PGI 216.403-1 Fixed-price incentive (firm target) contracts.

(1) *Use of FPIF contract.*

(*i*) *Not mandatory.* DFARS 216.403-1(b)(1) directs the contracting officer to give particular consideration to the use of fixed-price incentive (firm target) (FPIF) contracts, especially for acquisitions moving from development to production. DFARS does not mandate the use of FPIF for initial production and each acquisition situation must be evaluated in terms of the degree and nature of the risk presented in order to select the proper contract type.

(ii) *Considerations.* Volume 4, chapter 1, of the Contract Pricing Reference Guide provides a detailed discussion of the considerations involved in selecting the proper contract type. For example:

(A) It is not in the Government's best interest to use FPIF when the cost risk is so great that establishing a ceiling price is unrealistic.

(B) It is also not in the Government's best interest to use firm-fixed-price (FFP) contracts on production programs until costs have become stable. Therefore, FPIF contracts should be considered in production and sole source follow-on programs where actual costs on prior FFP contracts have varied by more than 3-4 percent from the costs considered negotiated. Contracting officers are reminded that actual costs on prior contracts for the same item or essentially the same item, regardless of contract type or data reporting requirements of the prior contract, are cost and pricing data on the pending contract, and must be obtained from the contractor on production programs when certified cost or pricing data are required.

(C) For sole source major systems procurements, contracting officers should utilize FPIF contracts instead of FFP contracts unless the reasons for significant variation are well understood and actions have been taken to ensure that significant variation will not recur. In addition, when options are included as described in PGI 217.202 (2), the use of FPIF contracts is both highly recommended and encouraged, because both parties will be assuming more risk in pricing multiple years of requirements.

(2) *Incentive arrangement.* DFARS 216.403-1(b)(2) directs the contracting officer to pay particular attention to share lines and ceiling prices for fixed-price incentive (firm target) contracts, with 120 percent ceiling and a 50/50 share ratio as the point of departure for establishing the incentive arrangement. While DFARS does not mandate the use of these share ratios or ceiling percentage, it is not unreasonable to expect that upon entering into production, risks have been mitigated to the point that the DFARS recommended point of departure for an FPIF incentive arrangement would be normal.

(3) *Analyzing risk.*

(i) *Quantification of risk.*

(A) The first step is establishing a target cost for which the probability of an underrun and overrun are considered equal and therefore, the risks and rewards are shared equally, hence the 50/50 share is the point of departure. Equally important is determining that the contractor has a high probability of being able to accomplish the effort within a ceiling percentage of 120 percent. In accomplishing

both these steps, the analysis of risk is essential.

(B) Too often, risk is evaluated only in general terms without attempting to quantify the risk posed by the various elements of cost. Also, a contracting officer may incorrectly fall back on the share ratios and ceiling percentages negotiated on prior contracts or other programs, without examining the specific risks.

(C) Whether being used to select the proper contract type or establishing share lines and ceiling price on an FPIF contract, the analysis of risk as it pertains to the prime contractor is key. From a contractor's perspective, all risks, including technical and schedule risk, have financial ramifications. Technical and schedule risks, if realized, generally translate into increased effort, which means increased cost. Therefore, all risk can be translated into cost risk and quantified. Risk always has two components that must be considered in the quantification: the magnitude of the impact and the probability that it will occur.

(D) When cost risk is quantified, it is much easier to establish a reasonable ceiling percentage. The ceiling percentage is applicable to the target cost on the prime contract. It is important to understand the degree of risk that various cost elements pose in relation to that target cost. A discussion of the major cost elements and the risk implications follows in paragraphs (3)(ii) through (iv) of this section.

(ii) *Subcontracts and material cost and risk*.

(A) In many prime contractors' contracts, a substantial amount of risk is borne by subcontractors, not the prime contractor, via negotiated firm-fixed-price (FFP) subcontracts. In the case of FFP subcontracts, the subcontractor is obligated to deliver at the negotiated price. The risk to the prime contractor is the supplier's failure to perform or perform on time. Generally, that risk is considered to be low by both the prime and the subcontractor as evidenced by the FFP contract type. In addition, the prime contractor will normally have priced effort for material management or subcontract administration to ensure timely performance on the part of the suppliers. This effort may be bid directly or indirectly (e.g., as part of an overhead expense) depending on the contractor's accounting practices.

