

094200



*Report*

**REPORT TO THE SUBCOMMITTEES ON  
RESEARCH AND DEVELOPMENT  
COMMITTEE ON ARMED SERVICES  
UNITED STATES SENATE AND  
PRIORITIES AND ECONOMY  
IN GOVERNMENT  
JOINT ECONOMIC COMMITTEE  
CONGRESS OF THE UNITED STATES**

Partial Report-  
In-Depth Investigation Into  
Independent Research And  
Development And Bid And  
Proposal Programs B-164912

Department of Defense

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

~~710710~~

1094200

AUG. 16, 1957



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

B-164912

To the Chairmen of the Subcommittees on  
Research and Development  
Senate Committee on Armed Services, and  
Priorities and Economy in Government  
Joint Economic Committee

Your letter of October 8, 1973, requested an in-depth investigation of the underlying assumptions and the overall justification of the independent research and development (IR&D) and bid and proposal (B&P) programs. Also, you asked us to consider the implementation of section 203 of Public Law 91-441 and Department of Defense (DOD) regulations. In regard to the latter, we refer you to our recent report to the Chairman of the Senate Committee on Armed Services (B-164912, May 1, 1974).

You enclosed a list of 22 questions to be answered as part of our examination. We previously notified you that, because of the extensive effort required to adequately fulfill your request, we will not have a full report until the fiscal year 1976 authorization and appropriation cycle. For this partial report, we have

- analyzed and reconciled the costs of IR&D and B&P programs as reported by DOD for the years 1968 through 1973 (questions 1 to 5);
- explored the availability of information on the costs of administering the programs (question 6);
- considered whether certain types of costs (directed toward new business, promotional and nontechnical services, etc.) are allowed and reimbursed as IR&D and B&P under DOD's regulations (questions 8 and 9); and

--evaluated the procedures implemented by DOD for contractors not meeting the \$2 million threshold prescribed by section 203 for advance agreements and technical reviews (question 10).

Each of these matters is covered in detail in the summaries which follow. These summaries are based on information obtained during previous and current GAO reviews at DOD, the Defense Contract Audit Agency; the Atomic Energy Commission, the National Aeronautics and Space Administration, and the Council of Defense and Space Industry Associations.

We have not obtained formal comments on this report from agency heads but have discussed it with DOD officials.

As your offices agreed, we are sending copies to the Chairmen of the House and Senate Committees on Appropriations, Armed Services, and Government Operations and to Representative Gubser at his request. Also, as agreed, we are sending copies to the Director, Office of Management and Budget; the Secretary of Defense; the Director of Defense Research and Engineering; the Secretaries of the Army, Navy, and Air Force; the Director, Defense Contract Audit Agency; the Chairman, Atomic Energy Commission; the Administrator, National Aeronautics and Space Administration; and the Council of Defense and Space Industry Associations.



Comptroller General  
of the United States

QUESTIONS 1 TO 5

DEFENSE CONTRACT AUDIT AGENCY REPORTS ON

IR&D AND B&P COSTS

Question 1. The DCAA audits of IR&D costs show that the ratio of IR&D costs to defense sales increased from 2.73 percent in 1968 to 3.83 percent in 1972. What accounts for this increase? What is the rationale to support a high level of contractor IR&D expenditures even in the face of declining defense sales?

DOD's share of IR&D, B&P, and other technical effort (OTE) costs of major defense contractors for contractor fiscal years 1968-73 is shown below. We include defense sales to show the percentage of such costs to DOD sales. Amounts were compiled by DCAA.

Table 1

DOD's Share of IR&D, B&P, and OTE Costs of Major Defense Contractors  
and Sales to DOD for Fiscal Years 1968-73

	IR&D	B&P	IR&D and B&P		Defense sales	Percent of costs to DOD sales		
			Total	OTE		IR&D and B&P	IR&D, B&P, AND OTE	
(000,000 omitted)								
1968	\$338	\$271	\$609	\$64	\$673	\$22,275	2.73	3.02
1969	410	289	699	79	778	22,692	3.08	3.43
1970	376	278	654	60	714	21,315	3.07	3.35
1971	354	265	619	49	668	19,568	3.16	3.41
1972	392	306	698	34	732	19,117	3.65	3.83
1972 <sup>a</sup>	392	306	698	37	735	19,117	3.65	3.85
1973	441	346	787	32	819	20,941	3.76	3.91

<sup>a</sup>DCAA recently updated its 1972 OTE figure and completed its compilation of 1973 figures.

