Chapter 5 : CONTRACT PRICING

Introduction

Contract Pricing Defined

The objective of purchasing is to obtain goods or services at fair and reasonable prices. "Contract pricing" is the term commonly used to describe the process for analyzing prices and/or costs to determine whether the price of the goods and services are fair and reasonable. The method of contract pricing differs depending on the nature of the service and the availability of competition. The discussion in this section refers generally to commercial contract pricing principles. Cost analysis of grant contracts is somewhat different, and resembles more closely cost analysis in "cost reimbursement" contracts, where analysis of specific cost elements (not an overall price) is most important. This discussion will first cover "price analysis," most relevant to firm, fixed price contracts, and then turn to cost analysis principles used in noncompetitive and cost-type contracts.

Other Economic Considerations

"Life Cycle Costs"

The price of a good or service is only one aspect of its cost. The total cost of ownership can include costs such as transportation, storage, administration, as well as the costs associated with maintenance, productivity, or other post-delivery costs associated with defects or failure, such as warranty costs.

"Best Value" in Source Selections

These other economic considerations are sometimes evaluated in negotiated procurements to determine which offerors offer the best combination of technical superiority and cost. Pricing considerations and cost analysis offer an additional opportunity, not only to achieve a fair and reasonable price, but also to assess whether the offeror understands the nature of the requirement and is offering a reasonable, comprehensive technical approach.

Contract Types

Closely related to price/cost analysis concepts is the choice of contract type: the type of cost/price analysis is dependent somewhat on contract types. The choice of contract type, e.g. fixed price or cost reimbursement, is an important initial consideration when conducting competitive procurements. In a "sole source" environment, sometimes the choice of contract type may be part of the negotiation and a result of discussions during cost and price negotiation. For a discussion of types of contracts and the risks associated with each, see Chapter 6. For a discussion of the impact of contract type on contract management, see Chapter 10, section 2.3.

Statutory and Regulatory Requirements

State Fiscal Rules and the Controller Statute

Section 24-30-202(2), CRS requires the State Controller to examine each contract to determine whether prices or rates are "fair and reasonable". As a practical matter, the State Controller depends on agency price analysis to determine whether prices or rates are "fair and reasonable".

Procurement Statutes

Section 24-103-403, CRS (1988) requires contractors to submit and certify "cost or pricing data" prior to the pricing of some contracts awarded by competitive sealed proposals or pursuant to sole source authority, or the pricing of change orders or contract modifications (over $500), unless:

1. The contract price is based on adequate price competition;

2. The contract price is based on established catalog prices or market prices;

3. The contract price is set by law or rule; or

4. It is determined in writing that the requirements of the statute may be waived, and the reasons for the waiver are stated in writing.

Federal Grant Contracts

The Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments, referred to as *The Common Rule*, establishes the cost principles applicable to grants funded with federal money. In general, the rule says:

1. A state must expend and account for grant funds in accordance with state laws and procedures for expending and accounting for its own funds. See *The Common Rule*, Section .20(a).

2. Applicable OMB cost principles, agency program regulations, and the terms of grant and subgrant agreements will be followed in determining the reasonableness, allowability, and allocability of costs. See *The Common Rule*, Section .20(a)(5).

3. Grant funds may be used only for the allowable costs of the grantees, subgrantees and cost-type contractors, including allowable costs in the form of payments to fixed-price contractors, and reasonable fees or profit to cost-type contractors. See *The Common Rule*, Section .22(a).

4. Grantees and subgrantees must perform a cost or price analysis in connection with every procurement action including contract modifications to determine the reasonableness of the

proposed contract price and, where there is no price competition, a profit that is "fair and reasonable." See *The Common Rule*, Section .36(f).

Price Analysis

Unless there is adequate price competition, some form of price analysis is required for any purchase of goods or services. How the price analysis is conducted depends on the value of the purchase and the circumstances surrounding it.

Definition of "Price Analysis"

Price analysis is defined as the examination of the offeror's/bidder's price proposal or bid by comparing it with reasonable criteria, without examining and evaluating separate elements of the costs (e.g. overhead and profit) making up the price.

Price Analysis for "Full and Open Competition"

Where there is adequate competition, as in invitations for bids and most requests for proposals, submission of competing offers or bids satisfies the need for price analysis. Generally, where there are at least two qualified, responsive sources who have responded to the solicitation, or only one offeror responds but the nature of the requirement does not give an unfair advantage to that competitor, the lowest bid or proposal normally provides a "fair and reasonable" price. Of course, some other means for assessing price reasonableness may also assist in price analysis.

