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ACQUISITION,
TECHNOLOGY
AND LOGISTICS

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COMMAND, (ATTN: ACQUISITION EXECUTIVE)
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(ACQUISITION)
DIRECTORS OF THE DEFENSE AGENCIES
DIRECTORS OF THE DOD FIELD ACTIVITIES

SUBJECT: Guidance on Using Incentive and Other Contract Types

I am pleased to issue the enclosed, "*Guidance on Using Incentive and Other Contract Types.*" Contract type is just one element of the overall contractor compensation arrangement, which includes contract financing, profit or fee, and incentives, as well as other contract terms and conditions. Selection of the appropriate contract type depends on a multitude of factors and is very situationally dependent. This guidance addresses, in a comprehensive way, the considerations our contracting and acquisition professionals should take into account when selecting and negotiating the most appropriate contract type for a given requirement.

Incentive-type contracts are proven tools that enable the Department of Defense (DoD) to achieve better acquisition outcomes in areas that are most important to our mission needs. They also are vehicles for DoD and industry to share equitably in cost savings or risks. Under an incentive structure, the contractor is afforded an opportunity to earn more profit/fee by reducing cost, and in certain cases by exceeding performance thresholds or reducing schedule. When structured correctly, an incentive contract aligns industry motivations with the Government's desired outcomes, with better performance tied to higher profits. While they aren't always the appropriate contract type, there is strong evidence that incentive type contracts (fixed-price incentive and cost-plus-incentive-fee), can lead to better results – when incentives are properly structured to motivate performance. To assist contracting and program management personnel, this guidance specifically addresses how to structure an effective incentive arrangement, with an emphasis on assessing and quantifying risk and negotiating reasonably challenging, but achievable, target costs.

DoD's success depends on a healthy industrial base that is lean, competitive, innovative and productive. Selection of contract type should balance risk fairly between a firm and the Government, providing the opportunity for industry to earn a reasonable profit/fee for successful delivery of products and services. Profit should not be targeted as a cost-cutting measure, but

should instead be reflective of actual performance, with higher profit levels tied to better performance and lower levels to poorer performance.

The enclosed "*Guidance on Using Incentive and Other Contract Types*" will be posted within the Defense Federal Acquisition Regulation Supplement (DFARS), Procedures, Guidance and Information (PGI) at DFARS PGI 216.104. To expound on the content of this guidance, Defense Acquisition University (DAU) is developing two complementary, corresponding Continuous Learning Courses (CLC) entitled, "Understanding Incentive and Other Contract Types" and "Advanced Issues in Incentive Contracting." These courses are expected be released in 2016, and will provide a great opportunity for contracting professionals to enhance their knowledge of when and how to use incentive contracts. I encourage contracting professionals to include both of these courses as part of their ongoing professional development and required continuous learning points.

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Director, Defense Procurement
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Guidance on Using Incentive and Other Contract Types

April 2016

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Background

This guidance was developed as an element of the Under Secretary of Defense, Acquisition, Technology and Logistics (USD (AT&L)) Better Buying Power (BBP) 3.0 – *Achieving Dominant Capabilities through Technical Excellence and Innovation* initiative. The analysis behind the *2014 Annual Report on the Performance of the Defense Acquisition System*, published by the USD (AT&L)) on June 13, 2014, demonstrated that the use of cost-plus-incentive-fee (CPIF) and fixed-price-incentive Firm Target (FPI(F)) contracts was highly correlated with programs that achieved better cost and schedule performance outcomes. Therefore, our preference is to employ these contract types when they are appropriate.

Contract Type as an Element of Overall Contractor Compensation

Contract type is just one element of the overall contractor compensation arrangement, which includes contract financing, profit or fee, incentives, and contract terms and conditions. Selection of the appropriate contract type depends on a multitude of factors, including the acquisition situation, and is a matter for negotiation. Since the contract type and the negotiated contract pricing are interrelated, they must be considered together. The overall compensation arrangement considers contract type, pricing, and financing together. Preferably, contracts are forward priced (as opposed to authorizing contractors to proceed under an undefinitized contract action or letter contract). Forward pricing requires the contracting parties to make assumptions about future changes in the marketplace. The chosen contract type and negotiated pricing should:

- Result in a reasonable degree and balance of risk between the Government and the contractor; and
- Provide the contractor with the greatest incentive for efficient and economical performance.

Generally, contract types vary according to:

- The degree and timing of the responsibility/risk assumed by the contractor for the costs of performance; and
- The amount and nature of the profit incentive offered to the contractor for achieving or exceeding specified standards or goals.

As a minimum, the appraisal of cost risk should consider two areas of particular concern--contract performance risk and market risk.

Contract Performance Risk

Risk associated with the work to be performed is the most important factor when selecting contract type. Most contract cost risk is related to contract requirements and the uncertainty surrounding contract performance. Areas to consider should include:

- Stability and clarity of the contract specifications or statement of work;
- Type and complexity of the item or service being purchased;
- Uncertainties impacting performance, such as maturity of technology being developed, implemented or utilized;
- Availability of historical cost and pricing data;
- Prior experience in providing required supplies or services;
- Contractor technical capability and financial responsibility; and
- Extent and nature of proposed subcontracting.

Performance risk should be reduced from a high to a relatively low level as the requirement progresses from vague to well-defined, and uncertainty regarding feasibility and cost/time to perform decreases. For example, research and development contracts generally have a rather high degree of performance risk. This is due to the fact of having lesser-defined requirements that arise from the necessity to deal beyond, or at least very near, the upper limits of current technology (i.e., "the state of the art"). Whereas, follow-on production contracts generally have a relatively low performance risk. In a production contract, requirements are well known, there is a cost history to draw on, and contractors have experience producing the product. As performance risk changes, so should contract type.

Market Risk

Changes in the marketplace will also affect contract costs. Consider:

- A volatile market will increase the cost risk involved in contract pricing, particularly when the contract period will extend several years (e.g., potential fluctuations in material and labor cost and potential material shortages in the future);
- In cases where costs subject to potentially large market fluctuations are significant, contract period risk becomes an important consideration in selection of contract type; and
- Fixed-price contracts with economic price adjustment, for example, are designed specifically to reduce this risk for contractors.

Factors in Selection of Contract Type

The Federal Acquisition Regulation (FAR), Subpart 16.104, includes the following factors to consider in selecting contract type:

- Type and complexity of the requirement;
- Urgency of the requirement;
- Period of performance or length of production run;
- Contractor's technical capability and financial responsibility;
- Concurrent contracts;

- Extent and nature of proposed subcontracting;
- Acquisition history;
- Degree to which price competition results in realistic pricing;
- Degree to which price analysis can provide a reasonable pricing standard; and
- Cost analysis including assessment of cost impact of uncertainties and reasonable allocation of cost responsibility to the contractor.

Uncertainties in Performance

One Government objective is to provide the contractor with whatever degree of cost responsibility and incentive that is consistent with the circumstances. This necessitates an analysis of the procurement situation and an assessment of the uncertainties of contract performance and their possible impact on cost. The uncertainties involved in performance and their possible impact upon costs must be identified and evaluated so that a contract type can be negotiated that places a reasonable degree of cost responsibility upon the contractor.

Depending on the procurement situation and skills of the negotiators, there can be uncertainties with regard to the estimating assumptions. Some factors that may contribute to such uncertainty are: availability of historical cost and performance information on like or similar work; clarity and detail of the work statement or specifications; likelihood of a substantial increase or decrease from the plant volume forecast at the time of negotiations; probability of program or design changes occurring after negotiations that will require contractual changes or re-pricing; and the likelihood that anticipated test or production problems may materialize or that unanticipated problems will materialize.

Because complexity is relative, it must be evaluated in terms of the extent of change from previous similar requirements. It requires an analysis of differences. Complexity may be measured by the number and type of operations required in manufacture or, if developmental, the number and kind of scientific disciplines that must be used to develop the desired answer or prototype. In general, the greater the number or level of manufacturing and scientific skills that are required, the more complex the job is, the greater the cost uncertainties involved in performance will be.

Similarly, a relationship exists between the stability of design and the degree of performance uncertainty. Without a reasonably stable design, specifications may not be sufficiently developed to indicate clearly the scope of the work necessary to complete the effort, and the resulting inability to write a precise statement of work makes it highly unlikely that responses to a multi-source solicitation will have a degree of comparability high enough to permit award solely on the basis of price competition. For a less defined, more developmental effort, comparative price analysis is extremely difficult as the amount, reliability, and relevance of available cost or pricing data and prior production experience are limited. Conversely, a reasonably stable design permits the establishment of well-supported basis of estimates and a

high degree of confidence in the pricing. This can make adequate price competition possible and lends validity to use of any prior cost and production information.

The longer the prospective period covered by the estimate, the greater the number of variables injected into the procurement situation. For example, a long span between award and first delivery can mean a high degree of design, tooling, and prototype engineering and testing. Projection of a long time span between the first and last direct labor hour to be expended on a per unit basis may indicate a high proportion of production engineering and a corresponding high degree of complexity.

Existence of performance uncertainties does not preclude negotiation of a contractual arrangement that imposes significant cost responsibility upon a contractor. The ability to analyze and agree upon the uncertainties, the likelihood of their happening during performance, and the possible impact on costs if they do occur is important. For example, a contingency in an estimate does not automatically mean that the use of a firm-fixed price (FFP) type contract is not appropriate. Nor does it mean that an incentive arrangement is beyond consideration. Any estimate is a projection of what costs should or might be. The difference between a realistic estimate and a contingency is one of degree and not that one is more or less desirable.

Think in terms of unsupported or poor estimates. If an event is possible and experience supports the probability of its occurrence, then it may be suitable for inclusion in the estimate. When used, however, it may be proper to question the magnitude of the event if it should occur or there can be a difference of opinion as to its likelihood. If based upon factual interpretation, then either point of view could cause a revision of the estimate. Therefore, negotiation of a FFP contract at a realistic level may be both possible and appropriate if the uncertainties are identified and evaluation of available support information leads to a conclusion as to the possible cost impact and likelihood of occurrence.

The ability to analyze and evaluate performance and cost uncertainties and to negotiate a contractual arrangement that provides for significant contractor cost responsibility at a fair and reasonable cost depends on the adequacy of available supporting information. As a program progresses, increasing amounts and kinds of supporting data become available. In general, there is a direct relationship between the stage in this progression, the degree of uncertainty involved in contract performance, the availability and adequacy of supporting data, and the type of contract most suited to the procurement.

Contract Types

Contract types are grouped into two broad categories:

- Fixed-price contracts; and
- Cost-reimbursement contracts

The specific contract types range from firm-fixed-price, in which the contractor has full responsibility for the performance costs and resulting profit (or loss), to cost-plus-fixed-fee, in which the contractor has minimal responsibility for the performance costs and the negotiated fee is fixed. In between are the various incentive contracts in which the contractor's responsibility for the performance costs and the profit or fee incentives offered are tailored to the uncertainties involved in contract performance.

The basic types of contracts authorized by the FAR may be used in combination unless otherwise prohibited. If the proposed combination would promote the best interests of the Government, there can be both fixed price and cost type contract line item numbers, which create "hybrid" contracts. For example, it is not uncommon to find a FFP contract with a cost-reimbursement line item for travel or other direct costs (ODCs).

Difference Between Fixed-Price and Cost-Reimbursement Contracts

A fixed price type contract places upon the contractor maximum risk and responsibility for all costs and resulting profit or loss. If the contractor does not perform in an efficient manner, it may experience a loss on the contract. If the contractor does not perform in accordance with the terms of the contract, it is subject to termination for default or cause.

Cost-reimbursement types of contracts require the contractor to put forth a best effort to perform, and provide for payment of the contractor's allowable, allocable, and reasonable incurred costs. These contracts establish an estimate of total cost for the purpose of obligating funds and establish a ceiling that the contractor may not exceed (except at its own risk) without the approval of the contracting officer.

