

UNIT 37: COST ANALYSIS

October 2003

Duty	Establish prenegotiation positions related to cost reasonableness and cost realism by analyzing cost and technical data from the offeror and other sources.
Conditions	Given acquisition planning, a solicitation or other requirement definition, at least one offer, any cost or pricing information submitted by the offeror, a technical evaluation, and any related audit report(s).
Overall Standard	Review and evaluate the separate elements of cost and profit in an offeror's or contractor's proposal (including cost or pricing data or information other than cost or pricing data) and the application of judgment to determine how well the proposed costs represent what the cost of the contract should be, assuming reasonable economy and efficiency. Establish fair and reasonable positions for each element of cost, for profit, and for other cost-related issues (e.g. cost realism).

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Policies

<i>FAR</i>	<i>Agency Suppl.</i>	<i>Subject</i>
2.101		Definitions, including “cost or pricing data”, “information other than cost or pricing data”, “cost realism”, “design to cost”, “forward pricing rate agreement”, “forward pricing rate recommendation”, “indirect cost”, “indirect cost rate”, and “unallowable cost”.
3.501		Buying-in.
15.305(a)(1)		Cost or price evaluation.
15.401		Definitions of “price” and “subcontract”.
15.404-1(a)		Requirement for cost analysis.
15.404-1(c)		Cost analysis.
15.404-1(d)		Cost realism analysis.
15.404-1(f)		Unit prices.
15.404-2		Information to support proposal analysis.
15.404-3		Subcontract pricing considerations.
15.404-4		Profit.
15.405		Price negotiation.
15.406-1		Prenegotiation objectives.
15.406-3		Documenting the negotiation.
15.407-2		Make or buy programs.
15.407-3		Forward pricing rate agreements.
15.407-4		Should cost review.
15.407-5		Estimating systems.
15.404-1(f)		Unit prices—integrity thereof.
15.408		FAR Table 15-2 Solicitation Provisions & Contract Clauses
22.101-2		Contract pricing and administration.
22.103-3		Procedures relating to overtime and shift premiums.
22.1103		Policy, procedures, and solicitation provision regarding fair compensation of professional employees.
27.204		Reporting royalties – anticipated or paid, including evaluation of anticipated royalty costs.
29		Taxes.
30		Cost accounting standards.
31		Contract cost principles and procedures.
35.008(e)		Cost or price analysis as a basis for evaluating an offeror's understanding of the project, perception of risks, and ability to organize and perform the work.
37.115		Uncompensated overtime.
42.704		Billing rates.
46.707		Pricing aspects of fixed-price incentive contract warranties.

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<i>FAR</i>	<i>Agency Suppl.</i>	<i>Subject</i>
47.104-3		Applicability of Section 10721 transportation rates to contractor shipments. Cost reimbursement contracts.
52.215-12		Subcontractor cost or pricing data.
52.215-14		Integrity of unit prices.
52.215-16		Facilities capital cost of money.
52.215-17		Waiver of facilities capital cost of money.
52.215-20		Requirements for cost or pricing data or information other than cost or pricing data.
52.222-46		Evaluation of compensation for professional employees.
52.227-6		Royalty information.
52.227-7		Patents – notice of Government licensee.
52.227-9		Refund of royalties.
52.229-1 thru 229-10		Taxes.
52.237-10		Identification of uncompensated overtime.
App B		Cost accounting standards.

Other KSAs

1. Knowledge of quantitative techniques (e.g., sampling, index numbers, improvement curves, moving averages, multiple regression, etc.) for preparing and analyzing cost estimates.
2. Knowledge of the different types of cost and their relationship and contribution to bottom line prices.
3. Knowledge of different methods for establishing indirect (e.g., overhead and G&A) cost rates.
4. Knowledge of agency structured (e.g., weighted guidelines) methods used to analyze profit.
5. Knowledge of basic principles and theory of accounting and cost accounting, including Generally Accepted Accounting Principles (GAAP).
6. Ability to communicate with technical and audit personnel concerning estimates or analyses prepared to support cost analysis.
7. Ability to exercise the attention to detail required to identify information relevant to cost analysis.
8. Ability to gather, organize, and retain the information required for cost analysis.
9. Ability to communicate orally and in writing about cost analysis issues.

