



# REPORT TO THE CONGRESS



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## Feasibility Of Using "Should Cost" Concepts In Government Procurement And Auditing 8-159896

**BY THE COMPTROLLER GENERAL  
OF THE UNITED STATES**

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MAY 20 1970



COMPTROLLER GENERAL OF THE UNITED STATES  
WASHINGTON, D.C. 20548

B-159896

To the President of the Senate and the  
Speaker of the House *of* Representatives

In response to a request made in **May** 1969 by the Joint Economic Committee's Subcommittee on Economy in Government, the accompanying report presents the results of our survey pertaining to the feasibility of our including "should cost" concepts in **our** reviews of Government contractor performance. The survey was made pursuant to the Budget and Accounting Act, 1921 (37 U.S.C. 53), and the Accounting and Auditing Act of 1950 (31 U.S.C. 67).

Although formal comments on the contents of this report have not been obtained from the Department of Defense or any of the civil agencies mentioned in the report, we did **give** them **an** opportunity to present their comments on an informal basis and, where appropriate, have included their comments in the report.

Copies of the report are **also** being sent to the Director, Bureau of the Budget, and to the Secretary of Defense.

*Thomas B. Staats*

Comptroller General  
of the United States

## DIGEST

### WHY THE REVIEW WAS MADE

The Joint Economic Committee, through its Subcommittee on Economy in Government, asked the General Accounting Office (GAO) to study the feasibility of applying "should cost" analyses in its audits and reviews of Government procurement. (See p. 4.)

The Committee's report defines the "should cost" approach as an attempt "to determine the amount that weapons systems or products *ought* to cost given attainable efficiency and economy of operation." Therefore, "should cost" reviews not only would utilize all the current concepts employed in evaluating price proposals but also would include development and consideration of possible areas for attaining additional economy and efficiency in the procurement of the product or service.

### FINDINGS AND CONCLUSIONS

#### Background

GAO included several aspects of "should cost" concepts and applications in this survey for the Subcommittee, such as:

- The extent that "should cost" concepts have been used by GAO in its postaward reviews of performance by Government contractors. (See pp. 8 and 9.)
- The extent that the Department of Defense (DOD) and civil agencies have applied "should cost" analyses to price negotiation. (See p. 10.)
- The more common use made of "should cost" today in private industry procurements. (See p. 21.)

#### What is being done

GAO reviews in the past have often used postaward "should cost" techniques. GAO's coverage of a contractor's operations has been directed to areas having known or suspected inefficiencies, and such postaward reviews have not normally been performed on a companywide basis.

Comprehensive "should cost" studies by the Government as an aid to price negotiations have been limited. "Should cost" concepts are recognized

#### Tear Sheet

in DOD policies, and these concepts are used to a limited extent. However "should cost" studies as defined in this report have been used by DOD in only a few instances. For the most part, cost analyses of contractor proposals and subsequent price negotiations are based upon historical costs rather than upon costs that could reasonably be incurred. (See p. 15.)

In the DOD at the present time, the Army is making a "should cost" review on a trial basis. DOD plans to evaluate the outcome of the Army's effort before deciding on the nature and extent of future studies.

"Should cost" concepts have been applied effectively in certain private industrial operations as a joint effort by buyers and their suppliers. Industry spokesmen told GAO that the use of "should cost" in their procurement processes have helped them attain fair and reasonable prices for equipment and increased their profits.

#### What can be done

1. It is feasible for GAO, in auditing and reviewing contractor performance, to utilize "should cost" analyses. (See p. 26.)
2. The greatest opportunity for the Government to benefit from the application of "should cost" appears to be through its use on a selective basis in *preaward* evaluations of contractors' price proposals. At this point, the results would be of maximum benefit to the Government negotiator in arriving at a fair and reasonable price. In addition, the contractor generally is more willing to implement corrective procedures during this time since he stands to realize the most benefits from any constructive recommendations developed during the review.
3. In addition to preaward reviews, Government agencies should consider performing "should cost" reviews selectively during the performance of the contract—on a *postaward* basis. These reviews would provide the Government with valuable data on the contractors' performance and cost consciousness and on the adequacy of the Government's prenegotiation efforts. They might also be effective in reducing costs on current and future procurements.
4. The extent and depth of the application of "should cost" concepts should be flexible and be based upon information developed in the initial stages of the review. The subsequent detailed review efforts, however, should be of sufficient depth to provide full documentation of inefficiencies and their impact on contract costs.
5. The success of any "should cost" work would depend to a large extent

--on the skill of a Government team in pinpointing areas for cost improvement by a contractor and

--on genuine cooperation between the Government and the contractor in providing adequate exchange of information between "should cost" review teams and contractor personnel and on a willingness by contractors to make changes based on the team's efforts when they appear to be constructive and practical.