(B) The impact of negotiated FFP subcontracts on the prime contractor's risk can be significant. A prime contract with a 120 percent ceiling price provides overrun protection to the prime contractor equal to 20 percent of the target cost on the contract. However, if FFP subcontracts represent half of the total contract cost, then half of the target cost is subject to little or no cost risk on the part of the prime contractor. Therefore, the overrun protection provided by 20 percent of the target cost is really closer to 40 percent protection of the prime's cost that is truly at risk to the prime contractor, which likely is significantly overstated. Thus, a ceiling price less than 120 percent in this risk situation would be more appropriate.

(C) For subcontracts that have not yet been negotiated between the prime and subcontractor at the time of negotiation of the prime contract, the degree of risk is essentially limited to the difference between the price proposed by the subcontractor and the subcontract value included in the prime contractor's proposal.

(D) For subcontracts that are not FFP, the risk to the prime is based on the risk represented by the subcontractors' contractual relationship with the prime. If the subcontract is FPIF and has a 50/50 share ratio and 120 percent ceiling, the prime's risk is 50 percent of each dollar of overrun up to the ceiling amount. An analysis of the subcontractor's risk would be necessary to determine the probability of reaching the ceiling price.

(iii) *Direct labor cost and risk.*

(A) The risk in direct labor is in the hours needed to perform the effort and the risk in the labor rates paid to employees. There is generally little risk in the direct labor rates. However, there are various levels of risk in the direct labor hours needed by the prime contractor to accomplish the contract requirements. This risk can be driven by a number of factors including technical complexity, schedule constraints, or availability of personnel, parts, or tooling. Risks vary by task and the key is to identify the major tasks and assess the "what if" impact at the total contract cost level.

(B) Schedule is often correctly cited as a risk factor, but it is important to understand and quantify the probability and impact of a potential schedule slip. Generally, any schedule slip can only affect the prime contractor's in-house cost. Therefore, any schedule impact should be assessed on the impact it would have on the prime contractor's performance of its tasks.

(C) However, it is wrong to assume the worst-case scenario that a schedule delay results in an extension of the entire prime contractor workforce for the period of the delay. A responsible contractor will take steps to minimize both the delay and the impact of that delay. For instance, a production schedule assumes an optimal sequencing of tasks which presumes the timely arrival and availability of parts from suppliers or other in-house sources. A delay in receiving parts as planned could require a resequencing of tasks and could adversely affect the efficiency of performing a number of tasks, but it will not cause the entire workforce to be idle during the delay.

(iv) *Indirect (e.g., overhead) cost and risk.* Overhead and other indirect costs (e.g., general and administrative expense) can represent a significant portion of the prime contractor's in-house cost. Indirect expense (hereafter referred to as overhead) poses potential cost growth risk or the opportunity for cost reduction from the following two perspectives:

(A) *Actual overhead rate.* (*1*) First, the actual overhead rate could be different than that proposed. Proposed overhead rates, even those covered by a forward pricing rate agreement, are based on forecasts of overhead expenses and the bases to which they are applied. The final overhead rate that is actually applied (charged) to a contract will be based on the actual overhead expenses and the actual base, each of which could be considerably different than estimated. The net effect could be a higher or lower overhead rate than estimated.

(*2*) In general, the risk in an overhead rate tends to be driven more by fluctuations in the base than in the expenses. This is because overhead expenses are made up of expenses that consist of "fixed" (e.g., depreciation) and variable (e.g., fringe benefits) in nature. When the actual base turns out to be lower than the estimated base, the fixed costs are spread over a smaller base resulting in a higher overhead rate. In general, if the actual base is greater than estimated, a lower overhead rate will result.

(*3*) In assessing this risk, the contracting officer should consider the contractor's ability to predict overhead rates based on comparing proposed versus actual rates for prior years. In making this comparison, it is important to do so in a manner consistent with the proposal being reviewed. For instance, if the majority of overhead costs on the proposal being reviewed occur two years in the future, the comparison should look at the contractor's accuracy in predicting overhead rates two years in advance. For example, in looking at the 2009 actual overhead rate, what did the contractor propose for 2009 in its 2007 forward pricing rate proposal?

(B) *Actual base cost.* If the actual base cost on the contract (e.g., direct labor dollars) is different than that proposed, the contract will be charged overhead costs according to the actual base costs on that contract. If the contractor overruns direct labor, even if the actual labor overhead rate was

the same as proposed, that rate would be applied to a higher base resulting in increased overhead dollars on that contract. The opposite would be true if the contractor underruns direct labor on the contract. Since this aspect of risk is tied to the base cost on the contract, the risk is the same as it is for those base costs (e.g., direct labor, material).

Parent topic: PGI 216.403 Fixed-price incentive contracts.