

DECISION

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

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FILE: B-183704

DATE: October 10, 1975

MATTER OF: Teledyne Lewisburg
Oklahoma Aerotronics, Inc.**DIGEST:**

Contracting agency's reasonable estimate of man-hours necessary for satisfactory performance of fixed-price contract may not be relied on to reject proposals which contain significant deviation from estimates without asking offerors to explain discrepancies since proposals may nonetheless be advantageous to the Government. Since record indicates that two offerors were not adequately informed of existence of deviation prior to rejection of their proposals, they should now be allowed to explain their proposed utilization of man-hours and have their proposals reevaluated on that basis.

Teledyne Lewisburg and Oklahoma Aerotronics, Inc. (OAI), have protested the rejection of their proposals and award of a contract to any other offeror by the United States Army Electronics Command (ECOM) under request for proposals (RFP) No. DAAB07-75-R-0776, which contemplated the award of a firm, fixed-price contract for the production of 1,200 AN/ARC-115 () radio sets. Both proposals were rejected because they offered substantially less man-hours than ECOM's estimate of man-hours necessary for successful contract performance; both protesters claim that the ECOM estimates were inflated and of little applicability to their respective proposals. In addition, Teledyne claims that it in fact offered the approximate number of man-hours ECOM desired, but that ECOM failed to realize this because it neither properly evaluated the Teledyne proposal nor conducted meaningful negotiations with it.

The RFP contained the following information relevant to evaluation of proposals:

"EVALUATION AND AWARD FACTORS

"D.1 Basis for Award

a. All proposals will be evaluated against the evaluation factors and subfactors set forth in D.2 below. To receive consideration for award, a technical rating of acceptable must be achieved in each factor and subfactor. Any award to be made shall be to that responsive, responsible offeror who submits the technically acceptable, lowest priced proposal.

"NOTE: To receive a technical rating of acceptable for a factor or subfactor the proposal must clearly demonstrate with respect to each factor and subfactor that the offeror understands the technical requirements, that he has identified specific production problems, if any and that his approach provides reasonable certainty of successful performance. (See D. 3)

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"D. 2 Technical Factors and Subfactors to be Evaluated

Each of the following factors shall be considered equally important for the purpose of determining the technical acceptability of each offeror's proposal. Subfactors are likewise equally important to each other within each factor.

"Factor A Production Engineering Approach (See D. 3 Factor A)

* * * * *

"Factor B Manpower Application (See D. 3 Factor B)

- (1) Engineering
- (2) Direct Labor - Fabrication
- (3) Direct Labor - Test

"Factor C Materials (See D. 3 Factor C)

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"D. 3 Technical Evaluation Approach

a. * * *The evaluation will determine whether the proposal demonstrates the following for each factor/subfactor:

- (1) Understanding of Technical Requirements: The proposal must demonstrate clear understanding of all technical features involved in meeting the technical requirements, identify production uncertainties where applicable, and provide specific proposals for their resolution.

(2) Feasibility of Approach with Supportive Evidence:
Soundness of approach and the extent to which performance is contingent upon available devices and techniques.

(3) Completeness: The proposal must demonstrate that all technical requirements have been considered and are completely defined and satisfied. Each proposal will be evaluated strictly in accordance with its written content. The Government will not assume the offeror will perform effort not specified in his written proposal. "

Teledyne, OAI, and five other offerors submitted proposals. The Teledyne and OAI proposals were regarded as technically unacceptable as submitted but were included in the competitive range as susceptible of being made acceptable. Oral negotiations were then conducted with both offerors, during which they were given letters outlining areas which ECOM regarded as proposal deficiencies. Subsequently, both offerors submitted revised proposals. These proposals were evaluated by ECOM's Technical Evaluation Group, which viewed the proposals as failing to cure certain deficiencies regarding proposed man-hours. Consequently, both proposals were treated as unacceptable and no longer within the competitive range. Best and final offers were requested from the four offerors remaining in the competitive range, and although they have been evaluated, award has not been made pending resolution of the protests.

The record shows that the Technical Evaluation Group prepared a list of questions and comments concerning the initial proposals submitted by Teledyne and OAI. Several of these questions/comments involved proposed manpower application. During the negotiation sessions, these questions/comments were provided in written form to each offeror along with a covering letter informing the offerors that they could submit a revised proposal "to cure these deficiencies." One of the written comments provided to Teledyne stated that "The offeror must review all engineering hours for adequacy and revise if necessary." The comment furnished to OAI stated that "Engineering hours should be reviewed and revised if necessary." Similar comments were furnished to both Teledyne and OAI with respect to their proposed testing hours. The two offerors then revised their proposals; among the revisions was an increase in the proposed number of engineering man-hours. Nevertheless, the Technical Evaluation Group concluded that the revised proposals were unacceptable because the "proposed use of engineering man-hours * * * fails to demonstrate an understanding of the engineering effort required for this procurement." Teledyne and OAI were regarded as offering 12,428 and 12,553

man-hours of engineering effort respectively, while ECOM's estimate was more than 20,000 hours. OAI's proposal was also regarded as deficient because it offered 17,070 hours for testing while ECOM's estimate of the minimum testing hours needed was 37,315.

