

DOCUMENT RESUME

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[Protest against Award of Cost Plus Incentive Fee Contract].
B-187325. May 20, 1977. 13 pp.

Decision re: Teledyne Ryan Co.; by Robert F. Keller, Deputy
Comptroller General.

Issue Area: Federal Procurement of Goods and Services (1900).
Contact: Office of the General Counsel: Procurement Law I.
Budget Function: General Government: Other General Government
(806).

Organization Concerned: Boeing Co.; Department of the Air Force.
Authority: B-184850 (1976). B-171349 (1971). B-181696 (1974).
B-164522(1) (1969). B-178887 (1974). B-176077(6) (1973).
B-175331 (1972). B-179603 (1974). B-185966 (1976). 52 Comp.
Gen. 870. 52 Comp. Gen. 874. 53 Comp. Gen. 977. 54 Comp.
Gen. 169. 55 Comp. Gen. 1111. Department of Defense
Directive 5000.28, May 23, 1975.

Company protested the award of a cost plus incentive fee contract on several contentions. The record does not support the contention that the contracting agency withheld data from the protester which was known to its competitor or that technical proposals were evaluated using data other than that furnished to all offerors. The agency's conclusion that the protester's proposed use of an untested design involved more risk than its competitor's use of a tested design was reasonable. Parametric and other cost-estimating techniques may legitimately be used by an agency to determine the credibility of each offeror's production estimates and most probable cost to the Government. (Author/SC)

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DECISION



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

FILE: B-187326

DATE: May 20, 1977

MATTER OF: Teledyne Ryan Aeronautical

DIGEST:

1. Record does not support contention that contracting agency withheld data from protester which was known to its competitor, or that technical proposals were evaluated using data other than that furnished all offerors, or that protester's competitor was given credit for design features which were not included in RFP.
2. Agency's conclusion that protester's proposed use of untested design involved risk as measured against competitor's use of tested design is reasonable.
3. Parametric and other cost estimating techniques may legitimately be used by agency to determine credibility of each offeror's production estimates and most probable cost to the Government.

Teledyne Ryan Aeronautical (Teledyne) protests the award to the Boeing Company of an Air Force cost plus incentive fee (CPIF) contract for the design, development, fabrication and test of a Remote Piloted Vehicle (RPV) for the Compass Cope Program.

Teledyne's basis of protest is in essence that (i) Boeing acquired a competitive advantage by performing studies which gave it knowledge of the payload volume requirements for the aircraft and by being given credit for design features which it prepared as a result; (ii) Boeing was given credit for prototype performance which was not an evaluation criterion, while Teledyne was not, and (iii) the Air Force used cost comparison techniques that were lacking in credibility.

Background

A contract was awarded to Boeing on July 19, 1971, to design, fabricate and test two prototype aircraft, and a contract was awarded to Teledyne on June 13, 1972, requiring the modification of two AQM-91A aircraft to the "appropriate" configuration and for flight demonstration. The firms were also furnished different engines by the Government for use in their respective prototypes so that as between the contractors there was no common base from which to measure performance. According to the Air Force, both contracts were successfully concluded, and the feasibility of the concept sufficiently demonstrated. Additional studies were subsequently funded for both firms as a result of unsolicited proposals. Boeing

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was awarded a contract on December 20, 1974, for systems engineering studies, and Teledyne was awarded a contract on December 20, 1974, for further flight testing "to further define the Talar Semi-Automatic landing equipment, demonstrate an operational payload capacity and establish an interface with the Federal Aviation Agency." In addition, Boeing completed further studies "to develop data on applicability of military specifications, handbooks, and standards; on design to cost; on serviceability/vulnerability; and on digital system control redundancy." All the foregoing efforts are reported to have been successfully concluded. Both firms were informed of the other's activities, with Boeing attending the Teledyne flight tests and Teledyne attending all Government reviews of the Boeing systems engineering studies.