GAO action

GAO currently is conducting trial applications of "should cost" at four contractors' plants. **These detailed** studies should provide information on such issues as:

- What problems may be met in making "should cost" reviews.
- What **size** of program or contractor activity should be reviewed.
- What type of contracts should be selected.
- What benefits may be expected.

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A TIONS

AEC Atomic Energy Commission

DOD Department of Defense

GAO General Accounting Office

GSA General Services Administration

NASA National Aeronautics and Space Administration

D I G E S T

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- What benefits may be expected.

## CHAPTER 1

### INTRODUCTION

In accordance with the request by the Subcommittee on Economy in Government, Joint Economic Committee, the General Accounting Office has made a survey of the feasibility of incorporating "should cost" concepts into its audit and review of contractor performance. Specifically, in its May 1969 report on the Economics of Military Procurement, the Subcommittee recommended that:

"GAO should study the feasibility of incorporating into its audit and review of contractor performance the should-cost method of estimating contractor costs on the basis of industrial engineering and financial management principles \*\*\*,"

Although the Subcommittee limited its recommendation solely to GAO's including "should cost" concepts in its audit and review of contractor performance, our survey also included consideration of the feasibility of incorporating such concepts into the Government procurement cycle which includes the pricing, negotiation, and postaward evaluation phases. We considered such broadening in scope an essential part of this study since, in our opinion, any application of "should cost" would have to be made principally within the procurement environment in which it operates.

"Should cost" was mentioned to the Subcommittee by several witnesses in connection with hearings on Government procurement practices. During this same period, extensive hearings were also conducted before the Military Operations Subcommittee, House Committee on Government Operations. At these hearings, Department of Defense personnel testified in detail on the "should cost" review made in connection with the definitization of a letter contract for aircraft engines for the F-111 program.

### DEFINITION OF "SHOULD COST" CONCEPTS

In the Subcommittee's report this definition of "should cost" was provided:

"The should-cost approach attempts to determine the amount that weapons systems or products ought to cost given attainable efficiency and economy of operation.'

Emphasis, in the "should cost" approach, is placed on a study and evaluation of the contractor's system of managing and controlling activities and costs and on procedures instituted to provide surveillance of these activities and costs in order to achieve economy and efficiency. "Should cost" reviews not only utilize all the current concepts that are employed in price proposal evaluation, but also include evaluations of such matters as (1) plant layout and machine capacity, (2) production scheduling and control, (3) labor standards, and (4) make-or-buy programs. Current price proposal evaluations emphasize consideration of historical costs, whereas "should cost" reviews emphasize means of improving upon prior experience.

It should be recognized that the extent and depth of the application of "should cost" concepts should be flexible and be based on information developed in the initial stage of the review but that this application would include those aspects necessary to attainment of the basic goal of determining what the product ought to cost. "Should *cost*" reviews at one contractor location could cover the contractor's entire operation, whereas at another contractor facility, it might be feasible to review only one or two of the major functions.

## METHOD OF STUDY

Our evaluation of the proposed incorporation of "should cost" concepts into GAO reviews of contractor operations has included research into the contracting practices employed by the Government and industry and has covered (1) procedures employed in arriving at the Government's independent estimates of the reasonableness of prices for desired items, (2) proposal reviews, (3) differences between Government and industry practices in arriving at a prenegotiation position, (4) differences between Government and industry in providing postaward surveillance, and (5) governmental agencies' positions with respect to performing "should cost" evaluations.

We discussed these matters with officials of the Department of Defense and the individual military services, Defense Contract Audit Agency, Defense Supply Agency (Defense Contract Administrative Services), Atomic Energy Commission (AEC), Bureau of Reclamation, Corps of Engineers, the General Services Administration (GSA), and the National Aeronautics and Space Administration (NASA). In addition, we have had informal discussions with the Council of Defense and Space Industry Associations.

Our discussions with industry officials were conducted both at the prime and the subcontractor levels. We also interviewed suppliers of commercial concerns in order to get a better understanding of the relationships that exist between buyer and supplier in the commercial marketplace. In addition, we discussed this subject with representatives of three consulting firms, to ascertain the procedures they follow in reviews of this type and to obtain information on the type of skills that might be required to make "should cost" reviews. Further, we were interested in the type of special services they could offer the Government in conducting such reviews at defense Contractor plants.

