

Negotiating Performance Based Payment Terms and Conditions

“It appears that the principal impediment to implementation [of Performance Based Payments] is a need for mutually acceptable accomplishment criteria.”

Acquisition Reform Implementation An Industry Survey, Coopers & Lybrand

Performance Based Payments (PBPs) came into existence a little over two years ago as part of the FASA changes to the FAR. Many of the desired outcomes that lead to their creation are being achieved. The administration of PBPs are proving to be generally easier than progress payments. Even though last year DCMC processed almost \$3B in performance based payment requests (17% of contract financing dollars) there has yet to be an instance of default, termination or litigation associated with PBPs. But the last two years have also demonstrated the accuracy of the above observation. The entire process hinges on the parties reaching agreement on terms, and on the quality of those terms.

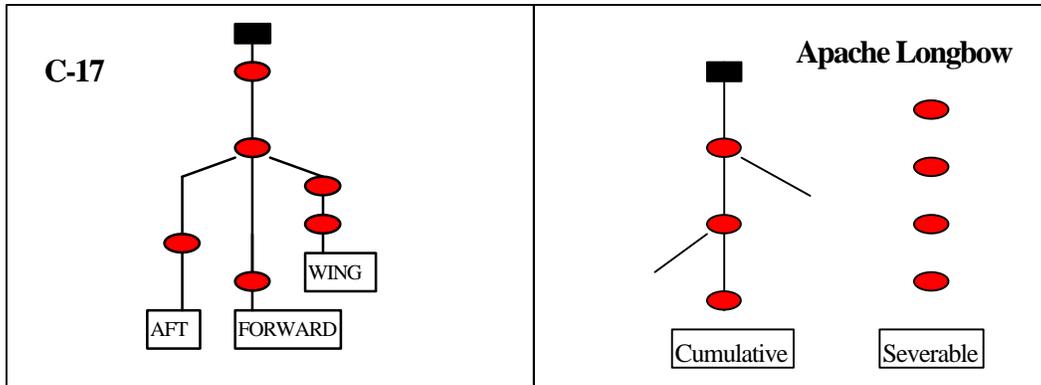
There are three pieces to defining performance based payment terms. 1) The Payment Event or Criteria, 2) The Definition of Successful completion and 3) the Value of the event. All three pieces need to be considered together to ensure that the contractor will have an adequate cash flow, that there is appropriate motivation for the contractor, and that achieving the payment events will lead inexorably to the successful completion of the contract. All of this requires detailed knowledge of the product and the processes required to build the product as well as close coordination between the technical and financial communities. Most of the problems encountered have been the results of business people acting without adequate technical understanding or technical people acting without adequate financial information.

Selection of Payment Events

Good payment events have a number of common characteristics. They are clear milestones in the path toward the ultimate completion of the contract, they represent a physical change in the product, they indicate added value, and they are not surrogates for incurred costs. The following are a sample of payment events:

- Receipt of material
- Product leaving a tool
- Completion of first article testing
- Completion of a sub assembly
- Machining, forging, fabricating parts

The best method of selecting events seems to be simply to diagram the process flow of the product and select the key events that lead to completing the product. They can be key events because of they represent milestones of progress, the joining of the wings to the fuselage of an aircraft, or because of their criticality toward the delivery of the final product, machining sabots for antitank munitions.



Since each product and each contract will be unique there is no magic number of events; however, 4-10 events seems to be common. Too few events and the contractor may be placed in financial jeopardy, threatening the completion of the contract leading to undesired behavior on the part of the contractor, too many events dilutes the motivational value of the events and increases the administrative burden.

Lets look at an example. A manufacturer of medium trucks uses a standard automotive assembly line approach for building their vehicles. Material is ordered 240 days prior to delivery, 90 days before delivery it is all received, The vehicles roll off the line with 30 days for final detailing and inspection (having spent less than a week in actual assembly).



These events are integral and necessary to contract performance. No interim events in the planned performance add similar value or are separated in time enough to be meaningful.

Definition of event completion

This aspect of PBP terms would seem to be inherently the simplest. The event has been selected, it only remains to demonstrate that it has been completed. But the definition of what constitutes completion is the area that creates the most problems in PBPs. In the Coopers & Lybrand Survey there were several industry comments that DCMC was overly strict in applying the standards of event completion. The more appropriate criticism is that there was not adequate flexibility negotiated into the PBP terms of contracts. On major complex system work may not be completed as planned due to ECPs, part shortages, skills shortages or host of other problems, but if the PBP terms don't address them than the ACO can not interpret their existence into the contract terms. The regulation specifically states *"The contracting officer shall not approve a performance-based payment until the specified event or performance criterion has been successfully accomplished in accordance with the contract."*

Taking another look at the truck example, the material in event two is made up of some 6000 separate pieces. Of these 150 constitute 85% of the value. Is it critical that all 6000 pieces be on hand before payment is made? Or is there a bigger risk to the contract by making the most critical financing event contingent on the receipt of every nut, bolt and washer? Surveillance planning should also be a consideration. Does the Government want to validate performance on 6000 separate pieces for each vehicle?