The two percentages cited in question 1 are not comparable. The 2.73 percent was based on the costs of IR&D and B&P, and the 3.83 percent was based on IR&D, B&P, plus OTE. Many other factors affect any year-by-year comparison of IR&D and B&P costs.

Burdening

Burdening is the accounting proactice of adding a proportionate share of overhead to the direct costs of a

particular project. Some contractors have always allocated an appropriate share of indirect and administrative costs to IR&D, consistent with their accounting policies. Other contractors have begun to burden IR&D at various times during the past years. Effective January 1, 1972, all contractors were required by Defense Procurement Circular 90 to burden B&P as well as IR&D with all applicable indirect costs except general and administrative expense.

As a result, IR&D and B&P costs from 1968 to 1973 increased by amounts representing burden added by contractors for the first time although contractor effort did not increase. The increases in IR&D and B&P costs solely for first-time burdening were \$32 million in 1972 and \$55 million in 1973. The amounts of burden included in prior years is not available.

#### OTE

Changes in OTE reporting requirements also affect the comparison of IR&D and B&P cost data. These changes are discussed in the answer to question 3.

#### Foreign military sales

The sales data in table 1 includes sales to foreign governments which were placed through DOD contracts. The foreign government reimbursed DOD for these sales, as well as the applicable IR&D and B&P costs allocable to the sales.

Foreign military sales for 1972 totaled about \$435 million, including about \$13.8 million of IR&D and B&P costs. Comparable figures for 1973 were \$962 million and \$36 million, respectively. Consequently, DOD's net share of IR&D and B&P costs reported for 1972 and 1973 is overstated by \$13.8 million and \$36 million, respectively. DOD sales data should also be reduced by the amount of the foreign sales.

All prior years would require similar adjustments. However, information on the amount of IR&D and B&P included in foreign sales for prior years is not available.

## Inflationary trend

Following is a summary of total IR&D and B&P costs and DOD's share. The dollar amounts and the percent of sales to DOD were extracted from DCAA reports. This table differs from table 1 in showing costs incurred by the contractors and amounts accepted by the Government for allocation to all work performed by the contractor, a share of which is then absorbed by the Government.

Table 2

### IR&D and B&P Costs

	<u>Contractor costs</u>			<u>Accepted by Government</u>			<u>DOD share</u>		
	<u>IR&amp;D</u>	<u>B&amp;P</u>	<u>Total</u>	<u>IR&amp;D</u>	<u>B&amp;P</u>	<u>Total</u>	<u>IR&amp;D</u>	<u>B&amp;P</u>	<u>Total</u>
(000,000 omitted)									
1968	\$ 776	\$381	\$1,157	\$579	\$367	\$ 946	\$338	\$271	\$609
1969	808	426	1,234	653	409	1,062	410	289	699
1970	753	413	1,166	597	398	995	376	278	654
1971	703	427	1,130	567	390	957	354	265	619
1972	936	469	1,405	725	432	1,157	392	306	698
1973	1,051	526	1,577	809	488	1,297	441	346	787

### DOD's Share of IR&D and B&P Costs

	<u>Percentage of contractor costs</u>			<u>Percentage accepted by Government</u>			<u>Percentage of sales to DOD</u>
	<u>IR&amp;D</u>	<u>B&amp;P</u>	<u>Total</u>	<u>IR&amp;D</u>	<u>B&amp;P</u>	<u>Total</u>	
1968	44	71	53	58	74	64	68
1969	51	68	57	63	71	66	62
1970	50	67	56	63	70	66	65
1971	50	62	55	62	68	65	61
1972	42	65	50	54	71	60	63
1973	42	66	50	55	71	61	61

The above table shows that contractors' costs declined from 1969 through 1971 by about 8.4 percent. DOD's share declined at an even greater rate, about 11.5 percent. DOD's share of contractors' costs increased about 12 percent in 1972 over 1971.

However, these costs have not been adjusted for the impact of inflation. We know of no research and development cost index. The National Science Foundation, in the absence of a reliable index, used the gross national product price deflator in its reports on funds supporting research and development for 1968 through 1973.