Other Methods of Price Analysis

Where there is competition, price analysis is easier. Where, however, a contract is "sole source," or conditions are otherwise not favorable for competition, then other means of price analysis must be found.

Established Catalog and Market Prices

Prices widely publicized in catalogs or price lists, such as the General Services Administration Federal Supply Schedule prices, may serve as a basis for price analysis for supplies and services that are similar in nature. Consider requesting from contractors recent sales summaries establishing that the prices are offered to a significant number of buyers. In some industries, there may be established or well known market prices for certain supplies or services that are not unique to one seller.

Prices Set by Law or Regulation

Regulated prices, e.g. utilities, may also serve as a benchmark for measuring the reasonableness of similar supplies or services.

Historical Prices

An agency may have had similar supplies delivered or services performed by the same or other contractors. When comparing historical prices, consider:

1. How conditions have changed;

2. Whether there are "mobilization" or other one time setup or non-recurring charges;

3. The effect of inflation or deflation;

4. Whether the contractor should be or has been able to take advantage of "learning curves" in achieving efficiencies.

Independent Cost Estimates

If an agency has the expertise or resources, it may be able to develop independent cost estimates of the costs of doing the work, from which it can evaluate proposed prices. These estimates require an expert analysis of the quantity and nature of labor and material that will go into the contract performance, and application of expected cost rates such as those for indirect costs, overhead, and profit.

Documenting Price Analysis

Where "full and open competition" has not been an adequate basis for price analysis, the contract file should explain the basis for the price analysis, and the conclusion that the price is fair and reasonable. An abstract of bids is sufficient where there is competitive bidding. The price negotiation memorandum should contain:

1. Information that was considered;

2. Weight given to information and why; and a

3. Rational explanation of why that information led to the conclusion that the price was fair and reasonable.

Relationship between Price Analysis and Negotiation

Sometimes, the absence of information from which to analyze reasonableness of prices can lead to fact-finding questions used during negotiations, where there is no "full and open competition." For example,

1. Does the contractor have price lists or catalogs?

2. Can the contractor identify a market price or rate that is readily identifiable?

3. How can the contractor otherwise support the reasonableness of the rate or price?

If information adequate to support price analysis cannot be obtained, then you may have to request "cost or pricing data" as required by the Procurement Code in order to conduct cost analysis.

Cost Analysis

Price analysis focuses on a comparison of the total price against objective indicators of reasonableness, such as competitors' prices, catalog or market prices, prices of similar work, etc. Sometimes, market conditions are not suitable for price analysis, e.g. "sole source" situations, pricing of modifications to contracts, "cost reimbursement type" contracts, etc. In those cases, "cost analysis" is used to determine whether the price to the State will be "fair and reasonable."

The purpose of cost analysis is likewise to arrive at a price that is "fair and reasonable." But costs tend to vary among companies, based on the capabilities of management, the efficiency of labor, and the quality and amount of subcontracting.

"Cost Analysis" Defined

Cost analysis is an evaluation of actual or anticipated costs. Successful cost analysis requires application of experience, knowledge, and judgment to cost data. The purpose is to forecast expected contract costs and assess an appropriate profit. Cost analysis is useful for establishing negotiation objectives for cost/price negotiation.

Analyzing Specific Cost Categories

Variable Costs/Direct Costs

These are costs, such as labor and materials, that vary directly in relation to the quantity of the product or service being ordered. Usually, these costs will be priced in proposals as "direct costs," those costs that are being directly incurred for contract performance, and which do not benefit other aspects of the contractor's business. These costs are traceable directly to the work being performed on the contract. Not only is a reduction in direct costs worth more than any other element of cost, direct costs are usually the basis for "indirect cost" charges also, i.e. overhead is usually computed as a percentage of direct costs.

- Direct costs are a product of both quantity and cost. For example, proposed costs for material may include a contingency for rework that should be analyzed. Similarly, cost of labor will vary depending on the number of hours of labor being proposed, which should likewise be analyzed based on your own estimates.

- Try to determine how much of the direct costs are proposed for "mobilization" or "set up," one time costs associated with beginning performance. The assumptions in proposing these costs may be ripe areas for negotiation.

- Labor costs and salaries are related to the skill/education of labor being employed. Evaluate proposals to insure that the labor skills are appropriate for the work being proposed.

- In contracts involving repetitive labor operations, look for "efficiencies", such as use of learning curve analysis.

- The location of the work may affect the rates for both labor and materials. Make sure rates conform reasonably to rates in the geographical area where work will be performed. The Bureau of Labor Statistics provides current wage rates for different job categories in different geographical areas.