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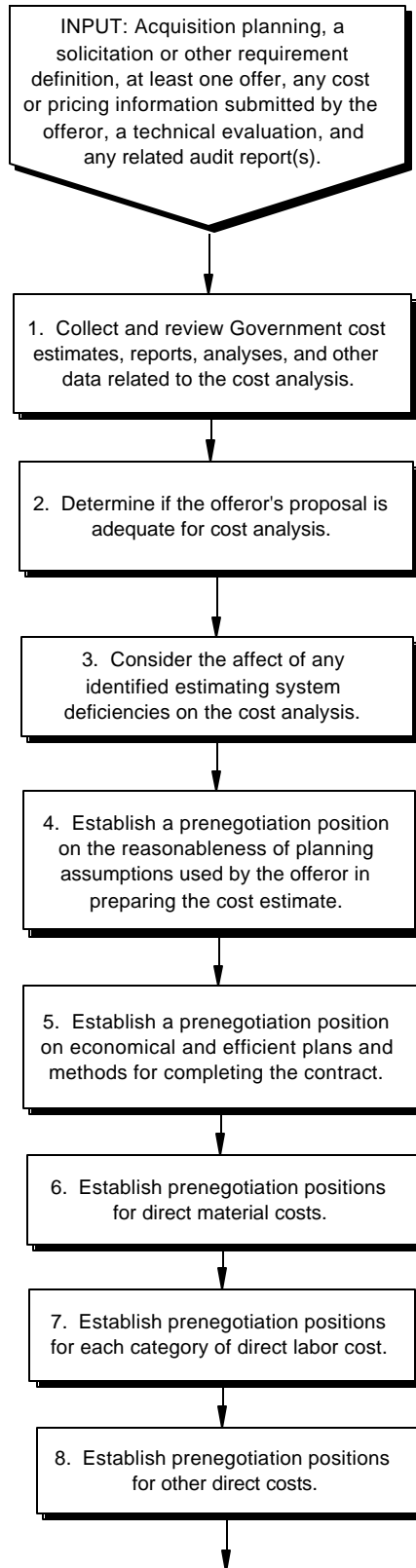
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10. Ability to relate to both Government and offeror concerns in the cost analysis process.
11. Ability to use arithmetic in cost analysis calculations.
12. Ability to apply math reasoning to the choice of appropriate cost analysis techniques.
13. Ability to appropriately consider price analysis in making business decisions.

Other Policies and References (Annotate As Necessary):