<u>Year</u>	<u>Price index</u>	<u>Year-to-year increase</u>
1968	104.01	4.01
1969	109.02	5.01
1970	115.01	5.99
1971	120.42	5.41
1972	124.25	3.83
1973	130.91	6.66

Using a base year of 1967, the table indicates the inflationary trend, i.e., products or services purchased for \$100 in 1967 would cost \$104.01 in 1968 and would cost \$130.91 to purchase in 1973.

We have not attempted to convert current IR&D and B&P dollars to constant dollars. The gross national product deflator includes price changes of all goods and services in the economy and therefore can only indicate approximate changes in costs of inputs specifically related to research and development.

Based on discussion with the cognizant National Science Foundation official, we believe there is some merit to the contention that salaries of scientists and engineers and, especially, costs of complex equipment have increased at a rate higher than that of the overall economy.

### Support during declining sales

DOD has found that, in times of declining sales, contractors' emphasis in IR&D will generally shift to efforts with shorter range payoff, as a means of survival. Greater B&P activity will also result. Initially, the amount of resources devoted to these endeavors may rise at the expense of other, less critical functions of the company. As sales continue to decline, however, IR&D and B&P actual dollar resources will start to decline even though IR&D and B&P as a percentage of company resources may increase even more at the expense of other company functions.

DOD finds that this same pattern will generally follow in negotiations of advance agreements with major defense contractors. In periods of declining defense sales and increasing commercial sales, establishing relatively constant IR&D and B&P ceilings will reduce DOD's actual dollar participation. Table 2 shows that DOD's percentage share of contractor costs declined from 1969 to 1972, as did sales to DOD by these contractors. (See table 1.)

DOD points out that it has the responsibility to maintain a base of competent contractors capable of competitive efforts in every critical defense technology area. This responsibility is often in direct conflict with any policy which would follow the forces of the marketplace relative to the level of IR&D and preclude a high level of support during declining defense sales.

Question 2. Reconcile the apparent inconsistencies in the figures for IR&D expenses from 1968 to 1972 between your April 16, 1973, report, reports by DCAA, and the figure given by DOD to the Senate Armed Services Committee as printed in the Committee report of September 6, 1973.

Much of the confusion regarding the varying IR&D and B&P cost figures stems from the fact that DCAA releases two sets of figures applicable to each year--one in the year immediately following the year in which the costs were incurred, based to some extent on estimated costs, and updated figures in the second following year. Table 3 identifies the source of figures referred to in question 2.



Table 3

IR&D, B&P, and OTE Costs Reported by  
the Senate Armed Services Committee, GAO, and DCAA

	IR&D and B&P <u>costs</u>	OTE <u>costs</u>	<u>Total</u>	<u>Defense sales</u>
	----- (millions) -----			
1968				
Senate report (note a)	\$ -	\$ -	\$ -	\$ -
GAO report (note b)	-	-	673	22,275
DCAA report Mar. 1970	609	64	673	22,275
1969				
Senate report	-	-	<sup>c</sup> 754	-
GAO report	-	-	778	22,692
DCAA report Mar. 1971	699	79	778	22,692
1970				
Senate report	-	-	714	-
GAO report	-	-	714	21,315
DCAA report Mar. 1972	654	60	714	21,315
1971				
Senate report	-	-	<sup>d</sup> 668	-
GAO report	-	-	673	<sup>d</sup> 19,655
DCAA report Mar. 1973	619	49	668	19,568
1972				
Senate report	-	-	<sup>e, f</sup> 738	-
GAO report	-	-	<sup>f</sup> 704	<sup>f</sup> 18,385
DCAA report Mar. 1973	704	(g)	<sup>f</sup> 704	<sup>f</sup> 18,385
DCAA report Mar. 1974	698	(g)	698	19,117

<sup>a</sup>Dated Sept. 6, 1973.

<sup>b</sup>Dated Apr. 16, 1973.

<sup>c</sup>Consists of IR&D/B&P costs of \$675 million reported by DCAA in its March 1970 report plus \$79 million of OTE costs. The \$675 million was subsequently corrected to \$699 million. The \$699 million of IR&D and B&P plus OTE of \$79 million equals the \$778 reported by DCAA and GAO.

<sup>d</sup>Preliminary amounts reported by DCAA in Mar. 1972.