According to ECOM, its estimate of required engineering man-hours was "based on extensive experience on four production contracts for this and similar radio sets * * *." Teledyne asserts, however, that this prior experience involved sole-source or limited competition situations which did not provide a proper basis for an estimate by which other companies could be judged. Both protesters state that they have established an efficient operating function headed by a streamlined management, and that ECOM's estimate improperly penalizes them for this. They also claim that the ECOM estimate is erroneous because of certain factors that were included in that estimate. These factors are identified as a "fatigue and delay" factor and as engineering/management coordination. The protesters claim that these factors might apply to some companies, but do not apply to the efforts of their professional staffs. In addition, the protesters disagree with ECOM's categorization of certain efforts as engineering labor.

The contracting officer explains the development of the estimate as follows:

"The Government estimate of engineering hours was prepared by a team consisting of technical representatives from the Avionics Laboratory, Production Engineering Division, and the Product Assurance Directorate. The members of this team are recognized as highly experienced experts with extensive experience with radio and communications equipment of similar complexity and technology (TAB L). The objective of this team's effort was to develop their estimate of the minimum acceptable engineering hours to perform the major tasks required for successful performance of this contract. The major engineering tasks were first identified (TAB J) and then an estimate of hours was developed for each task. The Government estimate of engineering hours was prepared assuming maximum contractor efficiency. For example, the estimate assumes no rejection and subsequent revision of contractor-submitted Engineering Change Proposals (ECP's) and other software. In addition, estimates for minor engineering tasks, such as engineering travel time, engineering consultation for TECOM testing (CLIN 0005), and contractor representation for flight tests (Subsection F.12), were

not included in arriving at the total estimated hours. The task estimates were derived from actual hands-on experience on the part of the team members with substantially equal tasks on this and similar equipment and software. The hands-on experience was acquired as a result of joint in-plant contractor-Government engineering effort and independent Government effort. In one instance (sustaining engineering for fabrication and assembly), where hands-on experience was not available, standard industrial estimating techniques were utilized. Some of the procurements from which specific experience was acquired for making a valid Government estimate of minimum engineering hours required to perform this RFP are as follows: Contract DAAB07-71-C-0117, Radio Set AN/ARC-114A, E-Systems, Inc., Memcor Division, Huntington, Indiana; Contract DAAB07-71-C-0290, Radio Set AN/ARC-116(), Florida Communications and Electronics, St. Petersburg, Florida; Contract DAAB07-71-C-0029, AN/ARC-114 and 115, GTE-Sylvania, Buffalo, New York; and Contract DAAB07-71-C-0126, Direction Finder Set, AN/ARN-89A, Emerson Electric Company, St. Louis, Missouri. Each of these procurements required extensive Government participation in engineering tasks and oftentimes required that Government engineering personnel spend lengthy periods of time on TDY at the contractor's plant working in conjunction with the contractor's engineering staff. It should be emphasized that the Government's estimate of engineering hours was not developed by using any previous contractor's estimated or actual hours for the procurements listed above, nor were they developed from or based on the estimated or actual hours experienced by GTE-Sylvania on the development contract. In addition, it should be noted that a "fatigue and delay" factor of 15 % was applied in arriving at the total estimated engineering hours, but the factor utilized is considered to be a normal estimate of standard allowances for a procurement of this complexity."

The propriety of a contracting agency's use of its own independent estimates as an aid in determining the acceptability of proposals is well established. See, e.g., Raytheon Company, 54 Comp. Gen. 169 (1974); 52 id. 198 (1972). Such estimates may pertain both to costs,

B-183704

Raytheon Company, supra, and 50 Comp. Gen. 390 (1970), and to items which contribute to cost such as required man-hours. 53 Comp. Gen. 240 (1973); B-176311(1), October 26, 1973. We have held that the "administrative judgment as to which method should be used" to develop the estimates "is entitled to great weight" and "may not be overruled by this Office, so long as it is reasonable." B-176311(1), supra; see also Vinnell Corporation, B-180557, October 8, 1974. At the same time, we have objected to the evaluation of proposals and selection of an offeror for award on the basis of an estimate that appears to be faulty. Vinnell Corporation, supra.