Our study was directed toward ascertaining (1) what "should cost" concepts encompass, (2) to what extent "should cost" practices are currently used by the Government and its contractors, (3) whether the inclusion of "should cost" concepts in GAO audits is feasible, and (4) to what extent

these practices can be incorporated **into** the regular procurement process, as well as identifying any areas that can adversely **affect** negotiation and postaward surveillance of Government contracts.

## CHAPTER 2

### USE OF "SHOULD COST" CONCEPTS

#### BY GAO

Same "should cost" concepts, as defined in this report, have been used by GAO in examining into whether Government funds have been utilized in an efficient and economical manner. However, our reviews at any particular contractor location have not been all encompassing. Rather, they have been directed primarily toward specific areas which appeared in need of improvement in management and control, and we have issued separate reports on these areas. Such reviews have encompassed a specific contract, a particular segment of a contractor's overall operation, or some aspect of the Government's administration and control of a contractor's operations.

Following are illustrations of these types of reviews:

- We have reported that, at 20 locations of 17 major contractors, the additional costs to the Government as a result of leasing rather than purchasing land and buildings could amount to about \$99.3 million.
- We have found at several contractor locations that contractors were incurring more costs than necessary through leasing rather than purchasing automatic data processing equipment.
- We have reported that sufficient consideration was not given to the potential economies to be achieved by improving the contractor's procedures for establishing prices with its subcontractors.
- At one contractor location, we have suggested (1) reducing the **use** of contractor-owned aircraft when commercial air transportation could have been used at a fraction of the cost, (2) better utilization of in-house computers and offset printing equipment, which would significantly reduce the need for outside vendor services, (3) more equitable allocations of

patent expenses, and (4) more timely and complete reporting of inventions developed under Government contracts.

We are currently making trial "should cost" reviews at four selected Government contractor plants. Our initial efforts will be experimental in nature and will provide information for making a determination as to **the extent** of GAO's future application of "should cost" concepts,

## CHAPTER 3

### USE OF "SHOULD COST" CONCEPTS

#### BY PROCURING AGENCIES

##### DEPARTMENT OF DEFENSE

Our discussions with various officials in DOD and in each of the military services, as well as in the selected civilian agencies contacted, have shown that they believe that many of these "should cost" concepts are used in their day-to-day transactions. The major difference between the use of these concepts in the day-to-day review process and the "should cost" review performed by the Department of Defense is one of scope. A discussion of one comprehensive "should cost" review, contrasted with the traditional pricing effort follows.

##### "Should cost" review performed by DOD on engines for the F-111 aircraft

In May 1969 hearings were conducted before the Military Operations Subcommittee, House Committee on Government Operations, at which time a Department of the Navy official testified in detail on the "should cost" review he had conducted on the engines for the F-111 aircraft. This was the most detailed review conducted by DOD under this particular label and was, by far, the most publicized efficiency review ever conducted by DOD. Some details of the review follow.

The sole-source supplier of the aircraft engine for the F-111 program was selected in 1961. Initial estimates for these engines amounted to about \$270,000 each. The cost estimates for these engines began to rise, and by 1967 the contractor was quoting unit prices in excess of \$700,000.

DOD was quite concerned over both the sharp increases in cost and the Navy's contracting methods employed at this particular contractor's location. DOD directed the Department of the Navy to study this matter, and a consulting firm was retained. Following a 2-1/2-month study, this firm

issued a rather critical report commenting on the contractor's operation. The consulting firm also arrived at a price for the engines which it felt to be reasonable. The Navy concluded, however, that the data developed could not be used since, in its opinion, the position recommended by the consultants could not be sustained during negotiations.

When DOD learned about the Navy's position, it insisted that the Navy perform its own analysis of the situation. A chief negotiator was then appointed for definitizing this large letter contract involving some 2,053 engines at about \$1.5 billion estimated costs, with engine deliveries scheduled from 1967 through 1970. The chief negotiator assembled a special team of about 40 people from various DOD components and conducted a comprehensive management review at the contractor's plants during the latter part of 1967 and the first part of 1968. The cost of this review was about \$300,000.

Following the review, which was conducted during an 11-month period, a contract for the 2,053 engines was negotiated in June 1968. Testimony indicated that savings in excess of \$100 million would be realized by the Government as a result of this review, which later was referred to as a "should cost" study. Some of the major areas of management weakness reported were:

1. Lack of adequate labor standards.
2. High employee turnover.
3. Inefficient plant layout.
4. Idle machine capacity and lack of usage data on machines.
5. Noncompetitive procurement.
6. Excessive spoiled work.
7. Poor production scheduling and control.