<sup>e</sup>Includes \$34 million of OTE costs which are not considered of an IR&D and B&P nature, as in prior years, because of the redefinition and reclassification of such costs effective in 1972. (See answer to question 3.)

<sup>f</sup>Preliminary figures. The final figures for 1972 appear in the DCAA Mar. 1974 report.

<sup>g</sup>DCAA stopped reporting OTE after 1972.

Question 3. In its report to Congress, DOD includes an amount for "other technical effort (OTE)" in its IR&D figures. What are the audit substantiated amounts for OTE for the years 1968 to the present? Why are these amounts not included in the DCAA audit report? Do the same rules apply for OTE as for IR&D and B&P costs?

The miscellaneous technical costs of operating a contractor's facility, which were not classified as IR&D or B&P, came to be known collectively as OTE. Although not a clearly defined group, these costs were cumulatively reported by DCAA as OTE. They did not necessarily represent audited amounts and, for the most part, were extracted from contractor's records. OTE reports were prepared and submitted in conjunction with IR&D and B&P reports through 1971. (For OTE amounts, see table 3.)

In the late 1960s, DOD became concerned that costs for designing and developing new products or improving existing products, and accumulated under such account titles as feasibility studies, capability studies, proposal efforts, pre-design studies, product development, and product improvement, should properly be considered as IR&D and B&P. Other accounts, such as technical equipment maintenance, sales engineering, and advanced marketing, even though technical efforts, were clearly not directed toward new or improved products.

Because of this concern, the definition of IR&D was revised to include "systems and other concept formulation studies [such as] analyses and study efforts either related to specific IR&D efforts or directed toward the identification of desirable new systems, equipments or components." The definition of basic and applied research remained substantially the same while the definition of development was revised to clarify the types of technical effort, such as design engineering, prototyping, and engineering testing, to be included.

B&P had been simply defined as the costs of preparing bids and proposals on potential Government and non-Government contracts or projects, including the necessary supporting engineering and cost data. Upon completion of the study, the definition was revised and expanded to include the costs incurred in preparing, submitting, and supporting bids and proposals, whether or not solicited, on potential Government

or non-Government contracts which fall within the definitions of administrative costs and technical costs.

These changes were published in Defense Procurement Circular 90 September 1, 1971. Revisions in contractors' accounting practices, to provide cost data required by these changes, were to become effective for the contractors' first fiscal year starting on or after January 1, 1972. This substantially removed costs which were in the nature of IR&D and B&P from other overhead accounts. However, contractors continue to incur certain technical costs in overhead accounts which are not part of IR&D or B&P effort.

With the revised definitions of IR&D and B&P, DOD felt that it was unnecessary to continue to compile a summary of OTE costs because items remaining in that category should no longer be considered as similar to IR&D and B&P. DCAA auditors are still expected, however, to review OTE costs to insure that they are properly identified and classified.

DCAA said that about \$14 million of costs incurred during 1972 for the types of projects previously classified as OTE had now been included as costs for projects in the IR&D and B&P category. DCAA auditors identified an additional \$34 million in 1972 of OTE costs that were not in that category. This total of \$48 million compares to the \$49 million of OTE reported during 1971. DCAA identified \$32 million of costs in 1973 which would have been reported as OTE prior to 1972 but are not IR&D and B&P type of costs.

The IR&D and B&P ceilings do not apply to OTE. OTE costs are recoverable through the normal overhead rate. Therefore, for the years 1968 through 1971, it can be assumed that some unknown portion of OTE, under current definitions, should have been classified as IR&D or B&P. The remainder should not have been considered in cost analyses relating to either IR&D or B&P.

Question 4. The DCAA audit report of IR&D covers only those defense contractors with "an annual auditable volume of costs incurred of \$15 million or more and other contractors who, although not meeting the auditable volume criteria, required 4,000 or more man-hours of DCAA's direct audit effort per year".

What does the term "auditable volume" of costs incurred mean? What is the difference between auditable volume of costs and total defense sales (including both prime contracts and defense sub-contracts)? What is your estimate of total IR&D, including contractors that do not meet the criteria of \$15 million of annual auditable costs incurred or 4,000 man-hours of defense audit effort?