In the instant case, however, the record does not support the conclusion that ECOM's method of arriving at its estimate for engineering man-hours was unreasonable or that the estimate itself was faulty. Essentially what this record shows is that ECOM developed man-hour estimates by task, and then added 20 percent for engineering/management coordination and 15 percent for fatigue and delay. In this regard, we cannot say that ECOM was unreasonable in utilizing its actual prior experience with substantially equal tasks on similar equipment. Neither can we say that ECOM's inclusion of certain items in engineering labor was arbitrary or otherwise unreasonable merely because the protesters do not agree with ECOM's approach. In addition, while it may well be true that the protester's professional staffs are such that ECOM's allowance for engineering/management coordination and fatigue and delay would have only minimal applicability to them, this would not invalidate the estimate itself since, unlike the situation in Vinnell Corporation, supra, where all offerors in the competitive range deviated substantially from the Government estimate, here, we are advised, the four offerors in the final competitive range all proposed man-hours in excess of ECOM's estimate. Accordingly, we are unable to object to ECOM's use of its estimate for engineering man-hours. See 53 Comp. Gen. 240, supra.

With regard to the estimated man-hours necessary for testing, the contracting officer reports:

"The Government estimate of testing hours was prepared in a manner similar to that of the engineering hours. The individual testing requirements were identified from the equipment specification and the requirements of the RFP (TAB D). Each testing requirement was then broken down into the individual manual operations necessary to perform the test. An estimate of the actual minimum essential time required to perform each operation was then developed,

utilizing actual Government testing experiences for these or similar testing operations performed at airframe manufacturers' plants, radio set manufacturers' plants, and at ECOM facilities. These estimates were then totaled and factored in accordance with the number of units to be tested to arrive at a minimum acceptable number of testing hours considered to be necessary for a demonstration of understanding of the test requirements. It should be noted that these test hours were developed without including factors for standard allowances such as fatigue and delay. In addition, in developing the test hours the team members assumed a zero failure rate, no troubleshooting and no re-testing in order to arrive at a minimally acceptable figure. It should be noted, however, that under normal production conditions, it is recognized that the testing hours would be expected to be higher because of these factors."

The record does not entirely support the contracting officer's statement. Tab J of the Army's administrative report filed in response to OAI protest suggests that hours for troubleshooting and retesting were included in ECOM's estimate of testing hours. Nevertheless, OAI's objections to the testing estimate, which are based on OAI's belief that the estimate comes from an obsolete testbook formula rather than actual experience and that it is not applicable to OAI's method of performing frequency range channel checks, do not persuasively indicate that the estimate, in general, is not valid. As noted above, "great weight" attaches to administrative methods of determining estimates. In addition, we have frequently pointed out that the amount of testing necessary for determining the acceptability of a product is a matter within the sound discretion of the contracting agency. See Hoffman Electronics Corporation, B-182577, June 30, 1975, 54 Comp. Gen. ___, and cases cited therein. We therefore must regard ECOM's testing estimate also to be unobjectionable.

However, although the estimates are themselves unobjectionable, we do not agree with how they were used in this case. As indicated, estimates are a legitimate and recognized aid for use by an agency in determining the acceptability of proposals. They are useful because in general they provide an objective standard against which an offeror's understanding of requirements and the realism of proposals submitted can be measured. Estimates are particularly useful in evaluating proposals for a cost type contract since the Government must assume the risk of paying for whatever reasonable costs are incurred by the contractor in performing the contract, regardless of the extent to which those costs might exceed those originally proposed. For that reason, we have stated that it is evaluated realistic costs, rather than proposed costs, which provide a sounder basis for determining the most advantageous proposal when a cost reimbursement contract is to be awarded. 52 Comp. Gen. 870 (1973).

Under a fixed-price contract, however, the contractor is responsible for performing the contract at the contract price, utilizing whatever number of man-hours is necessary to adequately perform that contract. While we have recognized that an agency may rely on its own estimates of the manning levels necessary for satisfactory contract performance when negotiating a fixed-price contract, see 49 Comp. Gen. 625 (1970), we believe that the agency should determine in such cases whether a proposal offering less than the agency's estimate is nonetheless acceptable despite the deviation. In this regard, it must be recognized that estimates are no more than informed guesses, frequently based on an agency's experience with its previous suppliers. It may well be that in some instances the estimates have little or no applicability to certain other companies, either because of the agency's limited experience base or because of some unusual aspect of those other companies. In such instances, any absolute reliance on estimates could have the effect of arbitrarily and unfairly penalizing an innovative or unusually efficient firm and depriving the Government of the benefits available from such a firm. In addition, when offerors are unaware of the Government's estimate or of the elements that make up that estimate, it is possible that proposals will be structured so that they appear to deviate from the estimate when in fact they do not. This is precisely what Teledyne alleges occurred here.