The Air Force advises that each firm received the completed report of the other firm's "extended" activities, except for certain cost and design data which were deleted from the Boeing report as proprietary information. Although Teledyne sought the deleted information through the Air Force program office, access was denied upon the determination that the deleted material was "proprietary or configuration sensitive." Teledyne was so advised by letter dated January 15, 1976, and according to the Air Force, no further mention of that fact was made to the program office until the current protest. In addition, Boeing participated in another engineering study which, although not directly related to the Compass Cope program, forms the basis for Teledyne's "competitive advantage" argument.

Because of the above-mentioned studies, Boeing and Teledyne were considered to be the only firms qualified to participate in the instant competition. Request for proposals (RFP) F33657-76-R-0342 was issued to Teledyne and Boeing on April 23, 1976. As set forth in the RFP, selection was to be accomplished in the following manner:

"Basis for Award. Selection of the Compass Cope contractor will be made on the basis of an integrated assessment by the Source Selection Authority of the proposals submitted in response to RFP F33657-76-R-0342. In essence, the integrated assessment will involve a determination by the government of the overall value of each proposed system measured in terms of system capability in context with system costs, recognizing that subjective judgment on the part of the government evaluators is implicit in the entire process. Throughout the evaluation, the government will consider 'Correction Potential' when a

deficiency is identified in the proposal. Selection will be based on the following three items listed in their relative order of importance.

(1) The technical excellence and appropriateness of the design to meet the stated operational performance requirements and goals.

(2) The most probable cost to the government to acquire, operate and support the systems in accordance with the operational scenarios provided.

(3) The ability to manage and produce the system to meet the stated requirements and goals."

In addition, the RFP stated that the "Offeror's submitted cost and pricing information covering the development program, Design-To-Cost (DTC) goal, Not to Exceed (NTE) proposal and Operations and Support Costs will be reviewed and evaluated to determine reasonableness, realism and completeness in context with the proposed technical/management approaches." Offerors were also advised that emphasis would be placed on determining the most probable cost for the development program by the use of comparative analysis techniques; that the proposed DTC goals, NTE amounts and operation and support information will be compared to relevant portions of the development proposal for consistency; and that comparisons would be made between proposals and government cost estimates and parametric data to ascertain realism.

After initial evaluation of both proposals were made by the Source Selection Committee, and cited deficiencies corrected by the offerors, technical and cost discussions were held with both firms. Best and final offers were received on August 23, 1976. The Air Force states that both firms were found to be technically acceptable. However, among other things, the Boeing design provided a detachable nose payload compartment with almost twice the volume required by the RFP, so that the multiple payloads up to 2,000 pounds required by the specification could be carried in the primary compartment instead of in other locations in the vehicle or in fuselage or wing pods as in the Teledyne design. In addition, the Boeing design provided an emergency power unit which provides thrust and thus improved "come home" capabilities in certain instances in the event of engine failure, instead of merely furnishing electrical power to support equipment control and glide capability as in the Teledyne design. The Air Force considered these features as offering substantial advantages in the air vehicle design. Also, the detachable nose section was considered to offer operational advantages. Finally, Boeing's most probable cost was estimated to be somewhat lower than Teledyne's.

On August 26, 1976, the Source Selection Authority (SSA) made the decision to award the contract to Boeing, and the necessary approvals were obtained on August 27, 1976. The contract was awarded with notice to Teledyne on the same date. The Air Force states that notice of the protest by Teledyne was received on August 30, 1976.

Teledyne was advised that award was made to Boeing because:

"a. The technical excellence and appropriateness of their proposed design to meet the stated operational performance requirements and goals was judged best.

"b. The most probable cost to the government to acquire, operate and support their proposed systems in accordance with the operational scenarios [stated in detail in the RFP] was judged best."

Competitive Advantage

Teledyne asserts that Boeing gained a significant competitive advantage over Teledyne by virtue of the knowledge Boeing acquired in the performance of a design study for the Precision Locator Strike System (PLSS), a potential payload for the aircraft to be developed under the contract in question. Teledyne relates Boeing's asserted superior knowledge regarding PLSS payload requirements to Boeing's design of more volume for the payload than was required by the RFP (115 cu. ft. vs. 80 cu. ft.) and the technical merit accorded to the Boeing design by the Air Force as a result, all to Teledyne's competitive disadvantage. Also Teledyne asserts that Boeing had an unfair advantage because it worked with the same Air Force personnel under the study contract who prepared the technical portion of the RFP under protest.