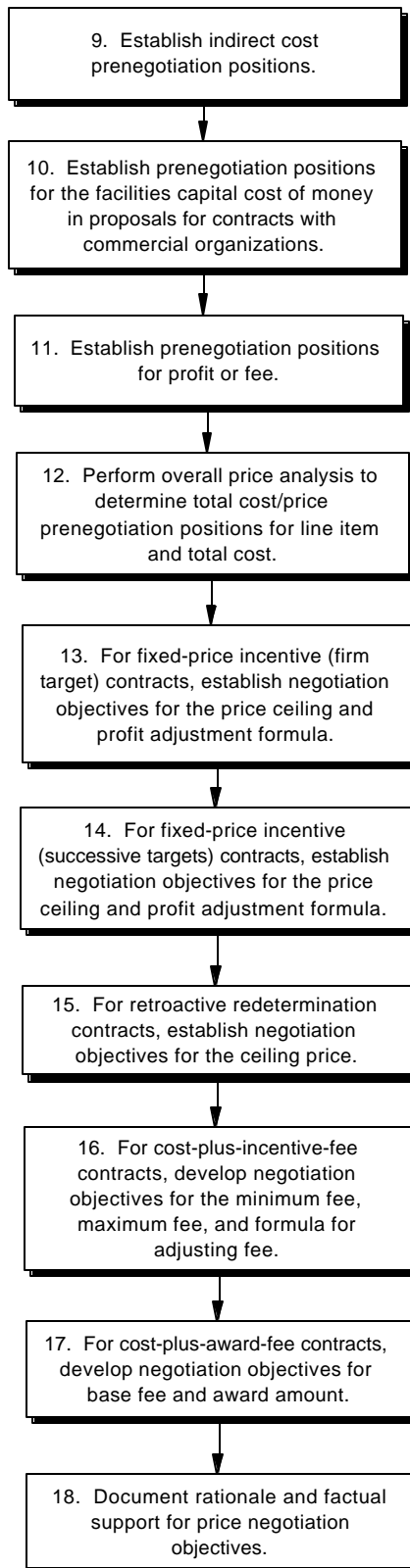
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Tasks	Related Standards
<p>1. Collect and review Government cost estimates, reports, analyses, and other data related to the cost analysis.</p>	<p>Identify and collect all relevant data bearing on each major element of cost, such as:</p> <ul style="list-style-type: none"> • Historical data, including actual costs (if any) previously incurred by the same contractor performing similar work. • Data from previous estimates from the offeror or other offerors for the same or similar items. • Technical evaluation reports; • Any applicable forward pricing rate agreements; • Any applicable forward pricing rate recommendations; • Audit reports, including any audit of contractor indirect cost rates within the last 12 months (if any); and • Any reports from Government monitoring of actual contract costs for similar work.
<p>2. Determine if the offeror's proposal is adequate for cost analysis.</p>	<p>To be adequate for cost analysis, the proposal must comply with all solicitation requirements (e.g., FAR Table 15-2) for the cost proposal that are of consequence to the cost estimate.</p>
<p>3. Consider the affect of any identified estimating system deficiencies on the cost analysis.</p>	<p>When appropriate, cognizant audit activities establish and manage regular programs for reviewing a contractor's estimating system or method, in order to reduce the scope of reviews to be performed on individual proposals, expedite the negotiation process, and increase the reliability of proposals. The results are documented in survey reports.</p> <p>Consider significant deficiencies not corrected by the contractor in any subsequent proposal analysis and negotiation. In particular, consider how the deficiency likely affects the current analysis.</p>

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Tasks	Related Standards
<p>4. Establish a prenegotiation position on the reasonableness of planning assumptions used by the offeror in preparing the cost estimate.</p>	<p>Determine reasonableness by:</p> <ul style="list-style-type: none"> • Identifying planning assumptions identified in preparing the cost estimate, such as: <ul style="list-style-type: none"> - Potential problems in retooling a production line to meet new Government requirements; - Potential technical problems in writing and testing new software; - Potential strikes; - Potential shortages of labor or materials; or - Inflation. • Evaluating the reasonableness of each assumption identified. For example, is inflation at a 10 percent rate reasonable? • Considering how contract terms and conditions affect the assumption. For example, it would be unreasonable to include a cost to cover projected inflation when the contract already has a clause for an inflation adjustment.
<p>5. Establish a prenegotiation position on economical and efficient plans and methods for completing the contract.</p>	<p>With technical personnel:</p> <ul style="list-style-type: none"> • Focus on significant cost drivers; • Identify uneconomical or inefficient plans, such as those related to: <ul style="list-style-type: none"> - Tasks and subtasks; - Methods; - Facilities; - Equipment; - Hardware and software; - Management and operating systems; and - Make-or-buy program; and • Prepare a prenegotiation position using established best practices.

