (Column) to group by
- Select **Group By**
- The Sort window will be grouped by the Column selected
- Sorting, Filtering and SUM features are enabled
- Select **Ungroup** to remove grouping

Group By
✕

Columns
 FIER - (FilterHier)
 PARS ID - Project Name -
 WBS - (ID)
 LL - (Lowest)
 Description - (ElemDesc)
DOE Program - (ProgName)
 Site - (ProgOffSym)
 Status Date - (EndDate)
 Percent Complete - (PctCn)
 Variance at Completion Tre

Group By
Ungroup

➔


- ☐ Utility Shaft Project (1)
- 1064 - Utility Shaft Project
- ☐ UPF Process Support Facilities (1)
- 1086 - UPF Process Support Facilities
- ☐ Safety Significant Confinement Ventilation Sy
- 1024 - Safety Significant Confinement Ventilation Sy
- ☐ UPF Substation Subproject (2)
- 1085 - UPF Substation Subproject
- 1085 - UPF Substation Subproject
- zzzzz
- ☐ Tank-Side Cesium Removal System Demonstr
- 1178 - Tank-Side Cesium Removal System Demonstr
- ☐ Sample Preparation Laboratory (SPL) (1)
- Contract Performance Chart

19

Use the “Group” button on the toolbar to bring up the list of columns you have available in the sort window. If you do not have the column you need, you can make a new view (next session) to provide the column. Follow the list on the slide to group by.

In this example, the DOE Program field was selected (internal to Empower this is called ProgName). In this case, the field has sent in a variety of data rather than the from the 8 basic programs (NNSA, EM, SC, FE, NE, etc) so the data is not yet reflective, but can see that it groups by what ever is in the column. In this case, the SUM button on the toolbar was also selected and where there are two or more projects in a group, you get a summary line to use as the active element for analysis.

DOE is working hard to make sure the data is correct, with two fields used for grouping still under review – program and site.



Group (Portfolio)

WBS	DESCRIPTION	Site	Contract	Service	ContrType	Program	ProgNum	PM Analyst	LVL	LL	PctCmp	SV	CV	VAC
100	BOOMERANG	Douglas	BOOMERANG	Navy	CPIF	Boomerang / MGM-	756	Mr. Money	1		26.96	↑	↑	↑
0	ALPHA	Hughes	ALPHA	Army	TCW	Stealth Jeep	126	Jones	1		65.17	↓	↓	↔
1F002383	Jeep 240z	North American	Jeep 240z	Army	TBF	Stealth Jeep	126	Wilson	1		8.98	↑	↓	↓
1	LAR	North American	LAR TREE	Navy	CPIF	LAR Vehicle	756	Smith	1		74.56	↑	↑	↑
1000	MOH-2	Douglas		AF		Mohawk Vehicle	100-1066	Smith	1		32.95	↓	↓	↓

Group By Site

HIER	WBS	DESCRIPTION	Site	Contract	Service	ContrType	Program	ProgNum	PM Analyst	LVL
Douglas (2)										
1	100	BOOMERANG	Douglas	BOOMERANG	Navy	CPIF	Boomerang / MGM-	756	Mr. Money	1
1	1000	MOH-2	Douglas	MOH-2	Air Force	CPAF	Mohawk Vehicle	100-1066	Smith	1
Hughes (1)										
1	0	ALPHA	Hughes	ALPHA	Army	TCW	Stealth Jeep	126	Jones	1
North American (2)										
1	1F002383	Jeep 240z	North American	Jeep 240z	Army	TBF	Stealth Jeep	126	Wilson	1
1	1	LAR	North American	LAR TREE	Navy	CPIF	LAR Vehicle	756	Smith	1

Group By ✕

Columns

- HIER - (FilterHier)
- WBS - (WbsNum)
- DESCRIPTION - (ElemDes)
- Site - (ProgOffSym)
- Contract - (ContrName)
- Service - (ProgOffName)
- ContrType - (ContrType)
- Program - (ProgName)
- ProgNum - (ProgNum)
- PM Analyst - (Analyst)

20

Using this test data, you can see it again in the sort window how it may look. In this case, site represents airline manufactures of the past.

Sum Button

Virtual total based upon filtered data

Chart & Report reflect Summary row

HIER	WBS	DESCRIPTION	LL	PctCmp	B=0	P=B	S>B	B<0	AwdB	ACwdB	ACrCmp	Cmp+ETC	LOE+SV	LOE+SVC	PwA	S<0	PC<0	SC<0	P<0	A>E	RwdETC	
1	100	BOOMERANG	Mc Toch	26.9%																		
1	0	ALPHA	Mc Toch	65.1%	2	1			2			1	1	1							1	1
1	1002283	Jepp 24Qz	Jones	8.9%								1	1	1	1	1					1	1
1	1000	MDH-2	Jones	32.9%			1					1	1	1							1	1
zzzzz	SUMMARY	SUM (PF: Level 1 Only)		26.0%	2	1	1	0	2	0	0	16	6	1	2	13	0	0	0	1	0	2