8. Improper costs incurred in many of the overhead and general administrative accounts (including lease-versus-purchase analyses).
9. Inappropriate cost allocation between the Government and commercial work.

A considerable amount of review work was performed in arriving at the Government's "should cost" estimate, nevertheless, the amount subsequently negotiated was significantly higher than the estimate. Several reasons were cited for this. One reason was that the contractor's position was firm and it was most difficult to get agreement on price; but, more importantly, engine deliveries for 1967 and a good portion of 1968 had already been completed. The subcontracts for long leadtime items for future years had already been awarded; therefore, it would have been most difficult to retroactively impose reductions on the contractor. Also, it was felt that, from a long-range standpoint, it was to the Government's advantage to obtain agreement from the contractor that certain of the procedural weaknesses which were identified during the review would be corrected. The contractor is currently in the second phase of its corrective actions program and has retained several consultants to assist it in improving its management controls.

Following the negotiation of this sizeable contract, the F-111 program was drastically reduced; consequently, procurement of about half of the contracted engine quantities has now been terminated. Many of the savings are now adversely affected by these terminations. The procurement practices followed by the chief negotiator, and the unique position in which he was placed, contributed significantly to the achievements claimed.

With respect to future reviews of this type, the chief negotiator for the contract testified that he was not in favor of doing another one; he felt that this type of action should be used only as a last resort. He felt that such reviews adversely reflect on both the contractor and the Government-contracting agency.

Similar opinions were expressed by other officials in DOD. They believed that the contracting situation in this engine procurement was unique and therefore required special attention. They also stated that, if similar situations should come to their attention, they would again form a special team, as was done in this case, to review the situation. This they believed would be preferable over establishing a continuing capability for reviews of this type.

Our preliminary observations at selected contractor locations where we are performing trial applications of "should cost" concepts, indicate that the situation in this case is not as unique as DOD believes. It appears that, over a period of time, most of the major contractors' operations should receive a critical review. These reviews can not be as effectively performed by pulling personnel from their regularly assigned duties, as they could be by a centralized staff.

#### DOD contractor management reviews

Both the Department of the Air Force and the Department of the Navy have established teams to provide analyses of a contractor's organization and management. We were told that the Air Force Program Management Evaluations-- formerly called Industrial Management Assistance Surveys-- and the Navy Industrial Management Reviews have been conducted in past years at selected contractor plants.

A number of individuals interviewed advised us that the first Air Force Industrial Management Survey effort, which was started in November 1960, was probably the only one that was comparable to the "should cost" review on the F-111 aircraft engines. This survey took about 4-1/2 months. The later surveys have been more limited in scope and have generally been performed in about 3 weeks with a staff of about 10 to 15 individuals of various skills. During the period November 1960 through August 1968, the Air Force team performed 28 of these surveys at contractors' plants.

The Department of the Navy initiated Navy Industrial Management Reviews of major Navy contractors in 1964 as a means of improving the effectiveness and efficiency of contractor and Navy management techniques in the administration of Government contracts. These Navy teams, which are generally composed of about 20 individuals, have reviewed the operations of 13 selected contractor plants; and these reviews were completed in a period of 2 to 3 weeks.

The procedures for these reviews provide for analyses of contractors' organization and management. The reviews are designed to determine the effectiveness of the contractor's management; and recommendations and suggestions are made to improve the contractors' operations.

These Air Force and Navy guidelines and reports are considered internal management documents and are treated as Inspector General reports, which are not generally made available to us. As a result we were unable to evaluate their extensiveness and usefulness.

Discussions with various officials and review of the limited data made available lead us to believe that the scope and effort expended on these reviews have been limited when compared with the major "should cost" effort mentioned previously. It appears that an effective use of these reviews would include the use of the results during negotiations with the contractor; instead, these reviews are performed with the understanding that results would be treated confidentially and the data are not intended for use in future negotiations. The reviews are intended as an evaluation of the contractor's management of a program or contract, and the contractor's top management is advised and encouraged to correct areas believed to be in need of improvement.

In addition to the contractor management reviews, Government contract administration activities and the Defense Contract Audit Agency perform functional reviews of larger contractors' operations. The more significant of these reviews include evaluations into the adequacy of a contractor's (1) procurement system, (2) estimating system, and (3) controls over Government-furnished property.

*Our* experience with these reviews has been that, while they are helpful in the identification of specific problem areas, they do not have the same objectives of the "should cost" reviews as defined in this report.