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Tasks

Related Standards

<p>6. Establish prenegotiation positions for direct material costs.</p>	<p>Give special attention to any direct material concerns identified during preliminary review of the material mix.</p> <p>For round table or comparison estimates:</p> <ul style="list-style-type: none">• Determine whether the use of summary cost estimates is appropriate for the estimating situation.• Determine whether the estimate is reasonable.• Develop and document your prenegotiation position on direct material cost. <p>For detailed quantity estimates:</p> <ul style="list-style-type: none">• Select a sampling strategy for analysis.• Determine the reasonableness of the base estimate of direct material quantities required to complete the contract.• Determine the reasonableness of any adjustments to the base estimate of direct material quantities required to complete the contract.• Develop and document your prenegotiation position on direct material quantities required to complete the contract. <p>For detailed unit cost estimates:</p> <ul style="list-style-type: none">• Determine if the offeror used an appropriate base for estimating unit material costs.• Determine if the estimate is reasonable.• Consider special requirements for interorganizational transfers.• Develop and document your prenegotiation position on unit costs for direct materials.
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Tasks	Related Standards
<p>7. Establish prenegotiation positions for each category of direct labor cost.</p>	<p>Give special attention to any direct labor-hour concerns identified during your preliminary review of direct labor cost estimates.</p> <p>For labor-hour estimates:</p> <ul style="list-style-type: none"> • Determine whether the estimating method is appropriate for the estimating situation. • Determine whether the estimating method was properly applied. <p>For labor rate estimates:</p> <ul style="list-style-type: none"> • Honor any applicable forward pricing rate agreement or forward pricing rate recommendation; • If no forward pricing rate agreement or forward pricing rate recommendation applies estimate a reasonable rate, considering: <ul style="list-style-type: none"> - Government labor-rate requirements, (e.g., wage determinations); - Skill mix of labor effort; - Time period of labor effort; and - Company-unique labor factors, including overtime and shift premium requirements.
<p>8. Establish prenegotiation positions for other direct costs.</p>	<p>When establishing an other direct cost objective:</p> <ul style="list-style-type: none"> • Identify any proposed other direct cost that apparently should be classified as an indirect cost. • Identify any proposed other direct cost that appears to duplicate another proposed direct cost. • Identify any proposed other direct cost that does not appear reasonable. • Identify any proposed other direct cost that merits special attention because of high value or other reasons. • Assure that concerns about other direct cost estimates are well documented.

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Tasks	Related Standards
<p>9. Establish indirect cost prenegotiation positions.</p>	<p>For each indirect cost:</p> <ul style="list-style-type: none"> • Honor any applicable forward pricing rate agreement or forward pricing rate recommendation; • If no forward pricing rate agreement or forward pricing rate recommendation applies estimate a reasonable rate, considering: <ul style="list-style-type: none"> - Any apparent rate inconsistencies over the indirect cost allocation cycle; - Any apparent weaknesses in the rate estimating process for each rate period: <ul style="list-style-type: none"> ? Estimate sales volume; ? Estimate indirect cost allocation base; ? Estimate indirect cost pools; and ? Estimate indirect cost rate; • Assure that each rate is applied to the appropriate base; and • Correctly apply the objective rate to the appropriate rate base in the objective to establish each indirect cost objective.
<p>10. Establish prenegotiation positions for the facilities capital cost of money in proposals for contracts with commercial organizations.</p>	<p>Do not prepare a facilities capital cost of money (FCCOM) objective if the offeror waived FCCOM.</p> <p>For each FCCOM estimate:</p> <ul style="list-style-type: none"> • Honor any applicable FCCOM forward pricing rate agreement or forward pricing rate recommendation; • If no forward pricing rate agreement or forward pricing rate recommendation applies estimate a reasonable rate; • Assure that each rate is applied to the appropriate base; and • Correctly apply the objective rate to the appropriate rate base in the objective to establish each indirect cost objective.