The *2014 Annual Report on the Performance of the Defense Acquisition System* showed no statistical correlation between performance and broad contract type; thus, a simple bifurcation of contract types (i.e., grouping all fixed-price and all cost-reimbursement contracts together) is misleading. Fixed-price contracts exhibit lower cost growth *because* they are used in lower-risk solicitations, not because they inherently lead to lower cost growth. The price can actually be overstated under a FFP contract to the extent a contractor is successful negotiating a firm-fixed price that is inflated if risk is priced in the FFP in an attempt to shift the cost risk to the Government. This highlights the importance of a good Government understanding of actual cost as the Government risks paying increased prices on FFP contracts. In addition, there is no sharing of cost savings with the Government on FFP contracts. The *2014 Annual Report on the Performance of the Defense Acquisition System* found a positive correlation between the use of incentive contracts and better performance outcomes. This is why it is important to consider incentive contracts separately from the fixed-price and cost-reimbursement families of contracts.

Cost-Reimbursement Contracts

Under a cost-reimbursement contract, the contractor must put forth its *best efforts* in performance of the contract. This language allows the Government to assume more risk as well. In many instances, the Government could not attract a contractor to take on the risk of some of our projects without paying an inflated price to compensate industry for assuming the risk; the best efforts language in cost-type contracts allows for contractors to receive payment even if a final deliverable is not achieved.

Cost-reimbursement contracts provide little to no incentive for a contractor to limit costs, unless there is an incentive built into them for that purpose. The cost reimbursement family of contracts is used when circumstances do not allow for requirements definition sufficient for the execution of a fixed-price contract, such as in:

- Research and development;
- Major system development;
- Prototype development and testing; or
- Low rate initial production.

The cost-reimbursement family of contracts includes:

- Cost;
- Cost-sharing;
- Cost-plus-incentive-fee;
- Cost-plus-award-fee; and
- Cost-plus-fixed-fee.

All cost-reimbursement contracts are subject to the limitations of FAR 16.301-3. They may only be used when:

- A written acquisition plan has been approved and signed at least one level above the contracting officer;
- The contractor's accounting system is adequate for determining costs applicable to the contract or order;
- Prior to award of the contract, or order, adequate Government resources are available to award and manage a contract other than FFP, to include at least one qualified contracting officer's representative prior to award of the contract or order; and
- Appropriate Government surveillance exists during performance to provide reasonable assurance that efficient methods and effective cost controls are used.

Note: Cost-reimbursement contracts are prohibited for the acquisition of commercial items

Cost Contracts

In a pure cost contract, the contractor receives no fee. Generally these contracts are used for research and development, specifically to educational institutions and nonprofit organizations. Cost contracts can also be used in arrangements where the contractor operates or maintains a Government provided facility. Since there is no cost incentive in a cost-only contract, no other performance or delivery incentives may be included in a cost contract.

Cost-Sharing Contracts

Much like a cost-only contract, contracts utilizing cost-sharing arrangements do not include a fee. In a cost-sharing contract, the contractor shares in a portion of the costs of contract performance. A cost-sharing contract may be used when the contractor agrees to absorb a portion of the costs, in the expectation of substantial compensating benefits.

For example, "memory foam" traces its origins as far back as a 1966 National Aeronautics and Space Administration contract effort to develop a material which would provide better shock absorption for seat cushioning and crash protection. This product is now widely used in football helmets, shoe insoles, mattresses, and pillows. (While Tang®, Teflon® and Velcro® are often associated with the space program, they are commercially-developed products, and not a result of a cost-sharing arrangement as widely believed).

Since there is no cost incentive in a cost-sharing arrangement (other than the internal pressure a contractor exerts upon itself to not expend excess funds), no other performance or delivery incentives may be included.

Cost-Plus-Fixed-Fee Contracts

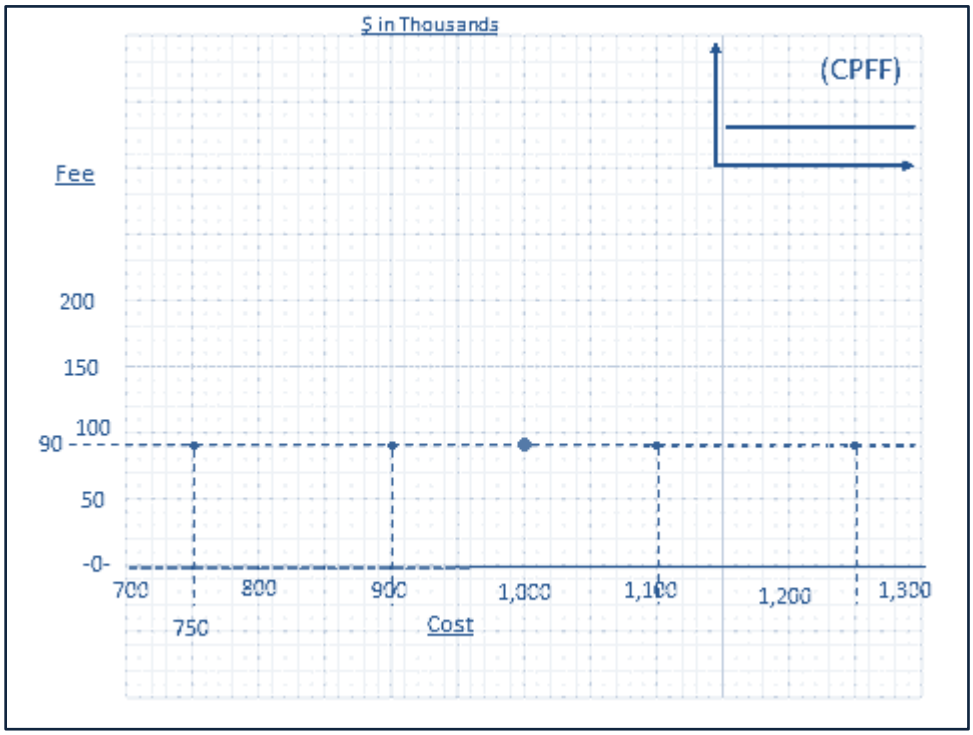
These contracts are primarily used in research, advanced development or exploratory development when the level of effort required is unknown. The uncertainties of performance are so great a fixed-price effort is not appropriate. Since a Cost-Plus-Fixed-Fee (CPFF) contract does not contain a cost incentive (or constraint) they are not appropriate for use with delivery or performance incentives.

The contracting officer is prohibited from negotiating a price or fee that exceeds the following statutory limitations, imposed by 10 U.S.C. 2306(d) and 41 U.S.C. 254(b):

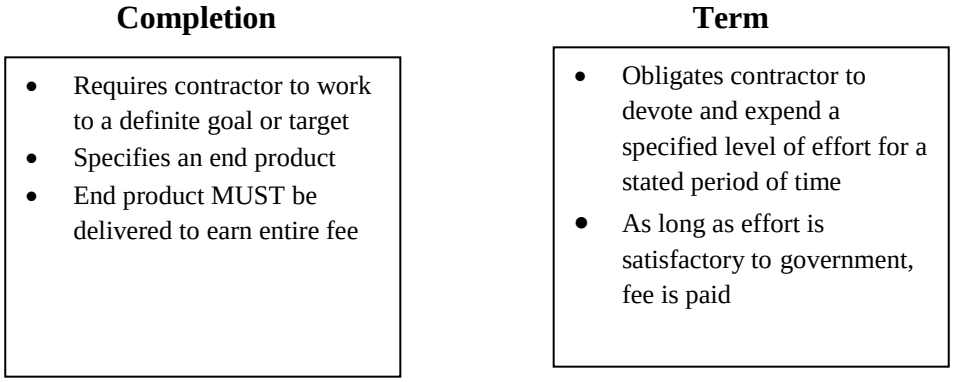
- For experimental, developmental, or research work performed under a cost-plus-fixed-fee contract, the fee shall not exceed 15 percent of the contract's estimated cost, excluding fee.
- For architect-engineer services for public works or utilities, the contract price or the estimated cost and fee for production and delivery of designs, plans, drawings, and specifications shall not exceed 6 percent of the estimated cost of construction of the public work or utility, excluding fees.

- For other cost-plus-fixed-fee contracts, the fee shall not exceed 10 percent of the contract's estimated cost, excluding fee.

Fee under a CPFF contract is a function of the estimated target cost—a fixed amount established as a percentage of that cost as a fee. Prior to contract performance, the fee percentage is established and applied to the estimated cost, setting the dollar value for the fixed fee. The fixed fee does not change unless the contract is modified to change something in the requirement. For example, if the original estimated cost was $1 million dollars and the fee was negotiated at 9%, the contractor would be due $90,000 in fee for its best efforts. If the contractor finishes performance at a total cost of $750,000, as the graph below indicates, the contractor would still be due $90,000 in fee. While this is still based on 9% of estimated contract cost at initial award, it now would translate to 12% of FINAL contract cost. If contractor's final cost goes over the estimated cost to $1,250,000, the contractor at this point still receives the same $90,000 in fee, but now it translates to a percentage of 7.2%. The following chart illustrates this example.



Two Forms of CPFF Contracts



In either form of the contract, there is only minimal incentive for the contractor to control costs. In the completion form, if the goal or target is not reached at the estimated cost, the Government retains the option of providing additional funds for completion to the contractor without increasing the fee earned. This in effect lowers a contractor's return on investment, but they can still earn the same fee dollars. If the Government does not increase funding for the effort, and the contractor did not reach the goal or target, the contractor may not receive the entire fee but their allowable costs are still covered. Completion or delivery of the specified end product, usually a report or study, is a condition for payment of the entire fixed fee.

In a term contract the fee is earned when the contractor has provided a level-of-effort for a stated period of time. As long as it does so, fee is earned regardless of the performance outcome. If the contractor's performance is considered satisfactory by the Government, the fixed fee is payable at the expiration of the agreed-upon period, upon contractor statement that the level of effort specified in the contract has been expended in performing the contract work. In contrast to the completion form, if the Government wishes to renew the contractor's effort, additional periods of performance are considered new acquisitions that involve new cost and fee arrangements.

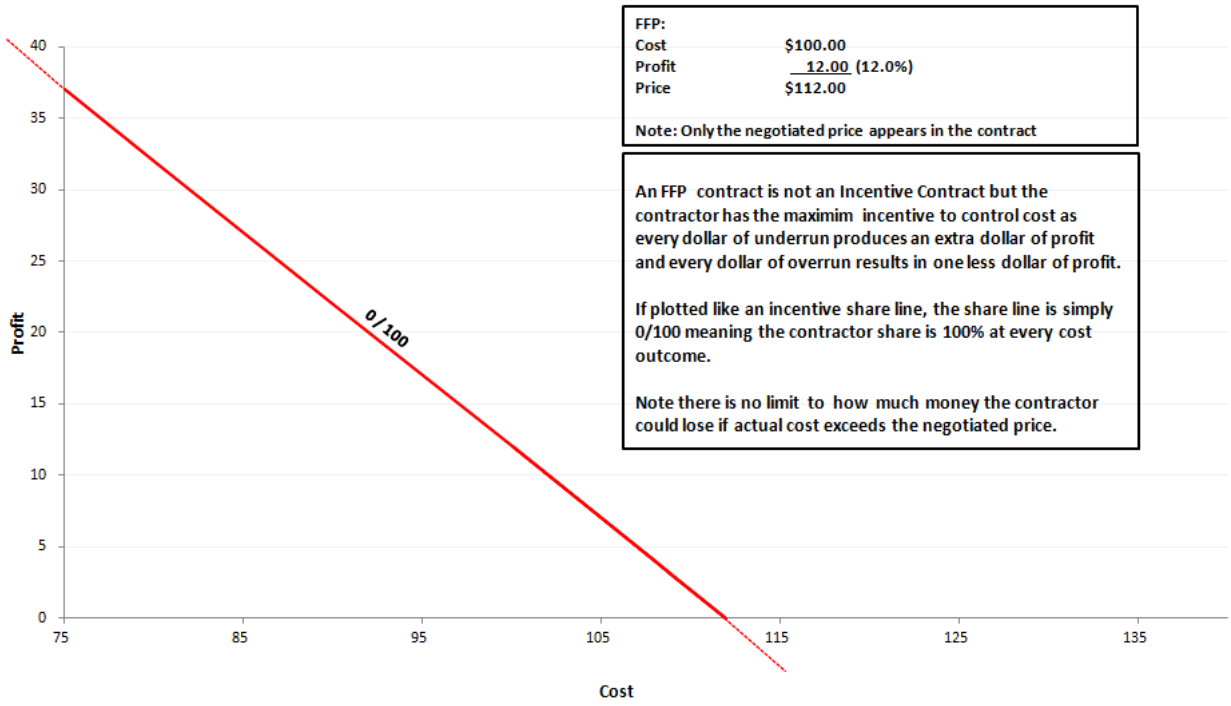
Fixed-Price Type Contracts

At the opposite end of the spectrum from the cost family of contracts, is the fixed-price family of contracts. These provide the strongest cost incentive to the contractor as there is a built-in correlation between contract cost incurred and final profit realized.