### Traditional Government preaward review

The traditional approach followed by the Government in arriving at a preaward position for noncompetitive procurement is to perform a cost analysis of the contractor's proposal. Such analysis is a technique used, in the absence of price competition, to evaluate the reasonableness of a contractor's proposed price in light of both historical costs and engineering estimates. The Armed Services Procurement Regulation 3-807.2C does mention "should cost," and cost analysis is defined as follows:

"Cost analysis is the review and ~~evaluation~~ of a contractor's cost or pricing data ~~\*\*\*~~ and of the judgmental factors applied in projecting from the data to the estimated costs, in order to form an opinion on the degree to which the contractor's proposed costs represent what performance of the contract should cost, assuming reasonable economy and efficiency. It includes the appropriate verification of cost data, the evaluation of specific elements of costs ~~\*\*\*~~, and the projection of these data to determine the effect on prices of such factors as:

- (i) the necessity for certain costs,
- (ii) the reasonableness of amounts estimated for the necessary costs,
- (iii) allowances for contingencies,
- (iv) the basis used for allocation of overhead costs; and

(v) the appropriateness of allocations of particular overhead costs to the proposed contract."

\* \* \* \* \*

"(3) Among the evaluations that should be made where the necessary data are available, are

comparisons of a contractor's or offeror's current estimated costs with:

- (i) actual costs previously incurred by the contractor or offeror;
- (ii) his last prior cost estimate for the same or similar item or a series of prior estimates;
- (iii) current cost estimates from other possible sources; and
- (iv) prior estimates or historical costs of other contractors manufacturing the same or similar items.

"(4) Forecasting future trends in costs from historical cost experience is of primary importance. \*\*\*"

Under the traditional approach followed by the Government in arriving at a prenegotiation position, a cost analysis is usually performed by a pricing team, consisting of the following field team members:

1. The administrative contracting officer, upon delegation, is considered the field "team captain" and has primary responsibility for consolidating and evaluating the findings of the pricing team members in the field.
2. The price analyst consolidates all field pricing data and develops a field pricing objective for the administrative contracting officer.

3. Other technical specialists (production, quality assurance, and engineering specialists) provide technical assistance in the review of contractor's proposals.
4. The Defense Contract Audit Agency submits advice **based** on the analysis of the contractor's books or other data as to the acceptability of incurred or estimated costs.

The Armed Services Procurement Regulation states that close cooperation and communication between the administrative contracting officer's specialists and the contract auditors are essential in providing **the** contracting officer with maximum support.

While it is a DOD written policy to utilize an integrated team approach for pricing purposes, we have found that this approach, although it may be conceptually sound, has not been fully effective for the following reasons:

1. Time allowed for the pricing review may not always be sufficient.
2. The **scope of** a pricing review is often limited, and the conclusions reached are not always supported .
3. Coordination between the procuring contracting officer, administrative contracting officer and his staff, and the contract auditor is not always effective .

#### Plans for "should cost" reviews by DOD

In discussions with DOD officials, we were told that **they do** utilize selected "should cost" concepts in their cost analyses and functional reviews. They agreed that these concepts are not used in their traditional reviews to the same depth and scope as was **the** case in the F-111 "should cost" review,

DQD officials also agreed that the approach used in the F-111 review was superior to the traditional pricing review. They were of the opinion that the circumstances surrounding the F-111 aircraft were unique; and, should similar circumstances arise again, another "should cost" review team could be formed.

Although the DOD is not performing "should cost" reviews on a continuing basis, the Department of the Army is currently making a "should cost" review; and DOD intends to evaluate the results of this trial application before taking further action,

We believe that the circumstances which existed in the procurement of the F-111 engines are not so unique as DOD believes and that a selective use of "should cost" reviews on major programs, especially those performed prior to negotiations, can be used by the Government negotiator as an effective tool in negotiating fair and reasonable contract prices. Although definite criteria as to when and under what circumstances a "should cost" review should be performed have not yet been established, criteria should become available as experience in its application and effectiveness is obtained.

DOD, as well as the various civil agencies directly engaged in the procurement function, has certain advantages in performing "should cost" reviews, which are not currently available to GAO. Such advantages include (1) availability of in-house technical specialists, (2) a greater chance of success in obtaining improvements identified during the review, and (3) the ability to more effectively use data which may not be completely free from controversy--although very useful when used during the negotiation process.

The success of any "should cost" review depends to a large extent on the skill of the team members to pinpoint areas of inefficient operation. We have been told that individuals possessing these skills are currently employed within the DQD establishment. However, we have also been told that these individuals may not be in one location and that they are not necessarily available for these special reviews, since they have regular assigned duties.