The term "auditable volume" of costs incurred means costs related to negotiated flexibly priced contracts, as opposed to firm fixed-price contracts, which DCAA audits to determine either the actual or projected total contract costs. Examples of such contracts are cost-plus-fixed-fee, fixed-price redeterminable, fixed-price incentive, and cost-plus-incentive-fee. A contractor who meets the DCAA criteria of having \$15 million or more of auditable volume of costs or requiring more than 4,000 man-hours of direct audit effort a year is included in the DCAA annual report.

Total defense sales, as reported by DCAA, means total sales prices of all contracts where DOD is the ultimate customer, including total sales under firm fixed-price contracts and/or subcontracts.

Neither we nor DCAA has any data to determine how much additional IR&D and B&P costs are paid to contractors who do not meet the criteria for inclusion in their annual report. DCAA said that getting any further detailed data would necessitate an inordinate amount of work, requiring a survey of 350 field audit offices and involving data collection of approximately 3,300 contractors. Even then, such a survey would only account for some of the smaller DOD contractors. The IR&D data of major contractors not included in the DCAA annual reports is not available to DCAA. Contracts are either awarded to those contractors on a firm, fixed-price, competitive basis or are based upon rates or schedules set by law and thus are not susceptible to DCAA audit.

We recognize the absence of data pertaining to some unknown portion of the IR&D and B&P paid by DOD. This figure has in the past been roughly estimated to represent 10 to 15 percent of the total. We plan to explore further the feasibility of reasonably estimating this amount.

Question 5. The IR&D figures reported to Congress are based on a DCAA statistical report covering 77 defense contractors. The top 77 defense contractors account for only 69 percent of defense prime contracts. How much additional IR&D costs are reimbursed by the DOD to divisions, contractors, and subcontractors not covered in the DCAA report?

As explained under question number 4, neither GAO nor DCAA has any data to determine how much additional IR&D/B&P costs are paid by DOD. We plan to explore the matter.

## QUESTION 6

### COSTS OF ADMINISTERING IR&D AND B&P PROGRAMS

Question 6. What is the total in-house cost of administering the IR&D program--include the cost of reviewing contractor proposals, DOD negotiation teams, technical review effort, administration of disputes, etc.? What are the comparable costs for AEC?

We asked DOD if such costs were maintained and, if not, could it estimate costs which could be verified by us.

DOD replied that no accounting or reporting system had been established which directly relates DOD administrative costs to IR&D and B&P. Further, there is no documentation that would provide a basis for estimating, with any sense of traceability, costs of time spent in prenegotiation preparation, preparation of correspondence, position papers, reports, advance agreements, supervision policy material, or other administrative support. These costs would have to be estimated by participating personnel on the basis of their recollection and could not be verified by audit.

Supporting documentation, such as lists of participating personnel and travel records, could be used to estimate roughly the time spent and costs involved in onsite technical evaluations of contractors' proposed programs. Because of the roughness of any such estimates, we did not obtain this unauditible information.

AEC does not maintain a system that will produce the in-house cost of administering IR&D and B&P programs, which involve a relatively minor portion of its overall contract negotiation and administrative effort. Therefore, AEC does not believe that the results produced by such a system would be commensurate with the cost. AEC was also unable to provide an estimate of in-house costs on an auditable basis. An estimate by one of the AEC offices most involved in IR&D activities indicated it to be very minor.

NASA also does not separately account for the costs of administering its IR&D program. NASA acknowledged that one of the important advantages of its cooperation with DOD is

the administrative economy of such an arrangement. NASA's in-house costs of administering its program are relatively small compared to what they would be if it had to assume the burden of an independent technical review and negotiation function.

Although not included in the scope of the question, a major factor in administering these programs is the contractors' costs. The seven contractors covered in our 1973 report to the Chairman of the Senate Committee on Armed Services said then that the increased emphasis on technical evaluations and relevancy reviews had increased administrative costs for them. Four contractors furnished estimates which showed, cumulatively, increased costs of between from \$500,000 to more than \$1 million. Three other contractors did not quantify the amount that their expenditures had risen. Some acknowledged improvements in management controls stemming from the expenditures.

One of these contractors recently affirmed that its visible costs for administering IR&D and B&P ran from \$500,000 to \$750,000 annually. The contractor attributes about two-thirds of these costs to the special handling required by Public Law 91-441. Another believed the administrative and management costs equaled about 50 percent of the total program costs. Still another contractor, whose administrative costs exceeded \$1 million annually, believes these costs have not been greatly affected by requirements of the law.