It is the position of the Air Force that Boeing gained no competitive advantage over Teledyne because the study contract in question related to the Precision Emitter Locator Strike System (PELSS) for manned aircraft; that PELSS was potentially only one component of the PLSS; that the known data necessary for the technical proposal relating to weight, volume and electrical requirements for the potential PLSS payload was equally available to both competitors for this procurement and that this was the data used in the evaluation of both technical proposals; that the Boeing study contract was one of two competitive contracts involving design/trade studies and preparation of proposals for the full scale development of the PELSS, the results of which were delivered by both competitors approximately

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4 weeks after the receipt of proposals for the contract in controversy; and that neither of those PELSS proposals had been selected for full scale development even as of the date the instant protest was lodged. Moreover, the Air Force asserts that both the Boeing and Teledyne proposed designs were determined to be equally capable of carrying the PLSS payload and had satisfactory interface requirements. The Air Force also states that the evaluation did not address the RPV's ability to carry any specific payload, and that the technical merit afforded Boeing's larger than required equipment compartment volume was not related to PLSS accommodation.

We find no evidence of unfair competitive advantage. Our review of the record does not support the charge that the Air Force withheld any information regarding payload requirements for the Compass Cope RPV or that the Air Force evaluators based their evaluation of the technical merits of either proposal on such undisclosed information. Nor are we able to conclude that Boeing's study contract conferred any favored treatment on it as a result of working with the Air Force personnel concerned with the PELSS project.

From the record, it is clear that both firms' proposed designs were considered by the evaluation team as acceptable for the potential PLSS package, as well as any multiple payloads. The difference between the two design approaches in this regard was the location of the additional payload's volume and weight. As stated by evaluators:

"[T]he payload volume/weight required by the RFP was 60 cu. ft./1200 lbs. which will accommodate all expected single Compass Code payloads. The RFP also required a capability to carry up to 2000 lbs. with some reduction in performance (mission altitude and/or endurance) allowed. This latter requirement is to accommodate multiple payloads for combined missions. Part of this payload could be carried in other locations in the vehicle or in pods. The large volume proposed by Boeing will allow carrying multiple payloads up to 2000 lbs. internally. * * * the large payload volume * * * should provide a significant improvement in operational flexibility of the system."

The protester's allegation that the Air Force withheld essential information without evidence of the fact is not sufficient to controvert the agency's assertions to the contrary. Aerospace Engineering Services Corporation, B-184350, March 9, 1976, 76-1 CPD 164. While

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conceivably Boeing may have acquired knowledge of the PLSS as a result of its PELSS studies, we are unable to conclude that the information made available to Teledyne was incomplete for the purpose of preparing the technical proposal.

The record shows that Boeing's proposal was considered to offer substantial advantages in this regard because of the way it treated the 2,000 pound payload requirement and the resulting operational flexibility achieved through the use of a removable/interchangeable payload compartment module. Clearly the 2,000 pound payload capacity was a requirement of the RFP. The detachable and interchangeable payload compartment features offered obvious operational advantages, since payloads could be mounted within the compartment, checked out and prepared for a mission without affecting the availability of the air vehicle for other missions. Obviously, the Air Force evaluators would consider the manner in which the payload requirements were treated by each offeror in the context of considering the "technical excellence and appropriateness of the design to meet * * * operational performance requirements and goals." We think it clear that the evaluators, consistent with the evaluation criteria, would give credit for an offer proposing an innovative approach such as a detachable payload compartment of sufficient volume to carry the entire 2,000 pound payload requirement, even though the RFP did not specifically state that such was a requirement. There is nothing in the RFP which limits the payload compartment to the 60 cu. ft. /1,200 pound capacity specified or requires that the additional capacity be relegated elsewhere in or on the vehicle. Teledyne's contention in this regard is denied.

