

ENGINEUITY TUTORIAL



% Of A Job Completed



% Of A Job Completed

The **% Of A Job Completed** on the **Job Details** does not always equate to the measured value recovered on a job in relation to the original bid value.

We will take a closer look at this anomaly.



% Of A Job Completed

Job 167 (In progress)

Navigate to "Main menu/Measuring performance/Assessing performance/Job performance/Job details"

Management consultants report Risk analysis

JOB SUMMARY

JOB PROGRESS



Period identified: 7
 Country: United States
 Location: New York City, New York
 Type: Build Only
 BIM model used: No
 Size: Medium
 Approx value: 11,000,000
 Duration: 3 periods
 Description: Replace onshore wind turbines
 Sector: Energy
 Client: First Wind USA [Details](#)

PROCUREMENT DETAILS

BID SUBMITTED

Estimated build cost: 8,929,002
 Estimated site cost: 1,785,800
 On cost: 134,946
 Mark-up: 4.1 %
 Bid: 11,294,590 ?

BID RESULT

Job won

[Tender Report](#)

BIDDING INFORMATION

The client relationship when bid submitted was satisfactory
 When progressing the job the expected value (turnover) for each man period was 73,341

A job was won with a bid of 11,294,590

ESTIMATED COSTS / PLANNED LABOUR SCHEDULE

Job period	Estimated build cost	Estimated site cost	Planned labour	Cumul % complete
1	2,678,701	535,740	46	30
2	4,464,501	892,900	77	80
3	1,785,800	357,160	31	100

8,929,002 1,785,800 154

RISK REGISTER

Risk description	Likelihood occurs	Impact cost	Reduction in cost if BIM used	Expected labour reduction
Incomplete survey	Low	55,000	No	2.4 %
Site access issues	Low	173,000	No	2.6 %
Leaks	Medium	49,000	No	2.1 %
Site cabins burn down	Low	71,000	No	6.9 %



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JOB SUMMARY

JOB PROGRESS

Job progression												Profit analysis			
Planned schedule			Actual progress									By period		Cumulative	
Job period	Planned labour	Cumul % complete	Period	Status	Actual labour	Ineffect due to delays	Ineffect due to overman	Effective labour	Actual % complete	Completion status	Profit	Profit % of cost	Cumul profit	Cumul profit % of cost	
1	46	30 %	9	Past	54	2.0	0.0	52.0	34.49 %	Ahead of schedule	-165,287	-4.1 %	-165,287	-4.1 %	
2	77	80 %	10	Current						2 planned periods of the job left					
3	31	100 %													

Total planned labour needed to complete the job is 154.

For a Energy job, the effective labour on site (after delays) cannot be more than 18% above the planned labour level for the period.

PERIOD 9

CLICK ON A LINE IN THE THE SUMMARY ABOVE TO SHOW THE DETAILS FOR EACH PERIOD THE JOB HAS BEEN PROGRESSED

LABOUR ANALYSIS	COST ANALYSIS	VALUE AND PROFIT ANALYSIS
PLANNED SCHEDULE	BUILD RELATED	Measured value: 3,843,990 ?
Required labour: 46	Build cost: 3,066,267 ?	Early completion bonus: 0
Overmanning of: 18 % permitted	Site cost: 633,135 ?	Total value: 3,843,990
Effective labour limit (ELL): 54.3	Risk cost: 199,135 ?	Total cost: 4,009,277
LABOUR ALLOCATED	Late completion penalty: 0	Total profit: -165,287 (-4.1 % of costs)
Own: 54	ADDITIONAL LABOUR COSTS	PROGRESS TO DATE
Sub: 0	Ineffective labour due to overmanning: 0	Amount of the job completed: 34.49 %
Total labour allocated: 54 ?	Ineffective labour due to completing the job: 0	Progress comment: [Ahead of schedule]
(less) labour lost by delays: 2 (ineffective)	Training new recruits (Own): 92,500	Cumulative profit: -165,287 (-4.1 % of costs)
Effective level after delays: 52.0	Labour payoffs (Own): 0	
(less) overmanning above the ELL: 0 (ineffective)	Subcontractor cost: 0	
Effective labour on site: 52	PROJECT MANAGER	
	Allocated: Dwane Dupont ?	
	Overall performance: excellent	
	Salary: 14,250	
	Bonus: 570 (4 %)	

BID SUBMITTED

Estimated build cost:	8,929,002
Estimated site cost:	1,785,800
On cost:	134,946
Mark-up:	4.1 %
Bid:	11,294,590 ?

The job has just completed its 1st period, and the **measured value** to date is 3,8843,990.

This equates to **34.03%** of the bid i.e., $(3,843,990 / 11,294,590) * 100$

However, the % complete shown is higher at **34.49%**, so why is there a difference ?



% Of A Job Completed

Overhead Performance

Navigate to "Main menu/Measuring performance/Assessing performance/Overhead performance"

Management consultant report

MARKETING DEPARTMENT

HEAD OFFICE / QHSE / MEASUREMENT

Period	Status	Turnover	Bench	Head Office				QHSE				Measurement			
				Number of staff				Number of staff				Number of staff			
				Comp	Agen	Total	Comment	Comp	Agen	Total	Comment	Comp	Agen	Total	Comment
1	History	0		0	0	0		0	0	0		0	0	0	
2	History	0		0	0	0		0	0	0		0	0	0	
3	History	5,371,986		3	0	3		2	0	2		2	0	2	
4	History	12,329,080	YES	3	0	3		2	0	2		2	0	2	
5	Early Years	9,938,009		3	0	3		3	0	3		3	0	3	
6	Early Years	12,281,120		4	0	4		3	0	3		3	0	3	
7	Early Years	16,280,720		5	0	5		4	0	4		4	0	4	
8	Early Years	14,671,130		5	0	5		3	0	3		3	0	3	
9	Early Years	18,394,660		2	0	2	Significant understaffing	1	0	1	Significant understaffing	1	0	1	Significant understaffing

INFORMATION

Period 4 should be used as the benchmark when determining the staffing level required

"Comp" is the company's own staff; "Agen" are agency staff

No comment indicates that the staffing levels set were appropriate

The % complete is derived from the **actual amount of the job completed** to date, and not the measured value.

The **Overhead performance** shows that the Measurement Department was significantly understaffed in the period, and this led to less money been recovered from the client than expected, and the full value from the jobs progressed was not recovered from the client.