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Tasks	Related Standards
<p>11. Establish prenegotiation positions for profit or fee.</p>	<p>Establish positions that allow the offeror an opportunity to attain financial rewards sufficient to:</p> <ul style="list-style-type: none"> • Stimulate efficient contract performance; • Attract the best capabilities of qualified large and small business concerns to Government contracts; and • Maintain a viable industrial base to meet public needs. <p>Use the appropriate structured approach (e.g., weighted guidelines) for profit/fee analysis unless the acquisition is exempt. If the acquisition is exempt, consider the FAR principles for profit/fee analysis in establishing an objective.</p> <p>For cost-plus-fixed-fee contracts, fee objectives must not exceed statutory limitations:</p> <ul style="list-style-type: none"> • 15 percent for experimental, developmental, or research work; • 6 percent of the estimated cost of construction for architect-engineer services for public works or utilities; or • 10% for other contracts.
<p>12. Perform overall price analysis to determine total cost/price prenegotiation positions for line item and total cost.</p>	<p>The total price objective should be the:</p> <ul style="list-style-type: none"> • Fixed price for a firm fixed-price, firm fixed-price level of effort term, or fixed-price award fee contract; • Target price for a fixed-price incentive contract or cost-plus-fixed-fee; • Estimated cost plus fixed fee for a cost-plus-fixed-fee contract; • Estimated cost plus base fee for a cost-plus-award-fee contract; or • Ceiling price for a labor-hour or time-and-materials contract. <p>Other price positions (e.g., minimum and maximum prices) should consider the uncertainties involved in prospective contract pricing.</p>

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Related Standards

<p>13. For fixed-price incentive (firm target) contracts, establish negotiation objectives for the price ceiling and profit adjustment formula.</p>	<p>In addition to a target cost, target profit, and target price, a fixed-price incentive (successive targets) contract must include:</p> <ul style="list-style-type: none">• An initial profit adjustment formula (sharing arrangement) that provides a fair and reasonable incentive; and• An initial ceiling price that provides for the contractor to assume an appropriate share of the risk. <p>The profit adjustment formula and ceiling price should reflect the risk involved and the share of that risk assumed by the contractor.</p> <ul style="list-style-type: none">• The profit adjustment formula must provide an incentive for the contractor to reduce cost for increased profit by requiring the contractor to share costs over target and benefit from a share of cost under target. The contract may also provide for other incentives (e.g., a schedule incentive).• The ceiling price is the maximum amount that the Government is required to pay under the contract unless there are modifications that increase the ceiling as part of an equitable adjustment.
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Related Standards

<p>14. For fixed-price incentive (successive targets) contracts, establish negotiation objectives for the price ceiling and profit adjustment formula.</p>	<p>In addition to a target cost, target profit, and target price, a fixed-price incentive (firm target) contract must include:</p> <ul style="list-style-type: none"> • 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. <p>The profit adjustment formula and ceiling price should reflect the risk involved and the share of that risk assumed by the contractor.</p>
<p>15. For retroactive redetermination contracts, establish negotiation objectives for the ceiling price.</p>	<p>The ceiling price must reflect a reasonable sharing of risk by the contractor.</p> <p>Once established in a contract, the ceiling price may be adjusted only if required by the operation of contract clauses providing for equitable adjustment or other revision of the contract price under stated circumstances.</p>

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Tasks	Related Standards
<p>16. For cost-plus-incentive-fee contracts, develop negotiation objectives for the minimum fee, maximum fee, and fee adjustment formula.</p>	<p>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.</p>
<p>17. For cost-plus-award-fee contracts, develop negotiation objectives for base fee and award amount.</p>	<p>A cost-plus-award-fee contract must provide for a fee consisting of two elements.</p> <ul style="list-style-type: none"> • A base amount is fixed at inception of the contract. In general, this element of fee should be reasonable reward for acceptable contract performance. • An award amount is identified that the contractor may earn in whole or in part during performance and that is sufficient to provide motivation for excellence in such areas as quality, timeliness, technical ingenuity, and cost-effective management. <ul style="list-style-type: none"> - The amount of the award fee to be paid is determined by the Government's judgmental evaluation of the contractor's performance in terms of the criteria stated in the contract. - The Government's evaluation and the methodology for determining the award fee are unilateral decisions made solely at the discretion of the Government.
<p>18. Document rationale and factual support for price negotiation objectives.</p>	<p>Document cost analysis as part of overall offer analysis and negotiation (e.g., in the price negotiation memorandum (PNM)). Cost analysis documentation must include:</p> <ul style="list-style-type: none"> • A summary of the contractor's proposal; • Any field pricing assistance recommendations, including the reasons for any pertinent variances from them; • The Government's negotiation objective; and • The source and type of data used to support the cost analysis.