Credit for Prototype Performance

The RFP Executive Summary letter states in pertinent part that:

"System performance requirements should be viewed as the best estimate of currently understood operations requirements. The offeror must address both required and desired performance specification. * * * The Government's interest is to provide considerable flexibility to each offeror to propose a program which takes maximum advantage of past feasibility demonstration experiences/ system engineering studies, to produce a * * * system that has acceptable performance and is within cost objectives." (Emphasis added.)

Protester's complaints regarding prototype activity involve basically what it believes to have been discriminatory actions by the Government in failing to consider what it terms its "exemplary prototype program." According to Teledyne, its program was more successful than Boeing's, yet that performance was not considered in proposal evaluation, while Boeing's was. Teledyne states that it concentrated its efforts on subsystem design (advanced turbofan engine, use of on-board computer control for redundancy management as examples), but that in order to meet RFP requirements configuration changes to the prototype were obviously necessary. Teledyne states that the Air Force's concern with its new air foil (wing) design was unfair in view of its successful prototype demonstration (17 flights). The protester states that in contrast the Air Force accepted the three-flight Boeing demonstration as a lesser risk.

Our review of the technical evaluation indicates that whatever minor risk was attributed to the use of a new air foil design was entirely consistent with the Executive summary letter. The proposed Boeing design incorporated the same wing used in its prototype studies, while Teledyne chose a wing design which differed from that used in its prototypes. The slight risk attributed to the untested Teledyne wing was not, therefore, a matter of crediting one prototype program to the exclusion of the other, rather it was a matter of assessing the risk of using a previously tested design versus an untested design. See, B-171349, November 17, 1971. Moreover, the technical choice of Boeing over Teledyne was made not on the basis of individual deficiencies or strengths of either firm, but rather on a consideration of the overall approach of both firms, and what appears to us to be a reasonable determination of the total and operational utility of one design over the other.

As we stated in Applied Systems Corporation, B-181696, October 19, 1974, 74-2 CPD 195:

"* * * It is not the function of our Office to evaluate proposals and we will not substitute our judgment for that of the contracting officials by making an independent determination as to which offeror in a negotiated procurement should be rated first and thereby receive an award. B-184522(1), February 24, 1969. The overall determination of the relative desirability and technical adequacy of proposals is primarily a function of the procuring agency and in this regard, we have recognized that the contracting

officer enjoys a reasonable range of discretion in the evaluation of proposals and in the determination of which offer or proposal is to be accepted for award as in the Government's best interest. B-178887(2), April 10, 1974, B-176077(6), January 26, 1973. Since determinations as to the needs of the Governments are the responsibility of the procuring activity concerned, the judgment of such activity's specialists and technicians as to the technical adequacy of proposals submitted in response to the agency's statement of its needs ordinarily will be accepted by our Office. B-175331, May 10, 1972. Such determination will be sanctioned by our Office only upon a clear showing of unreasonableness, an arbitrary abuse of discretion, or a violation of the procurement statutes and regulations. B-179603, April 4, 1974; B-176077(6), January 26, 1973.

Based on our review of the record and relevant portions of the technical evaluation reports, we believe that the selection of the Boeing proposal as technically superior had a reasonable basis, and we therefore have no reason to question that determination.

Cost Comparison Techniques

Protester's next ground for protest is that the Air Force's cost comparison techniques lacked credibility. In this connection, Teledyne points out that while Boeing's best and final offer was less than Teledyne's for the contract awarded (Phase I) (\$81.85 million vs. \$87.68 million, including Government furnished property [GFP]), Boeing was higher for the total program (\$179.88 million vs. \$182.73 million based on development cost, not to exceed price, and GFP. However, Government estimates of the most probable cost for the total development and production program determined the total program cost for the offerors to be \$229.78 million for Boeing and \$240.54 million for Teledyne.