Knowing that all the low dollar material is bought in bulk at the beginning of the contract for all trucks could support the decision to make the criteria for the completion receive material the receipt of the top 150 parts (as demonstrated by a report from the contractor's MRP system, that could be verified by the Government in either a pre or post payment review depending on risk).

The definition of event completion can also be an opportunity to motivate contractor behavior. Consider the machining of sabots for 120MM Armor Piercing Fin Stabilized Discarding Sabot (APFSDS) antitank rounds. The contract specification says that they can be built to a tolerance of $\pm 1/1000^{\text{th}}$ of an inch, but analysis shows that if the variance within a lot of sabots can be kept to $Cpk > 1.33$, then there is a higher probability of completing an expectable product. There will be less scrap in the latter processes, therefore fewer parts are required to be machined. By using the statistical process control measuring variance, " $Cpk > 1.33$ " in defining successful completion of the event "Complete Machining of Sabots," the contractor is motivated to produce a higher value product at a lower cost (a double incentive) even though this process measurement is not part of the contract.

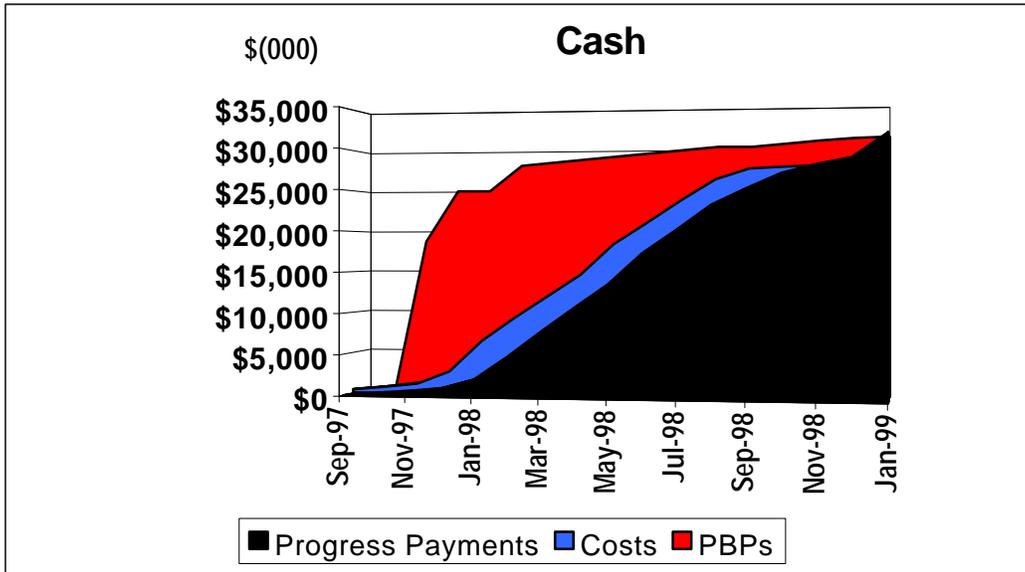
Valuation of payment events

In considering the valuation of performance events, it is important to remember that first and foremost, performance based payments are contract financing. They are not advance payments or incentive payments. Payments need to provide the contractor an adequate cashflow to perform the contract, but at the same time the value of the completed effort and the financing provided should be commensurate. Even though no performance based payment contract has yet been terminated, the Government does not want to be in the position of having provided financing in excess of the work in process.

While there is an incentive aspect to performance based payments, it is similar to the incentive provided by fixed price contracts. If a contractor can find a way to perform cheaper or faster they receive the full payment amount when the event is completed. Compare this to progress payments where the payment amounts are reduced as the contractor incurs less cost.