- Evaluate costs for capital equipment, special tooling or equipment, etc. Consider providing State equipment for use during performance.

- Be wary of "internal charges" or "markups" on subcontracted work or materials, or internal transfers of labor or material, where the additional cost proposed is not reasonably related to actual costs to the company.

Indirect Costs

"Indirect costs" can account for 30% or more of the cost of a project. Some of the common categories for these "indirect cost pools" are general and administrative overhead, engineering overhead, materials overhead, manufacturing overhead, and selling expense. They are all indirect costs and vary in the way they are allocated and recovered in pricing. In general, there are two basic distinctions: between those that benefit the business as a whole and those indirect costs that benefit specific production/service operations of a company.

Fixed Costs/General and Administrative Overhead

Fixed costs, sometimes referred to as "sunk costs," are costs that do not change with volume of contract performance or specific product/service lines. Home office expenses, facilities costs, corporate officer and home office salaries, some utilities, depreciation expenses, advertising, and research and development are examples of costs that commonly are considered fixed costs. These costs are typically recaptured using "overhead markup," usually applied as a percentage of direct and other indirect costs. Most companies have an established an overhead rate that is based on previous financial performance.

Semi-variable Costs/Other Indirect Costs

All costs are not either totally variable (e.g. direct costs) or fixed. Some costs are more closely associated with specific service or manufacturing activities in a company. Utilities, for example, are partly fixed and partly variable. How these kinds of costs are allocated is dependent on the contractor's accounting or "cost accounting" system. Usually, these other indirect costs are equitably allocated against a unit of production or service, such as hours of labor or units of manufacturing. The per unit variable costs are dependent on the volume of manufacturing or service production.

"Reasonableness" and "Consistency" in Cost Allocation

There is no single, common method of allocating all of the indirect costs/overhead. Although your familiarity with an industry may provide ranges of expected indirect costs rates, each company will have different accounting systems and different rates. What you should try to insure is reasonableness and consistency in the allocation of all indirect cost. The State should always be treated equitably in how the contractor is pricing its proposals and allocating its costs to the different cost categories. Further, you should challenge any known allocation systems that require the State to pay for indirect cost in an overhead pool that is inconsistent with cost allowability rules in the Procurement Rules or Federal standards governing grants. For example, fines and penalties are a common category of cost that is "unallowable" .

Of course, this level of cost analysis presumes that you have the data necessary to conduct it, either through contractor submission of cost or pricing data or availability of an audit done recently on a company.

Example:

Simplified example of costs for computer installation/software development:

Direct costs		
	Equipment	$10,000
	Labor (1000 hours)	$40,000
	Subcontractor	$3,000
Indirect costs		
	10% (Equip. handling)	$1,000
	10% (Sub markup)	$300
	Subtotal	$54,300
20% Overhead		$10,860
Total Costs		$65,160
Profit		$6,516
	TOTAL PRICE	$71,666

Requesting "Cost or Pricing" Data

Without data to analyze, you cannot perform cost analysis. In procurements, or before negotiating modifications to contracts, you ask the contractor to submit cost or pricing data. In solicitations, the requirement for cost or pricing data is part of the request for proposals, so offerors are on notice of the need to submit the data when they submit their proposals. With respect to changes or modifications, the requirement for cost or pricing data should be included in a contract clause.

The scope of the data you request can vary, from simple budget submissions showing projected expenditures (not really "data," except for the unit prices for categories such as salaries disclosed on the budgets) to much more detailed factual descriptions of historic indirect and overhead rates, salary and benefit breakdowns for all categories of labor, materials costs, subcontractor quotes, etc. The example above is probably the most simplified example of cost or pricing data that would ever be requested. In high value contracts, you may also want the offeror to submit subcontractor quotes concerning subcontracted work, as well as historical employee salary rates and material costs.

The following is an example of a solicitation clause requiring submission of certified cost or pricing data by offerors:

> [Offerors] shall submit cost or pricing data with their proposals. "Cost Data" is factual information concerning the cost of labor, material, overhead, and other cost elements which are expected to be incurred or which have been actually incurred by the contractor, such as vendor quotations, non-recurring costs, and unit cost trends, and which can reasonably be expected to contribute to the soundness of estimates of future costs. "Price Data" is factual information concerning prices for supplies, services, or construction substantially identical to those being procured, including offered or proposed selling prices, historical selling prices, and current selling prices of such items, which can be reasonably expected to contribute to the soundness of estimates of future costs. Successful offerors may be required to promptly certify that, to the best of their knowledge and belief, the cost or pricing data submitted was accurate, complete, and current as of a mutually determined, specified date prior to the date of [conclusion of negotiations] [submission of best and final offers] [submission of the proposal]. Such certificate shall contain a provision that the price to the State, including profit or fee, will be adjusted to exclude any significant sums by which such price was increased because the contractor-furnished cost or pricing data was inaccurate, incomplete, or not current as of the date agreed upon between the parties.