Essential to an understanding of the protester's contentions is a familiarity with the Design-To-Cost (DTC) goal concepts included in the solicitation, and their application to the cost evaluation factors. The Joint Design-To-Cost Guide (1973) issued by the Departments of the Army, Navy and Air Force, defines DTC as a process utilizing unit cost goals as thresholds for managers and as design parameters

for engineers. The DTC goal represents what the Government has established as an amount it is willing to pay for a unit of military equipment or major subsystem which meets established and measurable performance requirements at a specified production quantity and rate during a specified time. Unit production costs are only one aspect of the Life Cycle Cost (LCC) to the Government, the latter being defined as the total cost to the Government of acquisition and ownership, including the cost of development, acquisition, operation, support and disposal. DOD Directive 5000.28, May 23, 1975. As conceived, therefore, DTC is a design parameter to be considered in the acquisition of major military hardware, and consequently is directly related to the specific designs proposed by offerors in the negotiation of design and development contracts. The realism of those goals as related to the proposed designs and the LCC of those designs (to the extent they can be measured) are part of the award evaluation.

The RFP contained the requirement that offerors propose DTC goals in their proposals for the Phase I development contract, as well as not to exceed (NTE) prices for the anticipated Phase II production portion of the procurement. The NTE price, applicable to the production of 20 aircraft and 2 ground control communication systems is included in the Phase I contract; however, the Phase II contract is to be negotiated only when development is completed some years hence.

As conceived by the RFP, the Phase II NTE price is based on the negotiated DTC goal (as adjusted), e.g., an agreed sum is added to the DTC unit prices to determine the equivalent NTE unit prices. Adjustment occurs in the DTC goal during the course of development as the hardware is refined, as engineering changes occur, and because of inflation.

The development contract requires that the contractor submit a Fixed Price Incentive Fee (FPIF) proposal for Phase II production upon completion of the development contract, with the NTE (for the principal portion of the procurement) as the ceiling price and the DTC as the target cost. However, the contract also provides for modification of the developed hardware if the contractor is "unable to propose at prices the same as or less than the [adjusted] DTC prices" with consequent downward adjustment in the target cost and profit. In other words, there is no firm obligation to manufacture the hardware at the DTC as ultimately determined, and certainly not within the NTE price agreed to in Phase I. Consequently, although the NTE appears to be a fixed ceiling for the contract to be negotiated some

time in the future, it is subject to fluctuation because of the continuing refinement of the DTC goal through the development phase, which of necessity bears a direct relationship to the technical design approach proposed by each offeror in the RFP.

Teledyne's complaints regarding the Air Force cost evaluation techniques are based on the asserted failure of the Air Force to consider the NTE prices offered for Phase II production, relying instead on parametric estimating to arrive at the most probable cost to the Government. Protester asserts that the NTE is a ceiling and that it is impossible for the parametric price estimate to be more indicative of "most probable cost" to the Government.

Teledyne states that "[b]ased upon published information, it would appear that [Teledyne's] best and final offer for Phase I was somewhat higher than Boeing's Phase I offer [and that] Boeing's NTE ceiling price for phase II was considerably higher than TRA's * * *." Teledyne asserts that it was advised at the debriefing that the sole basis for price evaluation was a parametric estimating technique and that the Phase II DTC/NTE ceiling proposed amounts were not used. Teledyne characterizes as "inconceivable that any one could ignore substantial pricing documentation in favor of parametric estimates."

The Air Force, on the other hand, asserts that in estimating most probable cost, the cost data was not ignored as alleged and that the parametric data was not the sole basis of the Government's most probable cost estimates. The Air Force states that parametric estimates were made of the costs associated with airframe integration, system test and evaluation and program management; that "grass roots" estimates were used for the proposed propulsion systems along with engineering cost estimates for their modification for use with the air vehicle; "grass roots" estimates for costs associated with avionics and computer software were used. In addition, the Air Force says that offeror-supplied data for computation of the non air vehicle and ground control communication system Phase II production costs were used, while standard Air Force cost factors were applied for operation and support costs. The Air Force also states that the Phase II NTE amounts were not used in computing the most probable cost to the Government to acquire, operate and support system, because these amounts were not fixed. The Air Force also advises that the SSA had the full benefit for comparison of each offeror's proposed costs and the Government's estimates of most probable costs, and that contractor selection was based on "an integrated assessment of the cost, as proposed by the parties compared with Government estimates of the most probable cost thereof," as stated in the RFP.