Firm-Fixed Price

FFP contracts provide for a price that is not subject to any adjustment on the basis of the contractor's cost experience in performing the contract. This contract type places upon the contractor maximum risk and full responsibility for all costs and resulting profit or loss. It provides maximum incentive for the contractor to control costs and perform effectively, and imposes a minimum administrative burden upon the contracting parties.

The graph below illustrates several attributes of an FFP contract that differ from the cost family of contracts. One difference is that the line for profit on an FFP contract has a slope whereas fee under CPFF does not change with variation in cost performance. In fact, in an FFP arrangement the slope is -1. Mathematically this means that for every change in contract cost there is an equal change in profit to the contractor. So, if the contractor can complete the contract for less than the negotiated price, the contractor would realize an additional profit equal to the cost savings. If the contractor completes the contract and costs are more than expected, the contractor's profitability is reduced by an amount equal to the increase in costs. Another difference from cost reimbursement contracts is the profit line potentially extends below zero. This is the graphical representation of the contractor potentially experiencing a loss on the contract.



Notice also that the profit line has a slope at all points. In an FFP effort, the Government does not limit a contractor's profits or losses. Therefore, it is possible that in some cases almost all of the money realized in performance of a contract can be profit. Especially in the acquisition of commercial items, many times the Government does not necessarily know what the contractor's costs and profits are as the market conditions establish the price that a prudent customer would pay for the good or service. In performance of an FFP contract with a price of $1,050,000, at a contractor cost of $950,000, the contractor would realize a profit of $100,000 (10.5%). If the contractor could perform the same contract for $900,000 then $150,000 (16.66%) would be realized as profit. Notice that at $1,000,000 the profit is reduced to $50,000 (5%) and that at $1,050,000, the contractor does not lose any money, but it has no profit either. At any point

above a contractor cost of $1,050,000, the contractor is in a loss position. Regardless, the price to the Government remains $1,050,000.

Increased Profit Percentage Realized as an Incentive in Firm-Fixed-Price Contracts

So, why would a contractor continue performance in a loss situation? The terms and conditions of an FFP contract are such that the contractor must deliver or become subject to default. That begs the question, why would a contractor take on an FFP contract at all? The incentive inherent in an FFP to earn maximum profit may entice a contractor.

While an FFP contract provides the maximum incentive for a contractor to control cost, it is incumbent upon the Government to ensure that the requirement is very clearly defined and that the price paid is fair and reasonable. Vague contract language may leave the requirement open to different interpretations by the contractor and the Government. In order to hold down costs, a contractor may interpret the requirement in terms resulting in a lower level of performance than the Government intended. In that instance, vague language results in ambiguities in the contract.

Generally, when ambiguities exist in the contract, regardless of contract type, the doctrine of *contra proferentum* applies, which means any ambiguities are construed against the drafter of the contract. For the ambiguity to be resolved in favor of the drafter of the contract (the Government), the ambiguity must be a "patent ambiguity" where the ambiguity is obvious on the face of the document (i.e., defective, contradictory, obscure or senseless language). This is the test used by the GAO and the Court of Federal Claims (CoFC) when deciding cases where contract ambiguities are the central point of the disagreement.

Fixed-Price Contracts with Economic Price Adjustment

If the portion of the effort in question is a material or labor element, a fixed-price contract with an economic price adjustment (FPEPA) can help address a specified contingency that may be beyond the contractor's ability to control, such as fluctuation in the price of a commodity item (e.g., steel, petroleum, specialty metals). FPEPA contracts are used when:

- The market prices at risk are severable and significant;
- The risk stems from industry-wide contingencies beyond the contractor's control;
- The dollars at risk outweigh the administrative burdens of an FPEPA; and
- Market or labor conditions are projected to be unstable during an extended contract performance period.

Using an FPEPA contract may incentivize a contractor to accept a fixed-price effort without inflating the price to cover the risk due to the variability of a cost element, because of the built-in mechanism to mitigate the risk. For example, perhaps a significant portion of the bill of material includes a precious metal; or, perhaps a particular labor category is experiencing significant

volatility due to labor shortages. A FPEPA provides for upward and downward revision of the stated contract price upon the occurrence of specified contingencies.

There are three general types of adjustments:

- Adjustments based on established prices. These price adjustments are based on increases or decreases from an agreed-upon level in published or otherwise established prices of specific items or the contract end items.
- Adjustments based on actual costs of labor or material. These price adjustments are based on increases or decreases in specified costs of labor or material that the contractor actually experiences during contract performance (i.e. actual costs).
- Adjustments based on cost indices of labor or material. These price adjustments are based on increases or decreases in labor or material cost standards or indexes that are specifically identified in the contract (e.g. Producer Price Index).

Fixed-Ceiling-Price Contracts with Retroactive Price Redetermination

Another fixed-price option, which is especially helpful in small research and development efforts (estimated at $150,000 or less) is the fixed-ceiling-price contract with retroactive price redetermination. The advantage of this option over a cost-reimbursement contract is the ability for the Government to hold a contractor to a deliverable within the ceiling price (e.g., a feasibility report). The contractor enters into performance knowing that the report must be delivered as a condition of the contract, but the Government and contractor cannot agree on an FFP effort.

This effort does not provide for any incentive for a contractor to control costs except for the ceiling. Therefore, the contracting officer should communicate to the contractor that effectiveness and ingenuity will be considered when retroactively predetermining the price.

Fixed-Price Contracts with Prospective Price Redetermination

Another option in the fixed-price family is a fixed-price contract with prospective price redetermination. These contracts are helpful when the Government and the contractor can agree on an arrangement in the short term, but there are concerns about the arrangement in the long term. The parties can include in the agreement stated times or points in the contract performance when the price for the next period of performance will be determined. These contracts are helpful in quantity production contracts and some service contracts. The basic period of the agreement should be for as long as the parties can agree to the pricing. Redetermination periods should be at least 12 months long. These contracts help fill the void in the fixed-price family between FFP and fixed-price incentive contracts. As with all fixed-price contracts a contractor is incentivized to reduce costs within a period of performance. In an FPRP contract, the contractor realizes a dollar of increased profit for a dollar of cost reduction.

Firm-Fixed-Price Level-of-Effort Contracts

The firm-fixed-price, level-of-effort term contract provides an agreement for a specified level of effort over a period of time on work that can only be described in general terms. In the end the Government pays the contractor a fixed dollar amount based on the level of effort rather than results achieved. This type of contract is typically used for studies and generally restricted for use to $150,000 or less; however the chief of the contracting office can approve a higher limit.

INCENTIVE CONTRACTS

An incentive, which is a stimulus to a desired action, exists in every business arrangement. The effective application of incentives remains essential to building successful business arrangements that maximize value for all parties. DoD is committed to adopting incentive strategies that attract, motivate, and reward traditional and nontraditional contractors to ensure high performance.

Importance of Incentive Contracts

In the Performance of the Defense Acquisition System, 2014 Annual Report, the analysis showed that when cost control is predetermined and formulaically incentivized, (i.e., CPIF and FPI(F)) industry responds. The key is predictable incentives, not fixed pricing. The data showed that in development, low-rate initial production and full-rate production, incentive formula-type contracts had lower cost and price growth. Through incentives, a contractor can earn more profit/fee by reducing cost, exceeding the performance objectives or achieving the desired schedule. Positive incentives provide reasonable profit opportunities for offerors, without putting them at unnecessary cost risk during performance of the contract. Negative incentives penalize contractors through reduced profit when performance is less than expected. If appropriately structured, incentive-type contracts can allow the Government to share in cost savings and focus the contractor on the areas that are important to the Government. Incentive-type contracts provide the Government with valuable data on actual costs incurred. Incentives allow the contractor and the Government to make tradeoffs between cost and performance, and assist with managing cost growth and schedule delays.

Basic Principles of Incentive Contracts

The profit motive is the essence of incentive contracting. Incentive contracts provide the opportunity for the contractor to realize increased profit for attaining cost, performance and/or schedule criteria. At the same time, negative incentives may be employed to motivate contractors to avoid reduced profitability when outcomes fall short of the Department's desired levels. Incentive contracts should be structured to achieve desired objectives through reasonable and attainable targets that are clearly communicated to the contractor.

When developing an incentive type contract, the team should consider factors other than profit/fee that will motivate a contractor to perform. Examples of these factors include follow-on business, growth, maintaining or retaining a production capability, and positive past performance information (collected via Contractor Performance Assessment Reports). An analysis of these factors may help to determine the selection of performance and schedule incentives and the magnitude of the incentive rewards and penalties imposed by the share lines or by performance incentive formulas. If the team believes the contractor will perform at the desired or required level without an incentive, then the team should reconsider the use of a specific incentive; especially an incentive placed on a performance element. The team should use market research and review past performance information to determine if the contractors typically adhere to or exceed cost, schedule and performance parameters. It's essential that the team structure the contract to provide meaningful incentives and not include incentives that the contractor will be unable to achieve or will achieve regardless of the existence of an incentive.

In a cost-only incentive contract, the incentive applied to cost is interrelated to performance and schedule. In short, the sharing ratio applies to a given performance level upon which the estimated cost is based. A general assumption is that the relative value of cost, technical performance, and schedule remain constant.

Negative incentives are the counterpart of reward. The traditional method of applying positive (reward) incentives for cost under target and negative (penalty) incentives for cost over target in a cost-incentive-only contract has been the most widely applied incentive arrangement. The practical effect is the same where the fee ranges and the range of incentive effectiveness are the same.

The positive incentives and negative incentives in a cost-incentive contract or the cost sharing arrangement are expressed as a percentage ratio. This applies equally to either a CPIF or a fixed-price-incentiveFPI contract. A 60/40 incentive share line in the contract means that the Government pays 60 cents and the contractor pays 40 cents of every dollar of cost above the target cost of the contract. For every dollar of cost under target cost, the Government saves 60 cents and the contractor earns an additional 40 cents over and above the target profit or fee. The precise dollar amounts of the compensation adjustment are determined by this formula after the contract is completed.

Any incentive arrangement should be negotiated early in performance and preferably at the time of contract award. For maximum effectiveness, this arrangement should be in operation when performance starts so the first decisions made within the contractor's organization are made with the knowledge that every dollar spent reduces the profit potential by the amount of the share. Otherwise, the contractor, not knowing what its final actual cost will be until some point relatively far along in performance of the contract, can be motivated by the incentive to consider the cost implications of most decisions. While this may sound like an oversimplification of a complex business relationship, it is a true description of the incentive arrangement.

Evaluating cost, schedule, and performance periodically (like award fees) or based on interim milestones is not the same as evaluating acquisition outcomes. Some organizations have used interim incentive payments to motivate contractor performance; however, they are generally neither advisable nor necessary. Unless recoverable at completion, interim incentive payments run the risk of having paid incentives when acquisition outcomes are not met. Historically, this has been a fundamental problem when structuring award fee contracts. There are some exceptions to the use of interim incentive payments including satellites and shipbuilding given their long period of performance (7-8 years) with one delivery at the end. Most incentive contracts only include cost incentives because the value to the Government is clear. The value is the money the Government saves. Further, cost incentivizes delivery. The sooner the contractor delivers, the lower its cost and greater the return.

Pricing principles remain the same after an incentive contract type has been selected. The selection of an incentive contract type is not a substitute for sound pricing. Consider cost uncertainties when determining the type of incentive contract and the variety of pricing arrangements that can be structured into the contract.

The confidence in the objective target cost position (potential variation from actual target cost) is not the sole criterion or even the primary criterion for determining the selection of either a CPIF or an FPI contract. There are many more important factors. For example, in a situation where great technical uncertainty exists, there is also great likelihood of cost uncertainty. These factors dictate the selection of a cost-reimbursement type of contract.