DISCUSSION OF "SHOULD COST" CONCEPTS  
WITH SELECTED NON-DOD ACTIVITIES

To ascertain to what extent non-DOD activities may be utilizing "should cost" concepts, we talked with officials of the Atomic Energy Commission, Bureau of Reclamation, Corps of Engineers, General Services Administration, and National Aeronautics and Space Administration. These agencies do not have an established capability for performing this type of review on a continuing basis.

NASA officials believed that, as part of their regular pricing reviews, many of the concepts involved in a "should cost" review would be covered. However, they readily agreed that no reviews of the scope involved in the DOD F-111 aircraft engine effort had ever been conducted by them and that their in-house capability was not sufficient to conduct these reviews. They also expressed the opinion that there might well be situations **where** a review of this sort would be quite beneficial--especially on some of its programs that extend over a considerable period of time and where the contractor is not subject to a continued competitive environment. They stated, however, that their contracted effort was primarily one of research and development and that they believed that "should cost" reviews would be most beneficial in a manufacturing-type operation. They stated that it would be most difficult to consider a given program, such as the Apollo program, for this type of review.

AEC officials stated that the "should cost" concept appeared to have little application to most of their work, which is research, development, and engineering in nature or which involves the production of nuclear materials and is carried out by cost-type management contractors in Government-owned plants and laboratories. Although AEC does not perform should cost reviews, they believe that AEC's operating contractors do perform aspects of "should cost" in cases where substantial quantities of manufactured components must be procured.

GSA indicated that it did not have an in-house capability to perform reviews of this sort and stated that most of the items procured are common-use items which are generally purchased on a competitive basis. A good portion of GSA's

contracts are awarded on a formal advertised basis, and it is generally assumed that the competitive aspects common in these procurements provide assurance of getting a reasonable price. **GSA** officials did believe that savings could be accomplished on their procurements if they could follow some of the practices followed by commercial companies, such as multiyear procurements and selection of sources. They cited lack of funds as a major limiting factor in obtaining better prices.

During our discussions with officials of a Corps of Engineers District Office, we were told that, in evaluating proposals for construction work, they rely extensively on their own in-house estimate of what the work should cost. They believed that the Corps in its contracting had an advantage over the normal DOD procurement, since they generally (1) have a good definition of the work scope, (2) can specify precisely what they want, and (3) have good standards that they can use for arriving at an in-house estimate.

The Bureau of Reclamation indicated that it used procedures similar to those used by the Corps of Engineers.

## CHAPTER 4

### USE OF "SHOULD COST" CONCEPTS

#### BY INDUSTRY

"Should cost" concepts were being employed in varying degrees by the companies that we contacted. Some industry representatives we interviewed stressed that, to have an effective negotiation process, both parties need to make a thorough proposal review prior to negotiations. Two of the techniques that were specifically mentioned as being essential are (1) a clearly defined scope of work with good specifications and drawings and (2) an estimate of what the required item should cost, made independently of the manufacturer's proposed price.

These representatives characterized their relationship with their suppliers<sup>1</sup> as one of complete cooperation. As a result, we were told that postaward surveillance and periodic reporting are commonplace.

#### INDUSTRY PROCUREMENT PRACTICES

These "should cost" concepts are applied during both the preaward and the postaward surveillance phase of their procurements. Various industry officials told us that the use of "should cost" concepts during the procurement process helps to ensure the attainment of a fair and reasonable price for the item being purchased,

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<sup>1</sup>The term "supplier," as used in this report, refers to the manufacturer of a component or end item. "Buyer," on the other hand, refers to the organization purchasing the component or end item for resale to the consumer.

The relationship that exists between the Government and its contractors is usually referred to as Government/prime contractor. Prime contractors can award additional contracts creating a prime/subcontractor relationship.

The individuals we interviewed stated that, prior to negotiations, it is essential that there be a clearly defined scope of work and a realistic independent estimate by the buyer of what the required item should cost. Successful negotiations are partially dependent upon the care that is taken in identifying the scope of the work desired and being certain that the specifications and drawings are up to date; otherwise, it is extremely difficult to communicate meaningfully with potential suppliers. Furthermore, unless all prospective suppliers clearly understand what is involved in an effort, it is most difficult to evaluate their proposals.