A companion clause for cost or pricing data submission in modifications and changes is at Clause B2, Appendix A, Chapter 6.

Profit

Unless you are dealing with a nonprofit entity, the final large component of total price is the profit. There are no formulas about a reasonable profit. In fact, profit is sometimes the cost element that is likely to be negotiated away first by a firm that is motivated in getting your business. One caveat: sometimes profit may appear to be negotiated away, when in fact there may be conservative estimates in other cost categories that a contractor expects to "beat" during performance.

As a general rule, though, a contractor is entitled to receive a "fair and reasonable" profit. In general, profit should be a reward for efficiency and the risk assumed by a company. 10% profit is a common profit baseline for commercial, fixed price contracts having moderate risk and only incidental amounts of subcontracting.

Cost plus percentage cost contracts are illegal (section 24-103-501, CRS), and they make little sense, because there is no incentive for the contractor to restrain costs. A "cost plus percentage cost" contract is one which gives a contractor a fee based on the costs incurred during performance. By contrast, contracts <u>are</u> commonly negotiated and negotiation objectives established using profit as a percentage of total estimated cost, i.e. computing the "return of the investment" of time and money. The difference is: the profit or fee is fixed once the negotiation is finished and price agreement reached.

Here are some general considerations in evaluating and negotiating profit:

- A contractor assuming higher technical and/or cost risks should be entitled to more profit. Similarly, a contractor merely passing through someone else's productive effort should receive less (or no) profit.

- Generally, higher profit is justified per unit on low volume sales than larger orders, particularly where there is risk from mobilization or setup.

- Companies in high tech, rapidly developing and changing technologies are entitled to greater profit, because they have higher training and development costs to stay competitive.

- Companies who make substantial capital investments during performance are entitled to a higher profit.

- Consistently higher quality justifies higher profit.

A Note About Grants

The section above on *Statutory and Regulatory Requirements* lists federal requirements related to price and cost analysis. Note that formal cost or price analysis is required when grantees are "procuring property and services under a grant."

Requirements, generally applicable to grants, are found in *The Common Rule*. However, individual programs are often governed by more specific federal requirements in the Code of Federal Regulations, e.g. 34 CFR Part 80 (Education), 45 CFR Part 92 (Health and Human

Services), 24 CFR Part 85 (Housing and Urban Development), 29 CFR Part 97 (Labor), 44 CFR Part 13 (Federal Emergency Management Agency).

Considerations in Cost Analysis

Analysis of grant or subgrant proposals tends to be more like "cost analysis" than "price analysis," because subgrantees are typically local governments or political subdivisions with diverse organizations and financial management systems.

Apart from "procurements of goods and services," the financial management requirements for financial assistance grants focus on "expenditures" consistent with cost accounting standards. Payments are typically based on the actual costs incurred, unlike most commercial contracts. The audit oversight and cost allowability rules also help to assure "reasonableness" of expenditures.

- Agency personnel should have a working familiarity with applicable cost accounting standards for grants in order to do cost or budget analysis. To be payable, costs generally have to be reasonable, "allocable" to cost objectives, and not "unallowable" (e.g. fines and penalties, entertainment expenses, etc.) The cost accounting standards governing federal grants are:

  - OMB Circular A-87 - State and Local Governments.

  - OMB Circular A-122 - Private Nonprofit Organizations, other than Higher Education.

  - OMB Circular A-21 - Educational Institutions.

- Involve field personnel and technical experts in proposal analysis; they will be able to assess the reasonableness of proposed costs and apply the federal cost accounting standards to the proposed work or project.

- Direct costs, e.g. labor costs/salaries or projected equipment/materials costs, are still ripe areas for up-front analysis of budget or other cost proposals. Evaluate whether salary levels, experience/education requirements are appropriate for the nature of work being performed, and whether the projected numbers of hours/FTE are appropriate for the level of effort.

- Besides evaluating the quantity and cost of supplies/equipment, be aware that *The Common Rule* specifies different disposition and title vesting provisions for equipment (supplies with useful life of more than one year and acquisition cost of over $5,000).