	CUR-5	CUR-4	CUR-3	CUR-2	CUR-1	CUR-0
8,820,000	12,639,450	15,927,270	18,637,150	19,852,250	20,091,780	
8,371,000	12,575,840	14,111,220	16,076,580	18,512,270	19,697,590	
4,449,000	10,063,610	11,816,050	13,560,570	15,340,980	17,394,190	
4,370,000	9,510,230	11,305,170	13,000,000	14,819,290	16,807,400	
	-8,820,000	-11,816,050	-13,163,920	-14,037,000	-14,787,610	-15,394,590
	4,449,000	2,573,370	1,711,150	1,531,270	1,294,390	1,097,190
	-4,370,000	-2,543,610	-1,844,870	-1,706,730	-1,513,210	-1,307,400
	0.000	0.000	0.000	0.000	0.000	0.341
	-1,142,000	-1,621,890	-3,222,010	-2,992,690	-1,612,990	-1,981,790
	-13.6%	-13.5%	-22.8%	-18.6%	-8.5%	-8.0%
	0.880	0.881	0.814	0.843	0.921	0.928
	33,935,000	46,574,450	62,501,720	81,138,870	101,001,160	121,092,840
	30,543,000	42,518,840	56,430,080	72,708,840	91,618,910	111,316,500
	34,505,000	48,102,690	65,435,920	84,505,180	105,030,440	126,309,820
	-3,392,000	-4,055,810	-6,871,880	-8,432,230	-9,382,250	-9,776,440
	-10.00%	-8.71%	-9.39%	-10.39%	-9.29%	-8.07%

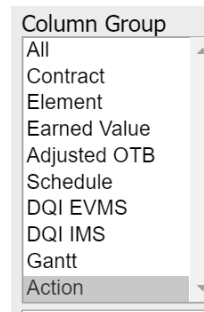
Just a reminder that the SUM button lets you look a summary line for the active element with respect to all views – Sort Window, Chart, and Report. This used with the Group by function provides a portfolio opportunity for the user.



Group Data Fields

- **Contract** – Level 1 Fields
- **Element** – WBS, Description, EVM, ET..
- **Earned Value** – Data values, SPA, At Comp
- **Adjusted OTB**– Data adjusted for OTB
- **Schedule**– IMS Calculated data (Sort)
- **DQI**– EVM and IMS DQI fields
- **Gantt**– IMS Dates, Duration, etc... (Gantt)
- **Action**– Action Item Fields

For DOE under the Contract Data Field
ProgName = DOE Program
ProgOffSym = Site

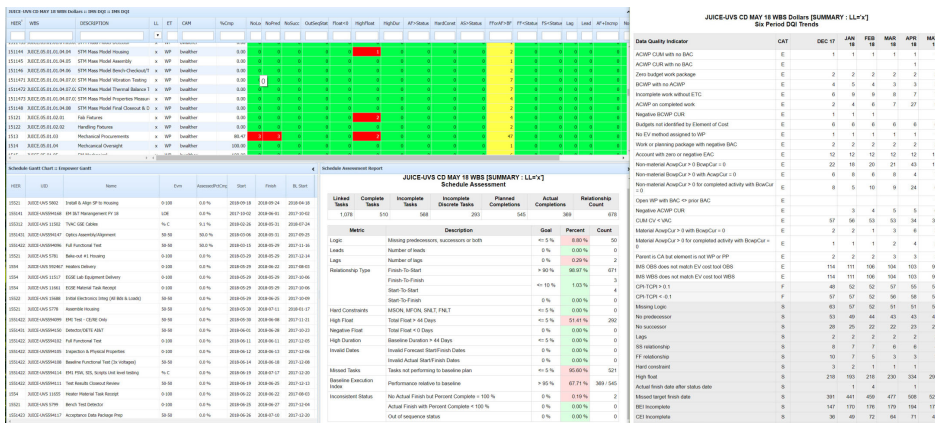


22

One concept that came up here is that of data fields in Empower. While Empower supports over 600, not all are filled out. You are able to look at all of them in a pick list when making or selecting one, or you can look under logical groups. As was mentioned for grouping, if you do not have the column available in the sort window view you are using and there is not another view to use, you can make your own. We will discuss this more in the next session, but to do so, you need to know the internal Empower field name to add the correct ones. In the case of DOE, we have used ProgName for DOE Program and ProgOffSym for the site name. In the advanced course and the Empower Users Guide, you can get a better appreciation for this.

External Windows

DQI Multi Window Dashboard



CTRL – Select a Chart or Report to view it externally

Lastly in this session, we will show you another plus. (Best to demo – with Screen capture of two monitors)

It was mentioned in the Dashboard session and will be reinforced here. The option to open up additional windows outside of the tri-pane view for reports and charts. This only applies to charts and reports. Remember that there is basic Gantt view under charts to allow you to do this with a Gantt as well. If you have two or more monitors, you can hold the CTRL key down when selecting a chart or report and it will open in a separate tab of our browser. In the example the Six Period DQI Trend report is opened external to the tri-pane and would place it in a separate screen – or if I had a large screen – such as in a control room or presentation site – I may locate it on the same monitor. This external tab, will also update as you select different active elements in the tri-pane view.