Another "should cost" tool emphasized by industry is the careful preparation, prior to the start of negotiations, of an estimate of what the required item should cost. This estimate is made independently of the supplier's proposed price. Generally, if a buyer has an in-house capability to make the item, as many of the companies that we visited did, a make-or-buy analysis could approach a "should cost" estimate. Once this detailed estimate has been prepared, it, of course, provides the negotiator with a tool that he can use effectively during negotiations. Since he knows precisely what is required to make the item, any major deviation between the in-house estimate and the supplier's proposal can be discussed in greater detail.

Industry officials also pointed out that the capability to make an item in-house is a distinct advantage, not only in arriving at a prenegotiation position, but also during the negotiation process. This capability provides a considerable amount of leverage in arriving at a reasonable price. The buyer can use his potential capability of doing the work in-house as an alternative to contracting for the effort, should there be an impasse during negotiations,

Postaward surveillance on the part of many companies we visited encompassed complete involvement in the operations of their suppliers. Such involvement included (1) furnishing the supplier with technical personnel to assist in planning and to help in solving problem areas, (2) requiring regular and extensive reporting, and (3) meeting frequently to discuss past performance and plans for future performance.

It is not uncommon for industry to send engineers and other technical personnel into a supplier's plant to assist in planning for a more efficient operation and in solving various problems. In fact we were told that at times the supplier will request assistance in various technical areas; for example, one individual told us that his company had been requested on some occasions to furnish technical assistance to a supplier to help in planning for more efficient manufacturing operation. This assistance involved areas, such as selection of necessary manufacturing equipment and plant arrangement.

Reporting requirements imposed by industry upon its suppliers in many instances are quite extensive. In most instances, both technical and financial data are reported on monthly or quarterly basis and cover historical as well as budgetary data. In keeping with the cooperative atmosphere in the commercial marketplace, we also found that in some instances a supplier would furnish cost type data on a completely voluntary basis. Although the data may not be required under terms of the contract, it was believed that the better informed the buyer, the better the so-called partnership arrangement.

We were told of one instance where the supplier furnished the same budget report to the buyer that was prepared for his own management's use. This supplier believed that the customer should have the same data that he used; with this information, both parties could sit down and negotiate fair and reasonable prices.

## CONTRAST IN OVERALL OBJECTIVES IN INDUSTRY AND GOVERNMENT PROCUREMENTS

During our talks with industry officials, we expressed interest in some of the practices followed in awarding commercial contracts. It became apparent to us that significant differences in overall procurement objectives exist between Government and industry in their buyer/supplier relationships. Recognition must be given to the fact that (1) the basic ground rules and objectives in commercial buyer/supplier relationships are not the same, (2) the factors which motivate these parties are not similar in all respects, and (3) the relationships and cooperation between the parties are not identical. It should be recognized that many of the Government's programs and hardware are more sophisticated than those purchased in the commercial marketplace, and this of course makes pricing of products more difficult. One illustration is presented below,

### Commercial buyer/supplier objectives

In the commercial atmosphere both parties to a contract generally work toward a common objective of marketing the product at the most advantageous price so as to produce a consumer demand that will yield the best return on the investment. In the commercial market the buyer or retailer will generally survey the market and conduct a market analysis of the consumer demand that can be generated for a new item at a given price. Once a decision is reached that a project is feasible, the buyer works with the supplier to reduce production costs. Priority is given to those items that have a rather elastic demand curve (i.e., where a slight shift in price has a marked effect on sales volume).

To the extent that costs can be reduced, the market price may be decreased, thus generating an even greater consumer demand. The increased demand will directly benefit the supplier, since he can expect more work. Thus, from a long-range objective, it behooves both parties to work cooperatively toward this common objective.

This motivating factor, which makes a close cooperative bond in many commercial procurement actions, may not be present in Government procurements. Essentially, the

Government (1) predetermines the quantities needed and (2) decides how much money can be budgeted for a particular end item. If funds can be saved through cost reduction programs, it is very likely that such funds will be reprogrammed to buy other needed materials or services. If, on the other hand, the price is higher than originally anticipated, the Government must (1) budget additional funds, (2) try to stay within the budgeted limitation and get by with lower technical performance characteristics, or (3) buy a smaller quantity. Therefore, the Government contractor, through a cost reduction, does not stand to benefit in added sales volume as might be the case for the commercial counterpart.

## CHAPTER 5

### CONCLUSIONS

We believe that we have applied a number of "should cost" concepts in many of our previous reviews; however, we have not performed these reviews on a plantwide basis. Accordingly, we plan to complete several trial reviews which will be experimental in nature and will provide us with data to answer such questions as (1) what problems we can expect to encounter, (2) what size program should be reviewed, (3) what types of contracts should be selected, and (4) what benefits can be expected from such reviews. GAO's decision concerning development of a capability in the future and its extent will depend, in part, on the outcome of these trials, the benefits obtainable, and any actions taken by DOD relative to uses of a "should cost" program.