In situations where the agency estimate is indicated in the solicitation, we think it would be reasonable for the agency to require offerors to justify in their proposals any substantial deviation from the estimate. See 53 Comp. Gen. 198 (1973); 53 id. 388 (1973); ABC Management Services, Inc., et al, 53 Comp. Gen. 656 (1974); Bell Aerospace Company; Computer Sciences Corp., 54 Comp. Gen. 352 (1974). However, in cases where the estimate is not revealed to offerors and a proposal substantially deviates from that estimate, we believe that the contracting agency should consider the possibility that such a proposal may nevertheless be advantageous to the Government. Ideally, when a fixed-price contract is to be awarded, the offeror should be told that its proposal deviates substantially from the Government estimate and should be asked to justify its lower estimate. However, any reasonable method used by the procuring agency to put the offeror on notice of the nature of the discrepancy would not be subject to objection by this Office.

Here, the record indicates that ECOM included Teledyne and OAI in the initial competitive range and entered into discussions with them. However, it does not appear that either offeror was adequately informed of the wide disparity between ECOM's estimates and what they offered or of ECOM's concern with that disparity.

The contracting officer reports that at the commencement of the initial negotiating session with Teledyne the representatives of that company were given the letter and accompanying questions/comments referred to above, which the contracting officer refers to as a "list of deficiencies." According to the contracting officer:

"The Teledyne team was then given an opportunity to review the letter and list of deficiencies for the purpose of developing any questions as to the meaning or intent of the noted deficiencies. The ECOM negotiating team then returned to the negotiation room and answered questions concerning and explaining in more detail the noted deficiencies. The Teledyne representatives stated that they understood the deficiencies."

Apparently, similar negotiating techniques were used with OAI. Under the heading "Engineering (manpower)", the list of deficiencies contained five specific comments stating that "the offeror must clarify * * *" certain particulars of the proposal. The sixth comment, as stated above, was "the offeror must review all engineering hours and revise if necessary."

The contracting officer regards that sixth comment as the pointing out of a "deficiency" with respect to Teledyne's proposed low man-hours. However, we do not see how that comment can be regarded as putting Teledyne on notice that there was a significant disparity between its proposal and an ECOM estimate of which it was not aware. Clearly the comment, by its terms, did not indicate any discrepancy between what was offered and what was expected; it merely left it up to Teledyne to determine whether it was "necessary" to revise the proposed hours without providing any basis for Teledyne to conclude that it might be necessary. Furthermore, although the contracting officer reports that face-to-face clarifying discussions were held, the contracting officer's own statement indicates that clarifications were offered only with respect to the areas which Teledyne questioned. Apparently Teledyne did not raise any question concerning the adequacy of its proposed hours, and in view of the nature of the comment regarding its hours, we do not believe it should be penalized for not having done so.

The burden to conduct meaningful discussions is on the contracting officer and not on individual offerors. With respect to disparities between Government estimates and costs or man-hours proposed by offerors, that burden can only be satisfied if offerors are informed of the disparity so that they can intelligently respond. As we said in 47 Comp. Gen. 336 (1967):

"* * * the discrepancies between the offerors' cost estimates and the Government estimate certainly were or should have been evident during negotiations and therefore should have been discussed with the offerors. Yet a review of the * * * negotiation minutes shows that, while estimated costs, the number of maintenance hours allocated to specific tasks, * * * etc., were discussed, * * * at no point * * * was there discussed the fact that the * * * cost proposal was considered to be generally unrealistic. * * * [T]he contracting officer was obliged to inform offerors of his determination [that the offerors' cost estimates were unrealistic] and to reopen negotiations for the purpose of enabling offerors either to justify the reasonableness of their cost estimates or to revise their cost estimates and/or fee floors." 47 Comp. Gen. at 342-3.

In view of the above, we conclude that the contracting officer did not adequately inform Teledyne of the nature of ECOM's concern with Teledyne's proposal, and that as a result Teledyne was not provided with an opportunity to explain the reasonableness of its proposal. The record supports a similar conclusion with respect to OAI. Since at this point the ECOM estimate has been revealed, we do not believe it would be appropriate to permit Teledyne and OAI to take advantage of that by revising their proposals to conform with that estimate. However, in accordance with the views expressed herein, we recommend that the revised proposals be further evaluated and the protesters be allowed to explain their proposed utilization of man-hours. It will then be up to ECOM, of course, to make a good faith evaluation of the proposals based on those explanations. If that evaluation results in a determination that one or both of the offerors should not have been eliminated from the competitive range, then negotiations should be reopened and new best and final offers requested from all firms remaining in the competitive range.

In view of this conclusion, we need not consider Teledyne's assertion that its proposal actually contained the desired number of man-hours, since that is a matter which Teledyne and ECOM may resolve.


Deputy Comptroller General
of the United States