The actual cost incurred in the performance of a contract cannot be expected to turn out exactly as predicted in the beginning. The incentive contract deals with the variations from predicted costs. Moreover, the establishment of a target cost in an incentive contract is a result of several variable factors, including: (1) the Government's price objective; (2) the contractor's price objective; and (3) negotiation as a tool of contract pricing.

In theory, the target cost objective includes the same mutually determined estimate of costs that would have been determined for any type of contract. When considering the target cost in an incentive contract, the target cost is only a point in a range of possible actual costs. The range of probable cost outcomes, from the most optimistic to the most pessimistic, must be determined prior to the establishment of a target cost objective and the target point may change in fact finding and during the negotiation process. The extent of the variation between the target cost point and probable cost outcomes may change during the contract's life cycle. In addition, the incentive concept expects variances in final realized cost. For example, there may be rate changes or risk assumptions that cause costs to change and therefore, overall price.

This is especially true in the area of research and development contracting because of the nature of the work, the usual lack of definitive requirements, and the inability to measure technical objectives. Inability to measure risk or objectively measure performance often necessitates the

negotiation of a CPFF or CPAF contract. The development effort following the contract definition phase, however, can be frequently accomplished under an FPI, CPIF, or FFP contract. Therefore, effective pricing and sound procurement practices require discernment when selecting and negotiating the right contract type.

The contract structure should reward suppliers for adopting business principles and processes designed to reduce cycle time and costs, while maintaining schedule, achieving performance expectations, and maximizing efficiency. Government business strategies need to focus on the overarching considerations related to each acquisition strategy.

Competing Incentives

Think carefully when using competing incentives. The contractor's goal will be to maximize the incentive it receives but this usually involves tradeoffs which may not consistent with how the Government views the relative importance of the incentives. Remember that once the contract is awarded, the contractor has control over how to pursue the incentives. Examples of competing incentives:

- Cost vs. Performance
    - It will probably cost more to build a jet that flies at Mach 2.5 than Mach 2
- Performance vs. Schedule
    - It will probably take longer to build and test a missile that will travel farther and be more accurate
- Schedule vs. Cost
    - Can be competing but generally delivering early means less cost (shorter time for level of effort functions)

"All or Nothing" Cost Incentives

"All or Nothing" incentives are powerful, but can also have unintended consequences. If an incentive becomes unattainable, all motivation for the contractor is essentially lost. "All or Nothing" never makes sense for a cost incentive. Consider, for example, a contract that provides for a $1,000,000 incentive if the contractor completes the effort at or below a certain cost. The best financial outcome for the Government is if the contractor misses the incentive by $1 (the Government pays $999,999 less). Government should never establish an incentive where it is not in Government's best interest for the contractor to earn the entire incentive.

Types of Incentive Contracts

There are two basic types of incentive contracts: fixed-price incentive contracts and cost-reimbursement incentive contracts. Incentive contracts may be further categorized as pre-determined formula-type incentives and those where performance cannot be objectively

determined. In both cases, the amount of profit or fee is directly related to the contractor's performance under the terms and conditions of the contract.

Award-Fee Contracts

An award-fee contract is a type of incentive contract. Unlike a predetermined, formula type of contract, evaluation of performance is subjective in nature. Therefore, an award-fee contract is suitable for use when:

- The work to be performed is such that it is neither feasible nor effective to devise predetermined objective incentive targets applicable to cost, schedule, and technical performance;
- The likelihood of meeting acquisition objectives will be enhanced by using a contract that effectively motivates the contractor toward exceptional performance and provides the Government with the flexibility to evaluate both actual performance and the conditions under which it was achieved; and
- Any additional administrative effort and cost required to monitor and evaluate performance are justified by the expected benefits as documented by a risk and cost benefit analysis (which must be documented in a Determination and Findings).

The award-fee incentive is a pool of money that the contractor can earn based on performance, in addition to any profit or base fee. The award-fee incentive can be included in a fixed-price or cost-reimbursement contract. An "award-fee contract" is a name commonly given to a fixed-price or a cost-reimbursement contract which includes an award fee incentive. Specific elements of the award fee incentive are stated in the award fee plan.

An award-fee plan establishes both: (1) the procedures for evaluating contractor performance including cost, schedule, and performance to determine award-fee; and (2) an award- fee board for conducting the award-fee evaluation. Generally, the award-fee plan is signed by both the Government and the contractor before the performance period begins, and can be changed by agreement of both parties. The plan is typically included as an attachment to the contract.

The award-fee plan describes how much money the contractor can earn as an award-fee and the criteria by which the contractor will be evaluated. These criteria should be linked to acquisition objectives defined in terms of contract cost, schedule, and technical performance.

Award-fee criteria should motivate the contractor to enhance performance in the areas rated, but not at the expense of at least minimum acceptable performance in all other areas. When a contractor's overall cost, schedule, and technical performance in the aggregate is below satisfactory levels, the contractor is not entitled to earn any award fee.

In DoD, objective criteria must be used, whenever possible, to measure contract performance. Award-fee incentives are to be used when you cannot measure contract performance objectively.

However, when using an award-fee contract, criteria shall be linked directly to contract cost, schedule, and performance outcomes. To the maximum extent possible, the criteria should be tied to identifiable outcomes, discrete events, or milestones.

The award-fee pool is the total of the available award fee for each evaluation period for the life of the contract. Since the available award fee during the evaluation period must be earned, the contractor begins each evaluation period with 0% of the available award fee and works up to the evaluated fee for each evaluation period. Contractors do not begin with 100% of the available award fee and have deductions taken to arrive at the evaluated fee for each evaluation period. However, the potential for the contractor to earn 100% of the award fee amount should be a mutual goal as it demonstrates the program's objectives were clearly communicated and achievable.

Establishing the award-fee pool is critical and requires careful consideration. Potential fees must be sufficient to provide motivation to achieve excellence in overall contractor performance. The potential fees should not be excessive for the effort contracted, nor should they be so low that the contractor has limited incentive to respond to Government concerns.

There is no single approach required by FAR for establishing the amount of an award-fee pool. However, it should be logically developed and reflect both the value of exceptional performance to the Government and the likelihood that the incentive will effectively motivate the contractor to exceptional performance. Consider the following when establishing the award-fee pool:

- Complexity of the work and the resources required for contract performance;
- Reliability of the cost estimate in relation to the complexity and duration of the contract task;
- Degree of cost responsibility and associated risk that the prospective contractor will assume as a result of a contract with an award-fee clause;
- Amount of base fee, if applicable; and
- Apply the DoD Offset Policy for Facilities Capital Cost of Money in calculating the prenegotiation base-fee amount (DFARS 215.404-73(b)(2)).

At least 40 percent of the award fee should be available for the final evaluation unless waived by the Head of the Contracting Activity (HCA). This ensures the contractor is incentivized throughout performance of the contract. This percentage can be waived, but only if the contracting officer determines that a lower percentage is appropriate, and this determination is approved by the HCA without re-delegation.

Per FAR 16.401(e)(4), the Government no longer allows unearned award fees to "rollover" from one period to another. Provisional award-fee payments, i.e., interim payments which are not a result of the evaluation at the end of an award-fee period, but those merely used to enhance

contractor cash flow, are also prohibited. (This prohibition does not apply to base-fee payments).

See DFARS Procedures, Guidance and Information (PGI) 216.405-2(4), Table 16-1, for sample Performance Evaluation Criteria and Table 16-2, for a sample Contractor Performance Evaluation Report.

DoD has generally moved away from the use of award fee contracts in favor of the preferable objective incentive arrangements. This shift has come about because of concerns that award fee contracts are limited in their ability to motivate contractors to control costs. Furthermore, there had been a number of instances where award fee earnings were inconsistent with contract outcomes. Therefore, the Department's policy is to limit use of award fee to those circumstances where we are unable to identify specific objective criteria and a subjective assessment is appropriate to motivate and reward contractors for performance outcomes.

Fixed-Price Contracts with Award-Fees

By its nature, a fixed price contract includes a significant cost control incentive. Therefore, the award-fee plan is typically written to focus the contractor's efforts on technical and schedule performance. Award-fee provisions may be used in fixed-price contracts when the Government wishes to motivate a contractor and other incentives cannot be used because contractor performance cannot be measured objectively. Such contracts shall establish a fixed price (including normal profit) for the effort. This price will be paid for satisfactory contract performance. Award fee earned (if any) will be paid in addition to that fixed price. A fixed-price contract with an award-fee may be used to motivate contractors for aspects of performance that cannot be measured objectively.

Cost-Plus-Award-Fee Contracts

A cost-plus-award-fee (CPAF) contract provides for a fee consisting of:

- A base amount (known as the "base fee") fixed at inception of the contract and the base fee percentage shall not exceed 3%; and
- An award amount (known as the "award fee pool") that the contractor may earn in whole or in part during performance and that is sufficient to provide motivation for excellence in the areas of cost, schedule, and technical performance.

Under a CPAF contract, the Government pays allowable cost, base fee, and award fee. The base fee does not vary; award-fee is determined by contractor performance. The amount of award fee to be earned is a unilateral and subjective Government evaluation decision.

CPAF contracts may be applicable for level of effort type of work when DoD seeks to motivate excellence in quality, timeliness, technical ingenuity, and cost-effective management. CPAF

may not to be used in lieu of CPFF or cost- plus incentive fee where objective measurement is feasible.

Predetermined Formula-type Incentive Contracts

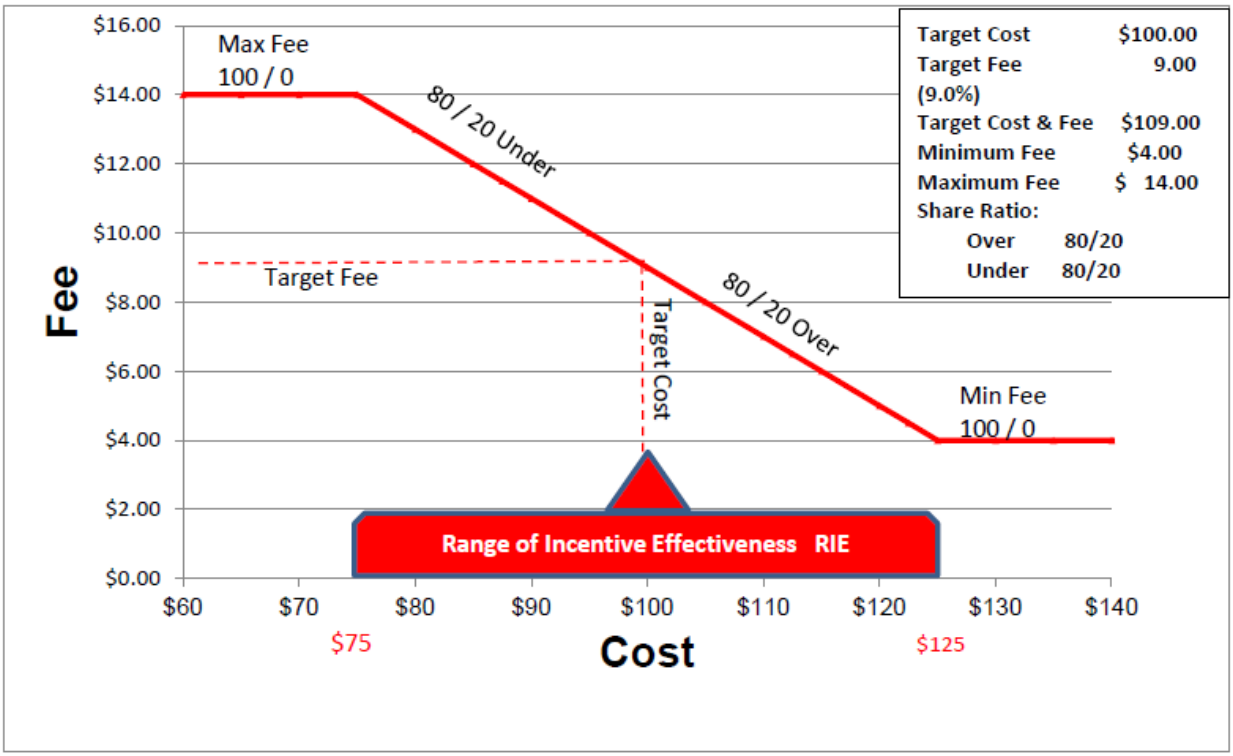
Predetermined, formula type incentive contracts include fixed-price incentive (FPI) contracts (firm or successive targets) and cost-–plus-incentive-fee contracts.