Our examination of the Air Force independent cost estimating models used to determine the most probable cost for the development, production and operating phases confirms the Air Force statements. In the area of tooling carryover credits from the prior prototype programs, for example, Teledyne received 80 percent credit and Boeing 90 percent, factors which appear reasonable in view of the similarity of the Boeing proposed design and its prototype. For the production phase, the parametric model was based on historical data derived from prior Teledyne and Northrop RPV experience, while estimates for operating and support costs were based on standard Air Force factors as well as offerors' estimates.

On the other hand, each of the offeror's proposals for both Phase I and Phase II were fully reviewed for the purpose of negotiation based on technical analysis of each proposal, and in light of DCAA, DCAS and Air Force cost team reviews of the prime and major subcontractor proposals. Moreover, life cycle cost estimates were developed for the three operational scenarios specified for evaluation in the contract on the basis of information supplied by the offerors as well as by use of standard Air Force data. In short, the record shows that the cost analysis was complete, thorough, and was applied equally to both offerors.

We recognize, that the Government's independent cost estimate of the program costs could only provide educated guesses for comparison with the offerors' projections, but we think the misunderstanding in this case is based primarily on the protester's assertion that the NTE price offered in its proposal is to be equated with a firm ceiling. As we have pointed out earlier, the NTE price is not fixed, but is rather a factor of the DTC and consequently very much related to the specific design approaches proposed. In addition, the NTE only covers the air vehicle (excluding propulsion systems) and the ground control communication system but does not include support equipment, training, project management, data management, and spares (all of which were estimated for budgetary planning purposes at approximately 30 million dollars).

The Joint Design-To-Cost Guide, supra, specifically recognizes that the normal practice of separate technical and cost evaluation of an offeror's proposal might not suffice in the evaluation of proposed technical approaches for the purpose of determining the creditability of each offeror's production estimates, and recognizes the use of parametric and engineering estimates as necessary evaluation tools. Moreover, the contract awarded to Boeing for the development of the RPV was a CPIF contract, and we have specifically recognized that

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evaluated costs rather than proposed costs provides a sounder basis for determining the most advantageous proposal to the Government in a cost reimbursement environment. 52 Comp. Gen. 870, 874 (1973); Morris Guralnick Associates, Inc., B-185966, July 13, 1976, 76-2 CPD 40.

A procuring agency's judgment as to the methods used in developing Government cost estimates and the conclusions reached in evaluating the proposed costs are entitled to great weight, since the agencies are in the best position to determine cost realism and corresponding technical approaches and must bear the major criticism for any difficulties experienced by reason of a defective analysis. Raytheon Company, 54 Comp. Gen. 169 (1974), 74-2 CPD 137. We have also recognized that the Government's estimates of costs in the award of cost type contracts are no more than informed judgments of what costs would be incurred by the acceptance of a particular proposal, and that although the judgment may or may not prove to be accurate as the contract progresses, hindsight would not serve to invalidate a judgment made at the time of award. Grey Advertising, Inc., 55 Comp. Gen. 1111 (1976), 76-1 CPD 325. We believe that the same principles are applicable in this case even though a form of fixed price contracting is contemplated as part of the total program at some future date. We have no basis to conclude that the cost evaluation methods were improper or lacking in credibility.

Conclusion

The ground rules for the selection of the development contractor in this case were fully and completely set forth in the RFP, including notice that the selection process involved subjective judgments in the proposal analysis. We are of the opinion that the Air Force evaluators had a reasonable basis for concluding that the Boeing design was superior overall. In addition, we believe that the record adequately demonstrates that the offerors' proposed costs for the development contract were reasonably evaluated and that the most probable cost to the Government was determined utilizing reasonable estimating techniques equally applied to both offerors.

We have consistently held that the source selection authority is vested with a considerable range of discretion, and in exercising that discretion, it is subject only to the test of rationality. Grey Advertising, supra. The selection of the contractor ultimately remains the function of the SSA, with our role being limited to testing the reasonableness of the result. Lockheed Propulsion Company, 53 Comp. Gen. 977 (1974), 74-1 CPD 339. We believe the record demonstrates the SSA selection to have been rationally founded and in accordance with the evaluation criteria included in the RFP.

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The protest is denied.

Deputy

P. J. K. 1/14/44
Comptroller General
of the United States