This also supports project reviews, where specific charts and reports are placed on large monitors or projected to a room of folks going over the health of the project.

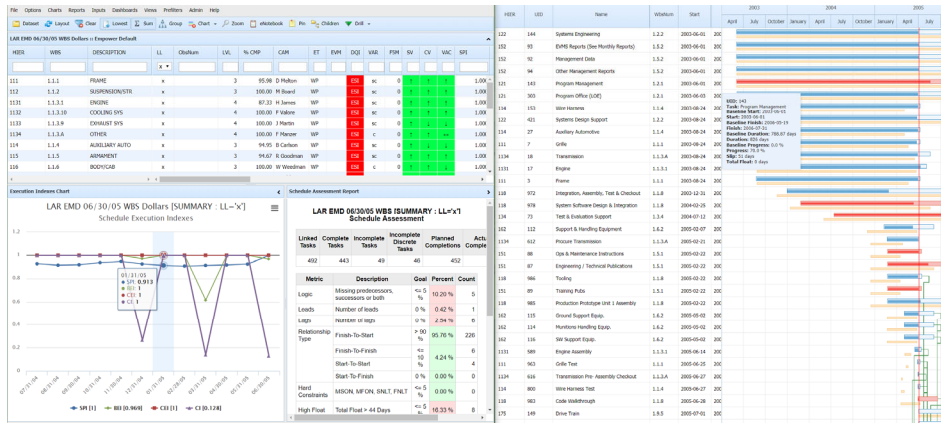
If you use a tri-pane with outside windows frequently, save them as a dashboard after you get them set up. This keeps you from having to reset tit from scratch each time

you want to use this display of information.



External Windows

Schedule available on External Window



CTRL – Select a Chart or Report to view it externally

This demonstrates the same thing, but with a Gantt chart added to the second screen.



Checks on Learning

- Useful tools to have readily available is the
 - A. DOE provided Useful Commands and Filter
 - B. DOE Gold Card
 - C. Empower User Guide
 - D. EPASOP
 - E. ECRSOP
 - F. All of the above
 - G. A, B, C, and D
 - H. A and D

- Interactive Filters:
 - A. Can be made into prefilters, if simple
 - B. Remove data from the dataset used, rather than hide it
 - C. Assist in finding the key items you need to review in analysis
 - D. Should be cleared using the Clear Button on the toolbar
 - E. Sort data to help with analysis

- You can use the interactive filter to filter data for
 - A. All columns with numbers
 - B. Text columns
 - C. Data quality indicator columns
 - D. Trend columns

25

THESE ARE PLACED HERE AT THE END – BUT CAN BE MIXED INTO THE TRAINING AT THE APPROPRIATE SPOTS.



Checks on Learning

- Gantt Filters exist to
 - A. Filter out complete activities
 - B. Filter based on preset performance criteria
 - C. Filter out milestones
 - D. Filter out constraints

- Prefilters:
 - A. Remove data from the dataset used, rather than hide it
 - B. Assist in finding the key items you need to review in analysis
 - C. Should be cleared using the Clear Button on the toolbar
 - D. Support Drilling into data that you filtered out
 - E. For the Sort Window can be selected in the Dataset box

- Drilling is useful when the prefilter is set to Level 1 Only if you need to see lower levels in the project
 - A. True
 - B. False

26

THESE ARE PLACED HERE AT THE END – BUT CAN BE MIXED INTO THE TRAINING AT THE APPROPRIATE SPOTS.



Checks on Learning

- When building your own prefilter
 - A. It is fairly easy to do for simple interactive filters
 - B. It can be hard to do when you build it from scratch, best an advanced task
 - C. It should have a logic name to make it easier to find
 - D. You have to be an administrator
- Grouping is useful to:
 - A. View multiple projects at Level 1 by a field in the sort window
 - B. Summarize related projects to analyze with charts, views, and reports
 - C. Cleared using the Clear Button on the toolbar
 - D. For the Sort Window can be selected in the Dataset box
- Data Group Fields are used to build custom views and can be used to add a field to the view needed for grouping
 - A. True
 - B. False

27

THESE ARE PLACED HERE AT THE END – BUT CAN BE MIXED INTO THE TRAINING AT THE APPROPRIATE SPOTS.



Checks on Learning

- - A. It is fairly easy to do for simple interactive filters
 - B. It can be hard to do when you build it from scratch, best an advanced task
 - C. It should have a logic name to make it easier to find
 - D. You have to be an administrator

- Using CTRL + a Chart or Report:
 - A. Lets the user set up a large monitor or multiple monitors with additional charts and report beyond what is in the tri-pane view.
 - B. Can be set up as under a dashboard to quickly open all up each time that dashboard is selected.
 - C. Can be used in a conference room on a large screen or set of screens for a project review
 - D. All of the above
 - E. A and C only

- External reports and charts displayed on separate monitors do not update as you select a new active element
 - A. True
 - B. False

28

THESE ARE PLACED HERE AT THE END – BUT CAN BE MIXED INTO THE TRAINING AT THE APPROPRIATE SPOTS.