Cost-Plus-Incentive–Fee Contracts

A cost-plus-incentive-fee contract CPIF is a cost-reimbursement contract that provides for an initially negotiated fee to be adjusted later by a formula based on the relationship of total allowable costs to total target costs.

This contract type specifies a target cost, a target fee, minimum and maximum fees, and a fee adjustment formula. The formula provides, within limits, for increases in fee above target fee when total allowable costs are less than target costs, and decreases in fee below target fee when total allowable costs exceed target costs. This increase or decrease is intended to provide an incentive for the contractor to manage the contract effectively. When total allowable cost is greater than or less than the range of costs within which the fee-adjustment formula operates, the contractor is paid total allowable costs, plus the minimum or maximum fee.

Cost-Plus-Incentive-Fee Contract



In the graph on the previous page, you see the Fee Adjustment curve which plots the amount of fee the contractor will earn at any cost outcome (final actual cost). The lower the final cost is, the more fee the contractor will earn until it reaches the point at which the Maximum Fee is reached. The higher the cost is, the less fee the contractor will earn until it reaches the cost outcome at which the minimum fee is reached. Although target fee, minimum fee and maximum fee are often cited as a percentage, they are really dollar values and dollars values appear in the contract. In this case, the minimum fee is $4.00 which happens to be 4.0% of the target cost but minimum fee the contractor can earn is $4.00. It cannot be stated as "4.0% of actual cost" as that would be a "cost plus percentage of cost" contract which is prohibited. The range of incentive effectiveness is essentially the fee opportunity between maximum fee at the lowest cost and the minimum fee at the most pessimistic cost. Target fee is at the most likely cost.

A CPIF contract is appropriate for noncommercial service or development and test programs when:

- A cost-reimbursement contract is necessary;
- The parties can negotiate a target cost and a fee adjustment formula that are likely to motivate the contractor to manage effectively;
- The fee adjustment formula should provide an incentive that will be effective over the full range of reasonably foreseeable variations from target cost;
- If a high maximum fee is negotiated, the contract shall also provide for a low minimum fee that may be a zero fee or, in rare cases, a negative fee; and
- The contract may include technical performance incentives when it is highly probable that the required development of a major system is feasible and the Government has established its performance objectives, at least in general terms.

Fixed-Price Incentive Contracts

There are two forms of fixed-price incentive (FPI) contracts: firm target (FPI(F)) and successive targets (FPI(S)). Unlike an FPEPA contract, which is used to manage risk for one element of cost, FPI contracts are used to manage a range of cost uncertainty. A FPI contract is a fixed-price contract that provides for adjusting profit and establishing the final contract price by a formula based on the relationship of final negotiated total cost to total target cost. The profit adjustment is expressed as a share ratio with the Government share as the numerator and the contractor share as the denominator (e.g., 80/20) reflecting how overruns and underruns above and below the negotiated target cost will be shared.

FPI is generally appropriate for programs in the early production phase at or near the end of engineering and manufacturing development (EMD), after a program has completed critical design review, built production representative prototypes, and completed some significant fraction of developmental test. DoD has experienced relatively less significant program overruns

during the early production phase, indicating that FPI would provide a reasonable level of risk to share with industry.

At the point low rate initial production (LRIP) is negotiated, typically production prototypes have not yet been built and developmental test has not yet been accomplished. Therefore, FPI may not be appropriate for LRIP unless the program indicates a low risk to complete EMD without major design changes that would affect cost. During the early stages of a program, the Government and industry teams tend to have a degree of optimism about risk, but realism and fairness require that the Government not simply transfer a significant amount of risk to the contractor prematurely.

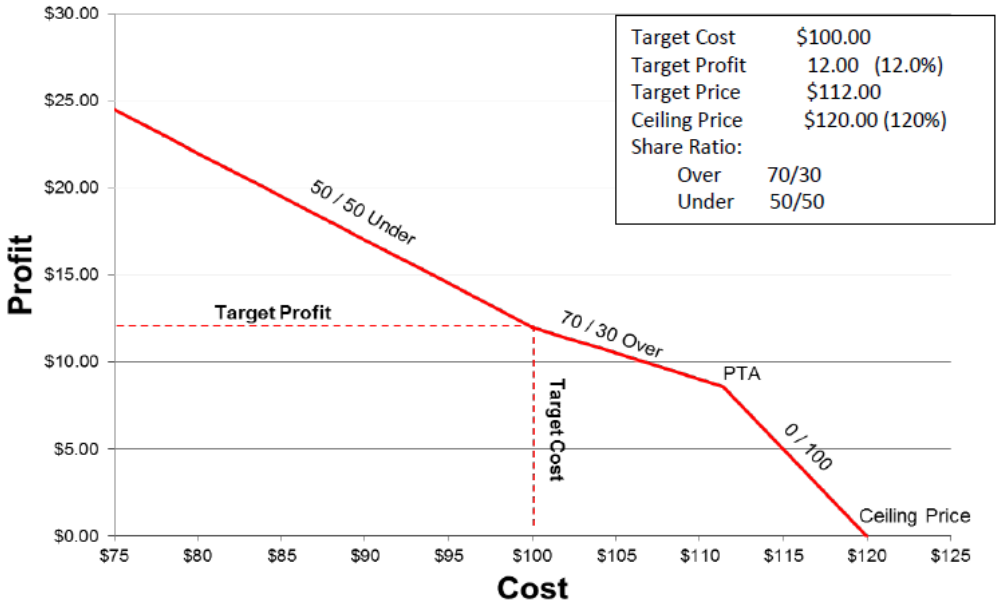
There may be instances where FPI is appropriate for mature programs in production (even if prior production lots were priced and negotiated using FFP). If for example, the Government has reason to conclude (in retrospect) that there is a poor correlation between the price negotiated and the actual cost/price outcome realized, that should be an indicator that FPI may be appropriate. Such a poor correlation may be the result of ineffective cost estimating, unreliable cost predictions at the prime or subcontractor level, incomplete audits, or diminishing manufacturing sources for some components. Also, when contract periods of performance are lengthy (e.g., certain multi-year contracts), uncertainty and risk may indicate that FPI is appropriate. The key consideration is the degree of confidence DoD has in the pricing. Where there is a known actual cost history and the necessary analysis to ensure that the price is fair and reasonable, then FFP is likely to be appropriate.

Under an FPI contract, the final price is subject to a price ceiling, negotiated at the outset. The ceiling price should account for a fair recognition of risk anticipated during performance of the contract. The Government's negotiation objective for a ceiling amount should be based on dollarized risks that the contractor can substantiate.

Fixed-Price Incentive (Firm Target) Contracts

A fixed-price incentive (firm target) (FPI(F)) contract specifies a target cost, a target profit, a price ceiling (but not a profit ceiling or floor), and a profit adjustment formula. These elements are all negotiated at the outset. The price ceiling is the maximum that may be paid to the contractor, except for any adjustment under other contract clauses. When the contractor completes performance, the parties negotiate the final cost, and the final price is established by applying the formula. When the final cost is less than the target cost, application of the formula results in a final profit greater than the target profit. Conversely, when final cost is more than target cost, application of the formula results in a final profit less than the target profit, or even a net loss. If the final negotiated cost exceeds the price ceiling, the contractor absorbs the difference as a loss. Because the profit varies inversely with the cost, this contract type provides a positive, calculable profit incentive for the contractor to control costs. The following graph illustrates the elements of an FPI(F) contract.

Fixed-Price Incentive (Firm Target) Contract



In the FPI(F) graph above, note that the share line stops where cost = ceiling price at which point the contractor earns zero profit (beyond that cost point the contractor loses money). There is no limit to how much money a contractor can lose on an FPI(F) contract. Just as in a FFP contract, the contractor is obligated to complete the effort regardless of cost. When actual cost exceeds the ceiling price, the contractor loses money. Just as in the CPIF example, although target profit and ceiling price are often cited as percentages, they are dollar values, not percentages.

Achieving a Reasonably Challenging but Achievable Target Cost

The reasonably challenging but achievable cost (RCA) approach provides a practical application in using FPI(F) contracts during sole-source negotiations.

In the past, DoD has experienced a significant variation in proposed/negotiated costs based on conservative contractor estimates compared to actual cost outcomes. The estimates factor in known risks, limiting contractor risk in the sole-source, fixed-price environment. Until such time as DoD is confident actual cost outcomes will approximate estimated costs, defined as actual outcomes within two to four percent of estimates, use of an FPI(F) contract is preferred over a FFP arrangement.

This approach starts with the premise that the Government's objective negotiation position represents a reasonably challenging, but achievable target cost. In this context, achievable means attainable with management focus on efficient and economical performance. In return, the contractor has the opportunity to achieve rewards, through operation of higher profit rates and attractive share ratios, commensurate with the risk assumed. These reasonably higher profit rates

and favorable share ratios represent the most favorable profitability profile DoD will offer during negotiations. The Government strategy is to reward the contractor for controlling cost. This should be the most favorable profitability offer from the Government made in negotiations.

The reasonably challenging, but achievable target cost should form the basis of the Government offer, and is roughly analogous to the Government's optimistic cost position. The minimum or optimistic position is realistic though optimistic. It is based on a best case scenario of contract performance based on a reasonable analysis of available information. Use of an arbitrarily low position is neither appropriate nor defensible and may be counterproductive as it undermines the credibility of the Government's position. This position must reflect a cost number the Government is confident the contractor can achieve with efficient performance. This number is the Government target cost position and should be modified only if the information and data that becomes available during negotiations changes this position. The Government should not have a reasonably challenging but achievable target cost number and a higher "objective" cost that reflects a settlement position.

If the contractor has a cost reduction initiative program in place, a reasonably challenging target cost should reflect the benefits of those initiatives. Contractors should not be rewarded for claiming to have cost reduction programs in place unless they are willing to reflect the benefits of those initiatives in the proposal.

The RCA number should only change if the factual data supports such a change. For example, if prior to negotiations a particular cost element is unsupported; it would not be unreasonable to assign zero dollars to this cost element. However, if during negotiations the contractor provides support for a higher number, the reasonably challenging but achievable number could change. The contractor would still be offered the initial deal elements reflecting more favorable share lines, a generous ceiling, and higher profit. However, if in order to settle, we have to go to a higher cost than the data justifies, that is a concession which results in a reduced profit and less favorable share ratios for the contractor. In general, think about it in these terms: as cost goes down, profit goes up; as cost goes up, profit goes down.

How to Determine Profit Amount and Underrun Share

The amount of target profit that should be considered reasonable depends upon the target cost that has been negotiated. Weighted guidelines will give you the profit dollars the contractor should earn if it achieves the target cost. However, profit cannot and should not be determined independently of the negotiated target cost. In other words, if the contractor has agreed to accept what the Government believes to be an RCA target cost, then the contractor should receive the highest target profit that the contracting officer deems fair. In addition, the contractor should be placed in a position to receive the lion's share of any contract underrun. However, as the negotiated target cost moves above what the Government believes to be reasonable but achievable, then the lower the target profit should be and the less the underrun share should be

advantageous to the contractor. The Government expect contractors to manage risk during contract performance, so allowing cost to grow above RCA should result in a lower profit.

Through careful cost and risk analysis, the Government should develop a target cost that represents RCA. When developing a profit objective based on the weighted guidelines, consider the offeror's acceptance of the increased risk in determining factors for performance and cost risk, and cost efficiency initiatives. This should not require exceptional performance on the part of the contractor. If the contractor has been performing well, continuation of that performance should be considered reasonably challenging. The contractor should be rewarded for good performance; whereas, substandard performance should never be considered challenging. If the contractor has not been performing well, a reasonably challenging position should reflect considerable improvement. Our approach for this RCA objective position should be to negotiate a relatively steep underrun share ratio that allows contractors to retain a greater percentage of any underrun. A relatively flat overrun share ratio minimizes the contractor's exposure to an overrun situation.