The degree of effectiveness that one can expect from these "should cost" reviews is largely dependent on the contractor's willingness to cooperate fully with the review team. Such cooperation should include a full and free disclosure of all pertinent data by the contractor's managers. It will also depend upon his reactions to the findings under these reviews.

The objectives of negotiating a fair and reasonable price, establishing specific definitions of the scope of work, and conducting thorough, well coordinated negotiations are, and should remain, a major goal of the Government procuring agency. To achieve these objectives, the Government agencies should, to the extent feasible, employ a capability to perform selective "should cost" reviews in its procurement programs, particularly on its major procurements and problem cases.

Although "should cost" concepts can be applied to the Government's procurement process during the prenegotiation phase and/or the postnegotiation surveillance phase, we believe that the most effective use of "should cost" review results would be obtained before the award of a contract. At that point in time, the results of a "should cost"

review not only would be of maximum effectiveness in assisting the Government negotiator in awarding a fair and reasonable contract but, more important, a potential Government contractor would be more likely to accept "should cost" findings and to agree to implement corrective procedures.

Because of familiarity with requirements, alternate courses of action, in-house technical knowledge of procured items, and the existing supporting agency personnel who are knowledgeable of contractors' operations, DOD should also provide a continuing capability to perform on a selective basis "should cost" types of reviews after the contract has been awarded--postaward. Such reviews could provide Government officials with data on (1) the contractor's performance and efficiency and **(2)** the adequacy of the Government prenegotiation review efforts.

**APPENDIX**

PRINCIPAL OFFICIALS OF THE  
DEPARTMENT OF DEFENSE, THE MILITARY SERVICES  
AND  
CIVIL AGENCIES  
CURRENTLY RESPONSIBLE FOR ADMINISTRATION  
OF ACTIVITIES DISCUSSED IN THIS REPORT

DEPARTMENT OF DEFENSE

SECRETARY OF DEFENSE	Melvin R. Laird
ASSISTANT SECRETARY OF DEFENSE (INSTALLATIONS AND LOGISTICS)	Barry J. Shillito
<b>DEPUTY</b> ASSISTANT SECRETARY OF DEFENSE (PROCUREMENT)	<b>John M. Malloy</b>
DIRECTOR, DEFENSE CONTRACT AUDIT AGENCY	<b>William B. Petty</b>
DIRECTOR, DEFENSE SUPPLY AGENCY	Lt. Gen. E. C. Hedlund, USAF

DEPARTMENT OF THE ARMY

SECRETARY OF THE ARMY	Stanley R. Resor
ASSISTANT SECRETARY OF THE ARMY (INSTALLATIONS <b>AND</b> LOGISTICS)	J. Ronald Fox
CHIEF OF ENGINEERS	Lt. Gen. Frederick J. Clark

PRINCIPAL OFFICIALS OF THE  
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AND  
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DEPARTMENT OF THE NAVY

SECRETARY OF THE NAVY	John H. Chafee
ASSISTANT SECRETARY OF THE NAVY (INSTALLATIONS AND LOGISTICS)	Frank Sanders

DEPARTMENT OF THE AIR FORCE

SECRETARY OF THE AIR FORCE	Robert C. Seamans, Jr.
ASSISTANT SECRETARY OF THE AIR FORCE (INSTALLATIONS AND LOGISTICS)	Phillip N. Whittaker

DEPARTMENT OF THE INTERIOR

SECRETARY OF THE INTERIOR	Walter J. Hickel
COMMISSIONER, BUREAU OF RECLA- MATION	Ellis Armstrong

GENERAL SERVICES ADMINISTRATION

ADMINISTRATOR	Robert L. Kunzig
COMMISSIONER, FEDERAL SUPPLY SERVICE	H. A. Abersfeller

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CIVIL AGENCIES  
CURRENTLY RESPONSIBLE FOR ADMINISTRATION  
OF ACTIVITIES DISCUSSED IN THIS REPORT (continued)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

ADMINISTRATOR	<b>Thomas O. Payne</b>
ASSOCIATE ADMINISTRATOR FOR OR- GANIZATION AND MANAGEMENT	<b>Bernard Moritz (acting)</b>

ATOMIC ENERGY COMMISSION

CHAIRMAN	<b>Glenn T. Seaborg</b>
GENERAL MANAGER	<b>R. E. Hollingsworth</b>