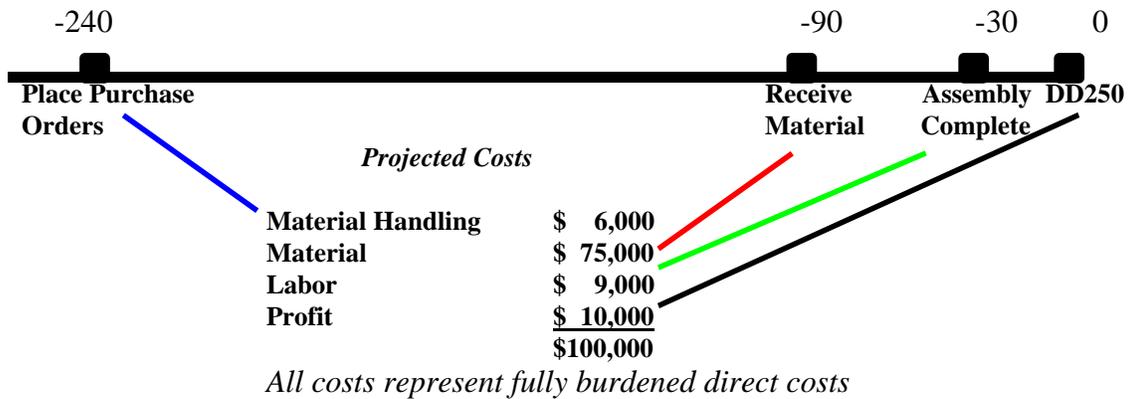
Here is a simple example, from an actual PBP proposal. The black area represents the financing the contractor would receive under progress payments. The blue area is the

difference between progress payments and the contractor's costs. The red area is the difference between the contractor's actual costs and their proposed PBP payment terms.

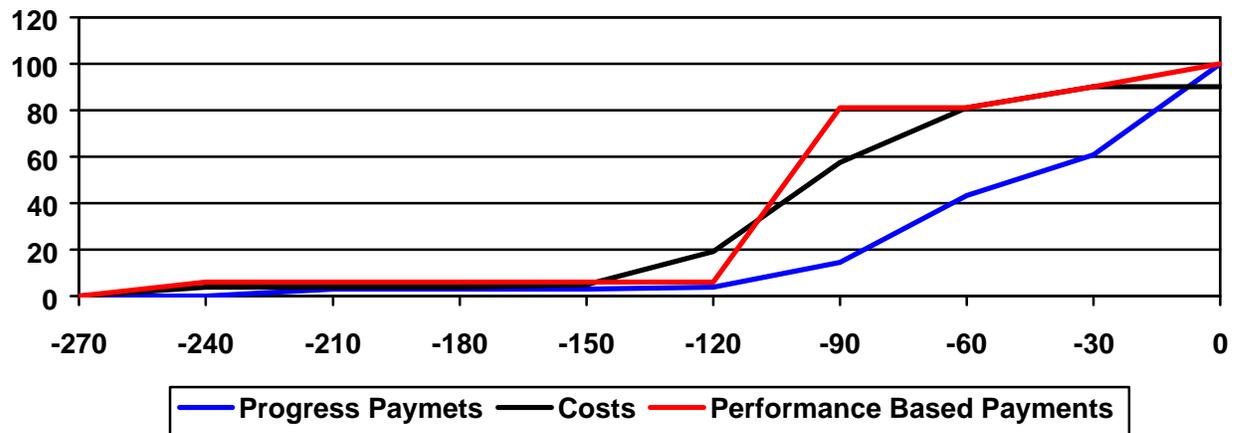


Clearly in this example the payments exceed the value of the performance events. There is nothing to indicate that the value of the completed events in anyway exceeds the projected costs associated with them. At the point of the completion of the second event the payments exceed the incurred costs and the contractor's anticipated profit by a factor of six. The contractor is better off drawing interest on what they've received than completing the contract!

Lets return to our truck contract one last time.



The breakdown for the major cost elements is a good match the proposed performance events. As the following chart shows, there is balance between ensuring that payments are commensurate with value and ensuring that the contractor's cashflow should be adequate for performing the contract.



This also demonstrates one of the benefits of performance based payments for the contractor, there is no paid cost rule. Under progress payments the contractor can bill for material in the first billing period after payment of the vendor, in performance based payments the contractor can bill in the first period after the event is completed. In this example that means the contractor receives the financing to pay his vendor's before he makes the actual payment. If the contractor is remiss in paying his suppliers the Government can reduce or suspend performance based payments.

Summary

Performance based payments offer many advantages to both the Government and the contractor. They offer better cash flow for the contractor and a higher probability for performance to the Government, with less administrative burden for all. But they require a change to the paradigm of contract financing. The PCO's role is now more than placing the clause in the contract and the ACOs need to not passively wait until they receive a contract to begin their participation. The insight of all communities, contractor, government, preaward, post award, technical and financial is required to achieve the maximum benefit.

Credits

I would like to thank the following individuals participated in developing this product, some knowing and some unknowing

Chuck Adams	Coopers & Lybrand	Sharon Brown	IOC
Fred Davis	Stewart & Stevenson	Pete Cardell	ARDEC
Ann Budd	Army Material Command	Richard Brown	OUSD (A&T)
Craig Hallen	DCMC Twin Cities	Jim Heimrel	DCMC Twin Cities

Which should not be construed as their necessarily agreeing with what has been said here.

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