A "split share line" has a different share ratio on the underrun than it does on the overrun. Split share lines should be consistent with the aggressiveness of the target cost. When you consider the range of likely cost outcomes and establish the target in the middle of that range, the under- and over-share lines should be the same (could be 70/30 over and under, or 50/50 over and under as long as they are the same on either side of the target cost). When the Government sets the target cost closer to the low side of the likely outcome range, the contractor has a greater chance of experiencing an overrun than an underrun; therefore, the contractor should have a steeper share on the underrun side and a shallower share on the overrun side. This is the type of situation that the "reasonably challenging but achievable" target cost is describing. Conversely, when the target cost is closer to the high end of the cost outcome range, a split share is also warranted but in that case, the underrun share should be shallow (e.g. 80/20) and the overrun share should be steeper, (such as 30/70).

For example, let's say the Government has determined RCA to be $100. At this target cost,the contracting officer should be willing to provide the highest amount of target profit deemed reasonable, in this case, say for example $13. In addition, the underrun share could be 20/80 (i.e., the contractor earns 80 cents for every dollar below the target cost). However, if we have established a target cost that is above what we believe to be challenging but reasonably achievable, in this case $105, then the amount of profit should be reduced accordingly. In addition, the underrun sharing arrangement should become less favorable to the Contractor.

How to Determine the Ceiling Price and Overrun Share

How is the ceiling price and overrun share determined? The answer is - it depends. It depends upon two things:

1. The risk the contractor has identified that has not been accounted for in the negotiated target cost; and

2. The amount of profit the contracting officer and the program manager (PM) jointly view the contractor should earn if that risk occurs (given the target cost and the target profit).

Once the dollar amount of risk for the contract is detemrined, you can establish a ceiling price by considering what profit dollars the contractor should earn at this cost level.

The ceiling price should be a function of risk to the prime contractor. Examine the individual cost elements in determining the appropriate ceiling price. Most cost elements present risks and opportunities for the contractor (however, all elements of cost do not necessarily present equal risks or opportunities). For example, for the material or subcontracts cost elements, negotiated FFP subcontracts with vendors generally pose little risk to the prime. Risk issues may entail: late delivery, quality issues, or vendor default (highly unlikely). The indirect rate cost element should be analyzed by looking to the history to understand the variation between forecast rates to actual incurred rates. For labor hours, consider the risk that specific tasks will require more than the negotiated amount. Analyze to understand how aggressive the position is in relation to cost history. For labor rates, consider risk that actual amount paid to employees will exceed negotiated rates (generally, low risk).

For example, let's assume that the Government agreed to an RCA target cost, in this case $100,000. Let's also assume the Government also agreed to a target profit of $13,000 (13%). Let's also assume that company has identified $6,000 of risk not included in the contract target cost ($3,000 of risk because of past poor performance that the company has accepted as a challenge to avoid in future performance--controllable risk, and $3,000 of risk because of the potential need to qualify a second source because of subcontractor financial instability beyond the control of the prime--potentially uncontrollable risk).

Point of Total Assumption

The point of total assumption (PTA) is the overrun cost point at which the share line formula will cause the actual cost plus profit earned to equal the ceiling price and, as described above, it is the point at which the total amount of cost equal to risk not included in the target cost could manifest itself. Since the price paid can never exceed the ceiling price, the share line becomes 0/100 because the contractor loses a dollar of profit for every dollar of additional overrun beyond PTA. In the extreme case, PTA equals ceiling price. An incentive arrangement that results in a PTA in

excess of ceiling would be unusual and if pursued as an objective or actually negotiated, should be brought to the attention of the clearance official. High ceilings are warranted when risk is high and steep overrun share ratios are generally warranted when risk is low so if you create a situation is which the calculated PTA is higher than the ceiling, you should double-check your calculation or rethink the incentive arrangement.

The contracting officer should seek the view of the PM about what the PM believes should be the amount of profit the contractor should earn if this identified risk manifests itself (total cost $106,000--$100,000 target cost plus $6,000 risk). In the example below, the total cost ($106,000 (target cost plus risk)) would be the "point of total assumption" PTA. If the view is that the contractor should bear half of the manifested risk and earn $10,000 profit (or (9.4% -- $10,000/$106,000) at that total cost level of $106,000, you can determine what the contractor overrun share ratio should be as follows:

Contractor Overrun Share (COS) = (Tgt Profit – Profit @PTA) / (PTA – Target Cost (TC))

Or, given our example,

COS = ($13,000 - $10,000) / ($106,000 - $100,000)

COS = $3,000 / $6,000

COS = 50%

So, here the overrun share would be 50/50.

Alternatively, if the view of the PM and the contracting officer is that the contractor should earn $11,500 (or 10.8%) if the total risk manifests itself, perhaps because the nature of that risk is such that the contractor has a lesser degree of control, then the overrun share ratio would be more favorable to the contractor as follows:

COS = ($13,000 - $11,500) / ($106,000 - $100,000)

COS = $1,500 / $6,000

COS = 25%

One limitation to consider in this formula is that the profit at PTA must be within a window of values (in this example, more than $7,000). Otherwise, the equation won't solve for a meaningful contractor overrun share ratio. For example, using $7,025 as the desired profit at PTA, the contractor overrun share ratio would be 99.5%. Also, of course, you would never use a profit at PTA that is more than target profit.

Given the PTA amount, we would then be in a position to determine (solve for) the ceiling price (CP) by simple math, as follows:

$$\text{PTA} = \frac{\text{Ceiling Price} - \text{Target Price}}{\text{Gov't Overrun Share Ratio}} + \text{Target Cost}$$

In the case described above,

$$\$106{,}000 = \frac{CP - \$113{,}000}{.5} + \$100{,}000$$

$$\$6{,}000 = \frac{CP - \$113{,}000}{.5}$$

$$\$3{,}000 = CP - \$113{,}000$$

$$\$116{,}000 = CP$$

CP can also be expressed as follows: PTA cost + profit at PTA = CP

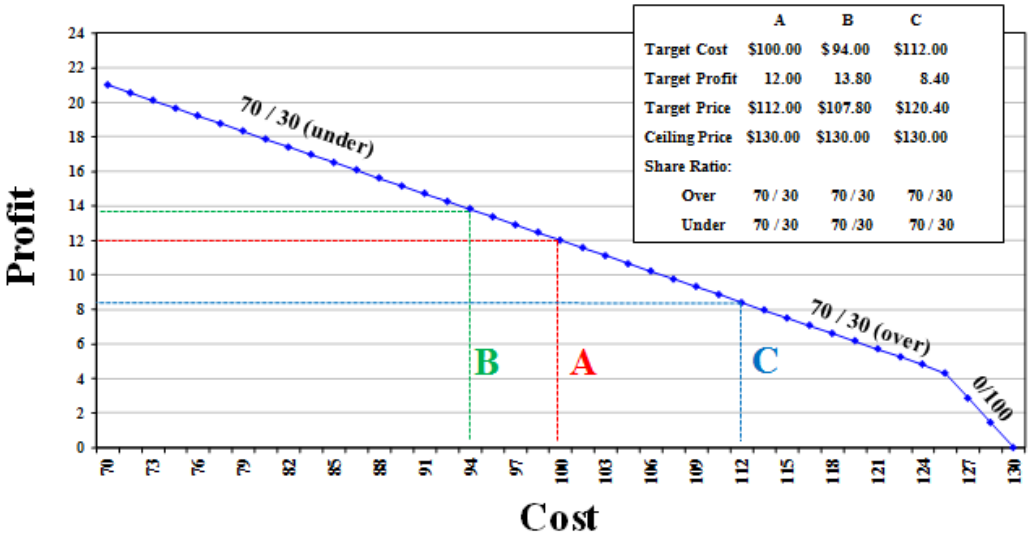
Cost Incentive Geometry

Cost incentives are not a one-size-fits-all proposition. Each element of the cost incentive structure is important. You should not focus solely on target cost & target fee / profit. The geometry (share lines, min & max fees, ceiling price) is what creates the incentive. The geometry can be a useful tool in reaching settlement. It is important to understand how the fee or profit adjustment formula works. The following example illustrates how offers that appear to be significantly different, can have exactly the same financial result regardless of what the final cost outcome is:

	A		B		C	
Target Cost	**$100.0M**		**$94.0M**		**$112.0M**	
Target Profit	**12.0M**	**12.0%**	**13.8M**	**16.7%**	**8.4M**	**7.5%**
Target Price	**$112.0M**		**$107.8M**		**$120.4M**	
Ceiling Price	**$130.0M**	**130%**	**$130.0M**	**138%**	**$130.0M**	**116%**
Share Ratio						
Over	**70 / 30**		**70 / 30**		**70 / 30**	
Under	**70 / 30**		**70 / 30**		**70 / 30**	

Regardless of which offer was chosen, the financial result to the Government and the contractor are exactly the same at every possible cost outcome because each offer was just a different point

on the exact same share line. So, if the Government chose Offer C (target cost $112M and target profit $8.4M), but the final actual cost turned out to be $100, then the contractor would earn a $12M profit, which is exactly the outcome of Offer A. Target cost – actual cost ($112M – $100M) = $12M underrun, contractor share of underrun is 30% (70/30). 30% times $12 = $3.6, which is added to target profit of $8.4M ($8.4M + $3.6M = $12M). So, the contractor would be paid actual cost ($100M) + $12M profit ($8.4M +$3.6M), which is exactly what Offer A was at target cost and target profit.

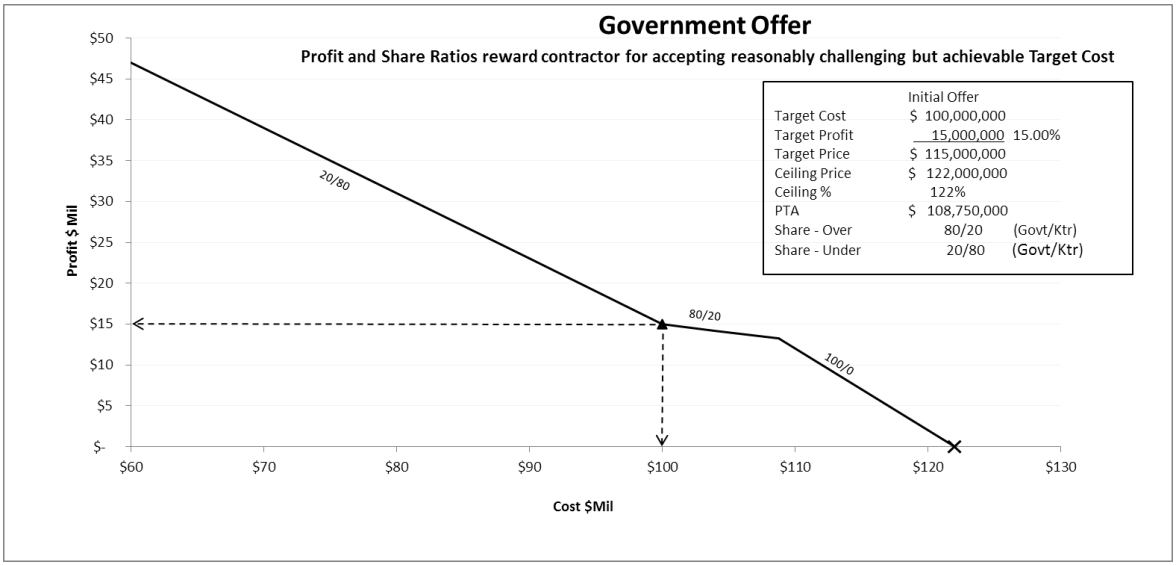


In understanding share lines, know that any point along a constant share line (same share over and under) is financially equal as long as:

- CPIF: min & max fee dollars are held constant
- FPI(F): ceiling price dollars are held constant