- Indirect cost rates are often negotiated by a "cognizant federal agency", such as the Department of Health and Human Services. In those cases where there is an approved rate, an individual State agency will not be responsible for evaluating indirect costs.

Matching Requirements

Also, unlike commercial contracting, the cost or budget analysis in grant contracts has to include evaluation of the "matching" or "cost sharing" rules governing the program. Matching funds provide an added incentive to the contractor to satisfactorily perform, because some of the contractor's money is at risk along with that of the state or federal government. See *The Common Rule*, Section .24, Matching or Cost Sharing.

Procurements Under Grants

When procuring goods and services under grants, *The Common Rule* establishes pricing requirements similar to those in the Colorado Procurement Code.

1. Cost and price analysis. Grantees must perform a cost or price analysis in connection with every procurement action including modifications. The method and degree of analysis is dependent on the facts surrounding the particular procurement situation.

    - Grantees must make independent estimates before receiving bids or proposals.

    - Cost analysis must be performed when the offeror is required to submit elements of its estimated cost, e.g. professional, consulting, and architectural engineering services contracts.

    - Cost analysis is necessary when adequate price competition is lacking, and for sole source procurements, including contract modifications and change orders, unless price reasonableness can be established based on

        - Catalog or market price of commercial products sold in substantial quantities to the general public; or

        - Prices set by law or regulation.

2. Profit. In grant contracts where there is not adequate price competition, or in any case when cost analysis is used, agencies must negotiate profit as a separate element of price for each contract for which there is inadequate price competition or when cost analysis is performed. *The Common Rule* requires consideration of

    - Complexity of the work to be performed;

    - The risk borne by the contractor;

    - The contractor's investment;

    - The amount of subcontracting;

- The quality of its record of past performance; and

- Industry profit rates in the surrounding geographical area for similar work.

3. Cost plus percentage of cost methods of contracting are not permissible (same prohibition as in the Colorado Procurement Code).

Price Negotiation in Commercial Contracts - Considerations

In competitive sealed bidding, there is no flexibility to negotiate prices with the successful bidder. By contrast, the competitive sealed proposal (RFP) process permits price negotiations prior to submission of "best and final offers." And in a sole-source situation, of course, negotiation of the price or cost will be a significant part of the contract negotiation.

Most companies have flexibility in their pricing. Initial proposals probably do not contain the "bottom line" price, and the price may be adjusted once the parties further clarify the scope of the work. While companies generally want to recover their direct costs, the usual objective in recovering indirect costs is to insure that the project recovers its "fair share." However, depending on a company's outlook on a specific service's or product's profitability, there may be flexibility in negotiating indirect cost components of a price. So remember to:

- Challenge assumptions in the pricing proposal because most prices are subject to adjustment, based on principled negotiations;

- Ask for "cost and pricing data" when required by the Procurement Rules or as necessary to perform adequate price/cost analysis;

- Press for a comprehensive understanding about what is "driving" the contractor's price proposal;

- Press for information on direct rates for labor, e.g. what labor rates were used and how they were priced;

- Evaluate whether the experience/education for the labor categories are appropriate for the work being performed;

- Determine what the "direct costs" are (which must be recovered) and the indirect costs, which may be subject to negotiation;

- Find someone familiar with the contractor's indirect cost/pricing practice, or with customary ranges of indirect cost rates in the industry;

- Press for information on and critically evaluate "markup" on supplies and other subcontractor work/services

- Evaluate the sources, costs, and quantities of key supply/material elements of a contractor's proposal;

- Determine what profit margin is being proposed by the contractor, and formulate arguments for a lower profit margin if appropriate;

- Understand and evaluate the contractor's labor hour estimates for key aspects of the work, and have your own estimates prepared by people who understand the State's requirement;

- Ask the contractor to demonstrate how its pricing proposal integrates "efficiencies" (e.g. learning curve analysis) where appropriate;

- Consider the availability of State-supplied equipment/service to lower costs;

- Determine how much is being paid for unspecified "mobilization" costs;

- Evaluate how much "contingency" is being proposed;

- Determine availability of "quantity discounts", (those discounts commonly offered to the contractor's customers who order large quantities of supplies or services), "seasonal discounts", or "cash discounts" paid to customers who pay "in full";

- Make sure you understand all of the contractor's cost categories in cost reimbursement-type contracts;

- Formulate pricing objectives after price/cost analysis to integrate into the contract negotiation;

- Consider options available from trading price or cost for delivery times, quality, and warranty coverage; and

- Insure that the contract terms reflect the agreement on the price, the type of contract, and the payment provisions