Example of the Reasonably Challenging but Achievable Approach

Initial Government Offer



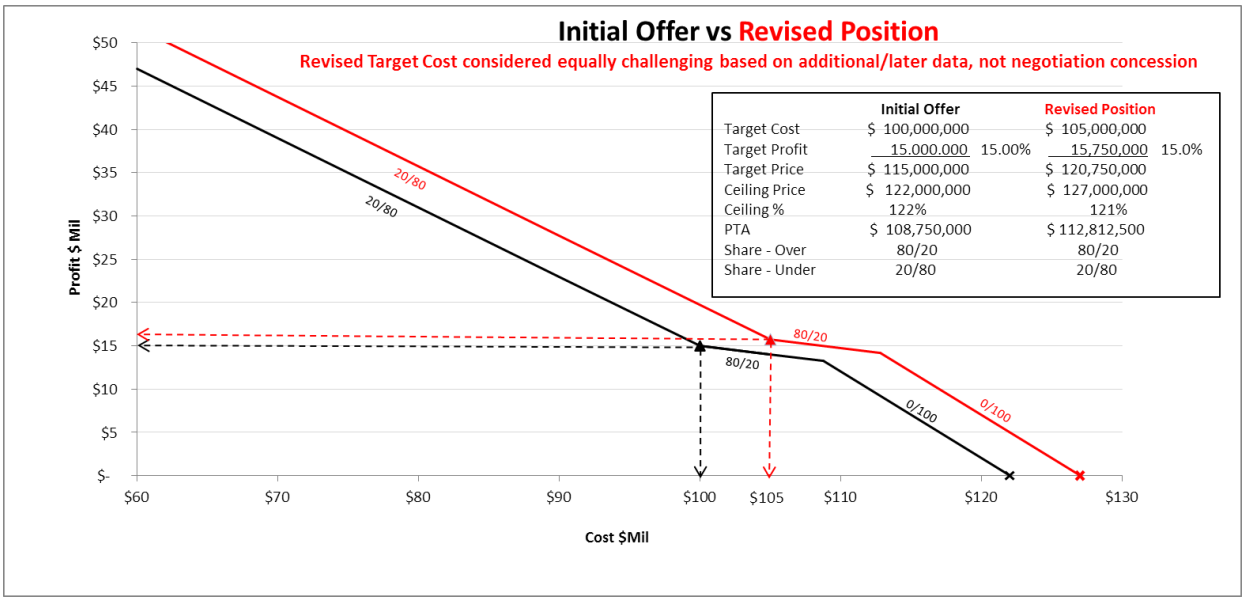
The above graph illustrates the initial Government offer under this approach. In this example, the target cost is $100M, the target profit is $15M (based on a 15% WGL profit objective), and the ceiling price is $122M (based on a 122% percentage of target cost). The underrun share ratio is 20/80, meaning the Government will benefit by retaining 20 cents of every dollar under the target cost and the contractor will increase its profit by 80 cents for every dollar under target cost. The overrun share ratio is 80/20, which means the Government assumes responsibility for 80 cents of every dollar over the target cost, while the contractor's exposure is 20 cents for every dollar. In this scenario, the contractor is rewarded both in the target profit and attractive share ratios surrounding the target cost. This is the most attractive offer the Government will make.

Let's assume the contractor accepts this challenge and experiences actual costs of performance of $90M. The contractor will increase its profit by $8M (delta of target cost of $100M and actual cost of $10M multiplied by the underrun share of 80%). The total contract price will be $113M (actual cost of $90M plus profit of $23M), for a realized profit percentage of 25.6% and the Government paying $2M less than the target price.

Revised Government Offer Based on New Information (NOT a Concession)

Often, analysis of the cost elements is based on incomplete information. If through fact-finding, the contractor provides new information, such as new facts or data, to support a higher target cost, it would be appropriate to increase the target cost and maintain the same/similar deal elements (profit percentage, share ratios, and ceiling percentage) as in the original offer. Examples of "new information" that warrant an increase in the Government's view of "reasonably challenging but achievable" cost include:

- Original Government position was based on a forward pricing rate recommendation and Defense Contract Management Agency subsequently negotiates a forward pricing rate agreement with the contractor;
- New data indicates a flattening of the labor learning curve; or
- New technical risks have become known.

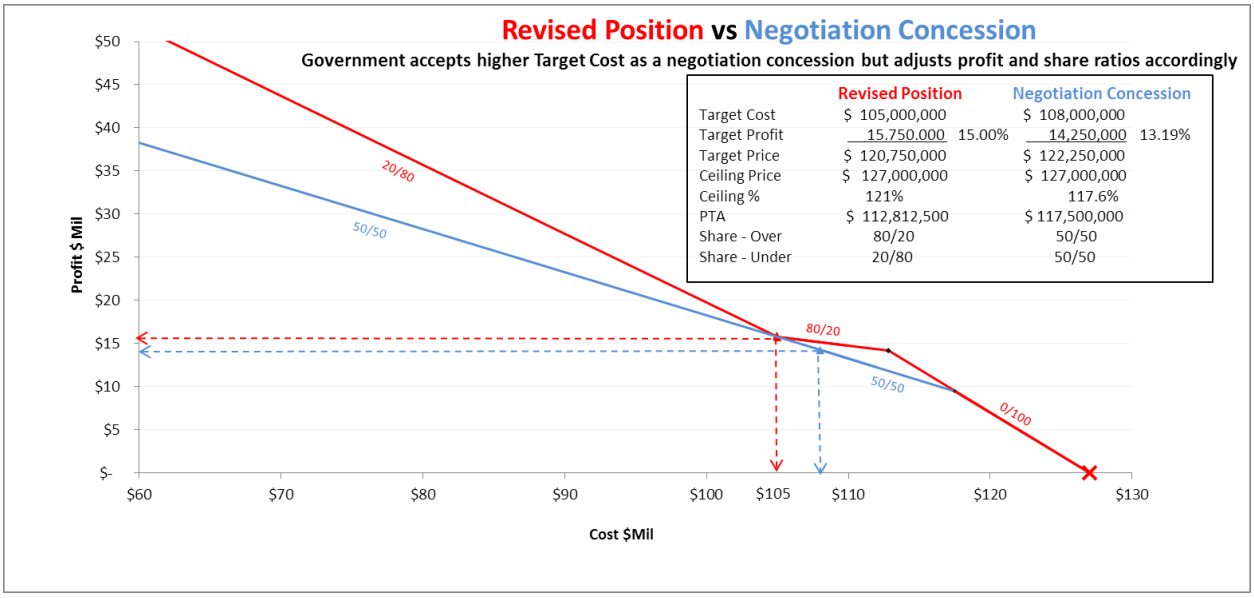


The graph above reveals a shift in the share line up and to the right illustrated by the red (upper) line which reflects the increase in the target cost from $100M to $105M. The lines are parallel since the share ratios are the same with a concurrent increase in the ceiling price. The ceiling percentage based on risk analysis is similar, at 121% or $127M. This is certainly an increase in the target cost and target profit, but is warranted by the change in the fact pattern – if the facts support a change in position, it is appropriate to do so. The Government strategy is still the same; however, additional/later data reveals that a higher cost more accurately reflects a reasonably challenging but achievable target cost. Therefore, the contractor should be rewarded with the same profit rate and share ratios. However, a contractor's refusal to move during negotiations does not constitute a change in the fact pattern.

Government Position Based on Negotiation Concession (NOT Additional Supporting Facts)

What is considered to be a "reasonably challenging, but achievable" cost position can change during negotiations based on new facts or data provided. If Government offers at target cost go above the "reasonably challenging but achievable" cost, profit and share ratios should become less favorable for the contractor. Examples of changes during negotiations that should not warrant an increase in the Government's view of "reasonably challenging but achievable" cost:

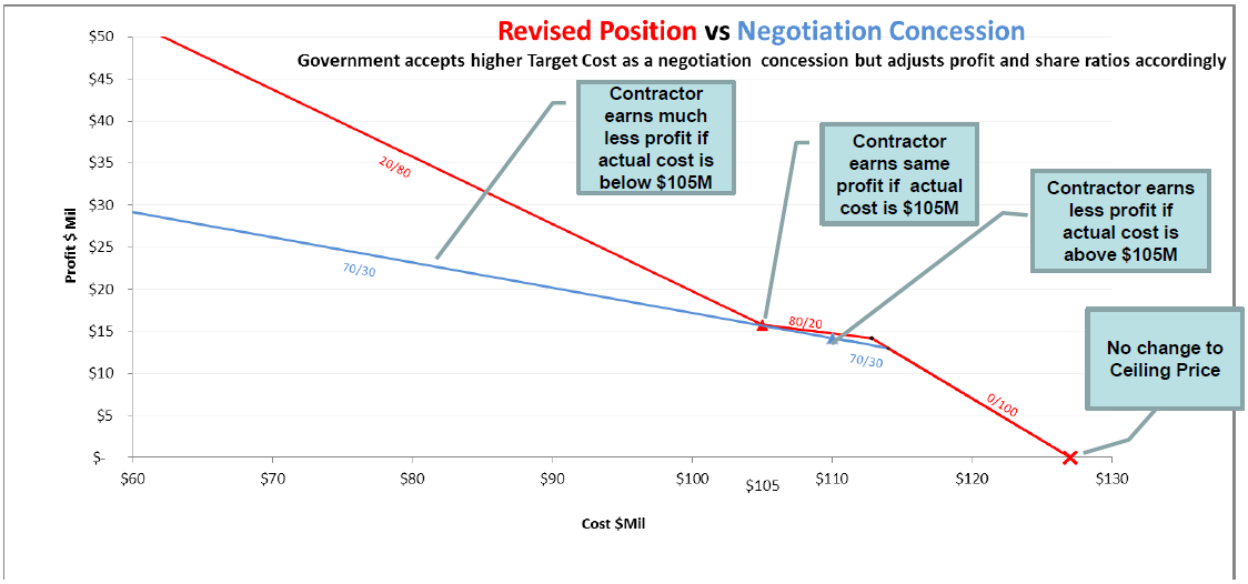
- Government moves above its position on labor hours "to settle";
- Government accepts contractor negotiated price for major subcontractor that considerably exceeds Government position for that subcontractor; or
- Contractor refuses to move, Government accepts contractor cost to preserve schedule, obligate funds, etc.



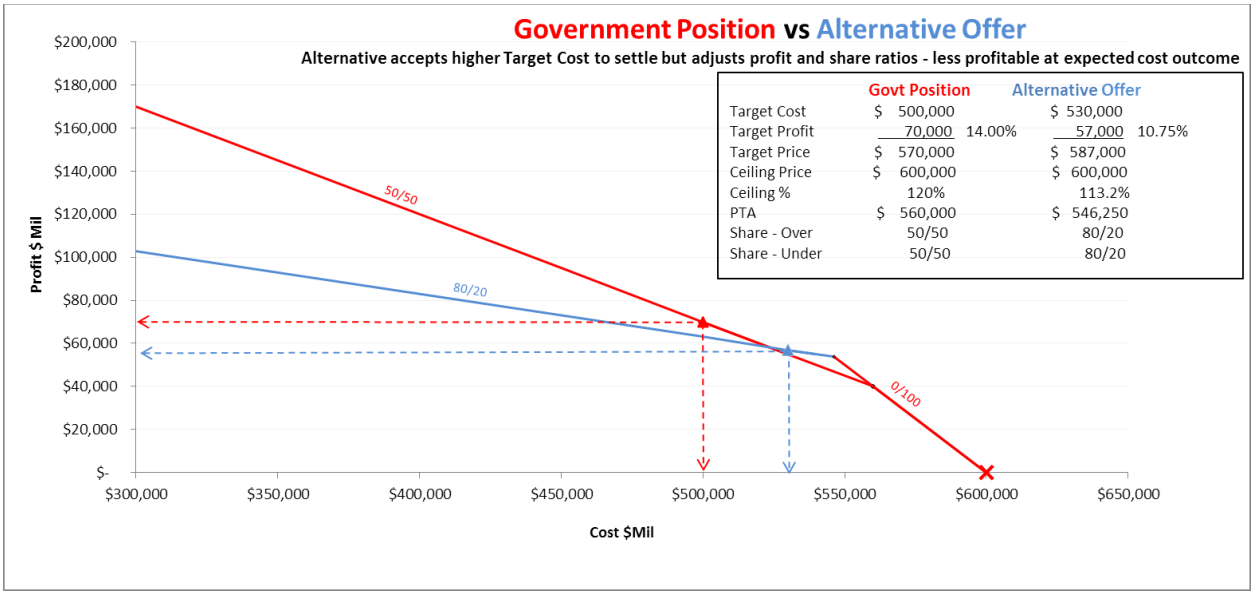
As the above graph illustrates, the Government moves off the $105M target cost as a negotiation concession to a target cost of $108M. Thus, the Government moves beyond what it considers to be the reasonably challenging, but achievable target cost. In this case, the deal elements change such that the under and over target share ratios change to 50/50, the profit rate decreases to 13.19%, and the ceiling percentage is decreased to 117.6% (ceiling dollars remain constant at $127M). Note that the profit the contractor would earn at the revised position cost outcome of $105M, is the same under either scenario (i.e., the red and blue lines intersect) but the share ratios and the profit earned on either side of that cost outcome changes.

Understanding the Strategy

In the chart below, although the ultimate price to the Government would be as low or lower at any cost outcome under the negotiation concession scenario, the Government is willing to reward the contractor with higher profits if the company is willing to accept and manage to the "challenging but achievable" cost. This is consistent with the DoD's position that if costs go up, profitability goes down and vice versa. Note that while the contractor's profit decreased under both scenarios, the profit decreased at a lesser rate under the challenging but achievable scenario.



Applying the Strategy—Alternate Approach



As the above graph illustrates, the Government was willing to offer an alternative offer at contractor's cost with less profit and a flatter share ratio that would provide the contractor with more profit than the Government offer on the overrun side but far less profit if the contractor underran. The Government was willing to do this because the Government was convinced that there was little chance of a cost overrun at the contractor's cost and a great chance of an underrun. The flatter curve (80/20 vs 50/50) results in much more of the underrun going to the Government. In this case, if the contractor really believed it could perform at the Government cost, the contractor would be better off accepting the Government position (red line) vs the alternative offer (blue line).

Fixed-Price Incentive (Successive Targets) Contracts

A fixed-price incentive (successive targets) (FPI(S)) contract specifies the following elements, all of which are negotiated at the outset:

- An initial target cost;
- An initial target profit;
- An initial profit adjustment formula to be used for establishing the firm target profit, including a ceiling and floor for the firm target profit (this formula normally provides for a lesser degree of contractor cost responsibility than would a formula for establishing final profit and price);
- The production point at which the firm target cost and firm target profit will be negotiated (usually before delivery or shop completion of the first item);

- A ceiling price that is the maximum that may be paid to the contractor, except for any adjustment under other contract clauses providing for equitable adjustment or other revision of the contract price under stated circumstances; and
- The contracting officer shall specify in the contract schedule the initial target cost, initial target profit, and initial target price for each item subject to incentive price revision.

When the production point specified in the contract is reached, the parties negotiate the firm target cost, giving consideration to cost experience under the contract and other pertinent factors. The firm target profit is established by the formula. At this point, the parties have two alternatives, as follows:

- They may negotiate a firm-fixed price, using the firm target cost plus the firm target profit as a guide.
- If negotiation of a firm-fixed price is inappropriate, they may negotiate a formula for establishing the final price using the firm target cost and firm target profit. The final cost is then negotiated at completion, and the final profit is established by formula, as under the FPI(F) contract.

Situations for Use of FPI(S) Contracts

An FPI(S) contract is appropriate when:

- Available cost or pricing information is not sufficient to permit the negotiation of a realistic firm target cost and profit before award;
- Sufficient information is available to permit negotiation of initial targets; and
- There is reasonable assurance that additional reliable information will be available at an early point in the contract performance so as to permit negotiation of either a firm-fixed price or firm targets and a formula for establishing final profit and price that will provide a fair and reasonable incentive. This additional information is not limited to experience under the contract, itself, but may be drawn from other contracts for the same or similar items.

An FPI(S) contract may be used only when:

- The contractor's accounting system is adequate for providing data for negotiating firm targets and a realistic profit adjustment formula, as well as later negotiation of final costs; and
- Cost or pricing information adequate for establishing a reasonable firm target cost is reasonably expected to be available at an early point in contract performance.

Appropriateness of Firm-Fixed-Price or Fixed-Price-Incentive Contracts for Development Efforts

For major programs in development, FFP or FPI may not be appropriate. DoD has determined that fixed price development contracts tend to create situations where neither the Government nor the contractor has the flexibility needed to make adjustments as they learn more about what is feasible and affordable, as well as what needs to be done to achieve a design that meets requirements during a product's design and testing phases. Most sophisticated weapons system development programs deal with maturing designs and challenging integration problems. As a result, the Government often will and should provide technical guidance and make tradeoff decisions during development. This technical guidance is inconsistent with what should be a Government "hands off" policy for FFP or FPI contracts.

However, when the following conditions exist, it may be appropriate to consider a FPI contract, or even a FFP contract. for an EMD program:

- Requirements are firm. This typically occurs when cost vs. performance trades are essentially complete, there is a very clear understanding of what the Department wants the contractor to build, and there is confidence that the conditions exist to permit the design of a product that meets the user's needs and the user will be able to afford and is committed to acquiring.

- Technical risk is low. This is evident when the design content is established and the components are mature technologies, there are no significant unresolved design issues, no major integration risk, the external interfaces are well defined, and no serious risk exists of unknowns surfacing in developmental testing and causing major redesign.

- Qualified suppliers. This occurs when firms that have experience with the particular kind of product and can be expected to bid rationally and perform to plan.

- Financial capacity to absorb overruns. Given the fact that overruns will occur despite everyone's best efforts, the Department needs to employ responsible contractors that have the capacity to continue and deliver the product despite potential overruns that may not have been foreseeable.

- Motivation to continue. A business case must be provided via a prospective reasonable return from production that will motivate suppliers to continue performance in the event of an unanticipated overrun. It is unrealistic to believe contractors will simply accept large losses. They will not.

Time and Materials/Labor Hour Contracts

Time-and-materials (T&M) and labor-hour contracts both have a fixed fully-burdened labor rate, but only include an estimated number of hours needed to complete a task. Both generally resemble a cost reimbursement contract, as neither requires the completion of the task within the agreed to maximum price and both contract types pay the contractor for actual hours worked. In practice there is no cost incentive for either contract type.

T&M is the least preferable contract type. Where requirements cannot be stated in performance-based terms and must be articulated as term or level-of-effort, then CPFF or CPIF should be used rather than T&M so long as the contractor has an adequate accounting system (and other requirements for cost reimbursable contracts are satisfied).

Summary

Selecting the appropriate contract type for a given effort is primarily a function of allocating a reasonable degree of risk to both parties (Government and contractor). This guidance is provided to illustrate the various factors that should be taken into account when selecting and negotiating a contract type.

The following chart summarizes the various points of consideration. This chart may also be found at: https://acc.dau.mil/CommunityBrowser.aspx?id=214513

	Firm-Fixed-Price (FFP)	Fixed-Price Economic Price Adjustment (FPEPA)	Fixed-Price Incentive Firm Target (FPIF)	Fixed-Price Award-Fee (FPAF)	Fixed-Price Prospective Price Redetermination (FP^3R)	Cost-Plus-Incentive-Fee (CPIF)	Cost-Plus-Award-Fee (CPAF)	Cost-Plus-Fixed-Fee (CPFF)	Cost or Cost-Sharing (C or CS)	Time & Materials (T&M)
Principal Risk to be Mitigated	None. Thus, the contractor assumes all cost risk.	Unstable market prices for labor or material over the life of the contract.	Moderately uncertain contract labor or material requirements.	Risk that the user will not be fully satisfied because of judgmental acceptance criteria.	Costs of performance after the first year because they cannot be estimated with confidence.	Highly uncertain and speculative labor hours, labor mix, and/or material requirements (and other things) necessary to perform the contract. The Government assumes the risks inherent in the contract, benefiting if the actual cost is lower than the expected cost, or losing if the work cannot be completed within the expected cost of performance.				
Use When . . .	The requirement is well-defined. •Contractors are experienced in meeting it. •Market conditions are stable. •Financial risks are otherwise insignificant.	The market prices at risk are severable and significant. The risk stems from industry-wide contingencies beyond the contractor's control. The dollars at risk outweigh the administrative burdens of an FPEPA.	A ceiling price can be established that covers the most probable risks inherent in the nature of the work. The proposed profit sharing formula would motivate the contractor to control costs and to meet other objectives.	Judgmental standards can be fairly applied by the fee determining official. The potential fee is large enough to both: •Provide a meaningful incentive. [1] •Justify related administrative burdens.	The Government needs a firm commitment from the contractor to deliver the supplies or services during subsequent years. The dollars at risk outweigh the administrative burdens of an FPRP.	An objective relationship can be established between the fee and such measures of performance as actual costs, delivery dates, performance benchmarks, and the like.	Objective incentive targets are not feasible for critical aspects of performance. Judgmental standards can be fairly applied. Potential fee would provide a meaningful incentive.	Relating fee to performance (e.g., to actual costs) would be unworkable or of marginal utility.	The contractor expects substantial compensating benefits for absorbing part of the costs and/or foregoing fee or the vendor is a non-profit entity.	No other type of contract is suitable (e.g., because costs are too low to justify an audit of the contractor's indirect expenses).
Elements	A firm-fixed-price for each line item or one or more groupings of line items.	•A fixed-price, ceiling on upward adjustment, and a formula for adjusting the price up or down based on: •Established prices. •Actual labor or material costs. •Labor or material indices.	•Ceiling price •Target cost •Target profit •Delivery, quality, or other performance targets (optional) •Profit sharing formula •120 % ceiling and 50/50 share are points of departure	•Fixed-price. •Award amount •Award fee evaluation criteria and procedures for measuring performance against the criteria	•Fixed-price for the first period. •Proposed subsequent periods (at least 12 months apart). •Timetable for pricing the next period(s).	•Target cost •A minimum, maximum, and target fee •A formula for adjusting fee based on actual costs and/or performance •Performance targets (optional)	•Target cost •Base amount, if applicable, and an award amount •Award fee evaluation criteria and procedures for measuring performance against the criteria	•Target cost •Fixed fee	•Target cost •No fee •If CS, an agreement on the Government's share of the cost.	•Ceiling price •A per-hour labor rate that also covers overhead and profit •Provisions for reimbursing direct material costs
Contractor is Obliged to:	Provide an acceptable deliverable at the time, place and price specified in the contract.	Provide an acceptable deliverable at the time and place specified in the contract at the adjusted price.	Provide an acceptable deliverable at the time and place specified in the contract at or below the ceiling price.	Perform at the time, place, and the price fixed in the contract.	Provide acceptable deliverables at the time and place specified in the contract at the price established for each period.	Make a good faith effort to meet the Government's needs within the estimated cost in the Contract, Part I the Schedule, Section B Supplies or services and prices/costs.				Make a good faith effort to meet the Government's needs within the ceiling price.
Contractor Incentive *(other than maximizing goodwill)* [1]	Generally realizes an additional dollar of profit for every dollar that costs are reduced.	Generally realizes an additional dollar of profit for every dollar that costs are reduced.	Realizes profit on cost by completing work below the ceiling price. May earn higher profit by incurring costs below the target cost or by meeting objective performance targets.	Generally realizes an additional dollar of profit for every dollar that costs are reduced; earns an additional fee for satisfying the performance standards.	For the period of performance, realizes an additional dollar of profit for every dollar that costs are reduced.	Realizes a higher fee by completing the work at a lower cost and/or by meeting other objective performance targets.	Realizes a higher fee by meeting judgmental performance standards.	Realizes a higher rate of return (i.e., fee divided by total cost) as total cost decreases.	If CS, shares in the cost of providing a deliverable of mutual benefit.	
Typical Application	Commercial supplies and services.	Long-term contracts for commercial supplies during a period of high inflation.	Production of a major system based on a prototype.	Performance-based contracts.	Long-term production of spare parts for a major system.	Research and development of the prototype for a major system.	Large scale research study.	Research study.	Joint research with educational institutions.	Emergency repairs to heating plants and aircraft engines.
Principal Limitations in FAR/DFARS Parts 16, 32, 35, and 52 [2]	Generally NOT appropriate for R&D.	Must be justified.	Must be justified. Must be negotiated. Contractor must have an adequate accounting system. Cost data must support targets.	Must be negotiated.	MUST be negotiated. Contractor must have an adequate accounting system that supports the pricing periods. Prompt redeterminations.	The contractor must have an adequate accounting system. The Government must exercise surveillance during performance to ensure use of efficient methods and cost controls. Must be negotiated. Must be justified. Statutory and regulatory limits on the fees that may be negotiated. Must include the applicable Limitation of Cost clause at FAR 52.232-20 through 23.				D&F required (w/ HCA if over 3 years). Government MUST exercise appropriate surveillance to ensure efficient performance. Document any ceiling increases.
Variants	Firm-Fixed-Price Level-of-Effort.		Successive Targets (FPIS)		Retroactive Redetermination			Completion or Term.		Labor Hour (LH)