In conclusion, Government in-house costs and contractor costs of administering IR&D and B&P are probably substantial in view of the number of people involved and the time spent. However, these costs are not quantified. We will look into the possibility of obtaining a rough estimate of them.

## QUESTIONS 8 AND 9

### CONTRACTOR COSTS ACCEPTED BY DOD IN IR&D AND B&P

Question 8. Does DOD pay contractors' cost for:

- a. research and development projects primarily of a promotional nature, such as projects directed toward the development of new business or projects connected with proposals for new business;
- b. studies or projects which are undertaken, in whole or in part, for other customers; and
- c. projects which represent unwarranted duplication of other research and development work sponsored by the DOD.

Cite examples if any such costs are paid.

Question 9. Do Bid and Proposal costs paid by DOD include negotiating and promotional costs or the cost of salesmen, representatives or agents who do not provide technical services in connection with bids or proposals?

The request of October 8, 1973, states that, for the purposes of this study, the term IR&D is inclusive of B&P. In answering the above questions, however, we have assumed that question 8 pertains only to IR&D exclusive of B&P, since question 9 is specifically directed at B&P costs.

#### New business projects in IR&D

The overall intent of DOD in supporting IR&D is to encourage the evolution and maintenance of a strong, up-to-date, and creative technology-based industry, from which DOD can draw both new concepts and rapid competitive responses to meet its requirements.



The Armed Services Procurement Regulation (ASPR), in defining IR&D, allows technical effort of projects directed at new business. Projects allowable as IR&D include (1) applied research to exploit the potential of scientific discoveries or improvements and attempts to advance the state of the art, (2) projects to design, develop, test, or evaluate a potential new product or service, or improve an existing product or service, and (3) analyses and studies directed toward identifying desirable new systems, equipment, or components or desirable modifications and improvements to existing ones.

DOD's policy is to allow, as charges to overhead, costs of IR&D projects which are judged to be relevant to DOD's mission and responsibility and which, in the aggregate, are not unreasonable in total dollar value as measured by what a prudent business man would expend in operating his business.

Based on IR&D projects examined in our past work; reviews of contractors' procedural guidelines; and discussions with contractor officials and DOD personnel, including contract auditors; it is clear that contractors undertake IR&D projects to obtain new business. The projects we examined were largely technical in content rather than related to selling or marketing activities.

#### Projects for other customers

DOD is aware that IR&D accepted for allocation to Government and commercial contracts may result directly in products which both DOD and other customers desire. Some IR&D relevant to DOD may also be of interest to other customers of the contractor. On the other hand, IR&D primarily directed toward commercial customers may be of interest to DOD and the Government.

The percentage of IR&D relevant to DOD is generally much greater than the percentage of DOD's participative share. Therefore, DOD believes that it receives benefits considerably greater than its dollar share in those cost centers involving a mix of DOD and commercial business. Our previous studies have shown that military relevant projects in all cases exceeded the negotiated ceilings which DOD agreed to accept for allocation to all customers. For

example, in 1973 DOD absorbed \$441 million as its share of the \$809 million of IR&D accepted by the Government, the better part of which had in the past been relevant to DOD. Also, contractors incurred an additional \$242 million for IR&D projects, some of which were relevant to DOD. (See table 2.)

#### Duplication of research

DOD acknowledges that creating and maintaining multiple bidding sources in the various technologies necessarily results in some duplicative effort among contractors in any particular area. DOD believes that this duplication provides alternate approaches to a problem and is thus beneficial to some degree.

In 1970 we reported to the Congress (B-164912, February 16, 1970) our belief that a data bank on contractors' IR&D programs would be of benefit to Government personnel in selecting research projects. A DOD official agreed that a systematic method of disseminating information on IR&D projects would be useful in avoiding unnecessary duplication in Government-sponsored research. DOD subsequently established a data bank, which is still in a trial period to end July 1, 1975. In view of the proprietary nature of the contractors' IR&D programs, such information is confined to Government personnel.

Although some of the duplication might be eliminated by exchange of information between contractors, this is not feasible because of the proprietary nature of IR&D. DOD states that it has no authority to single out and support a limited number of competitors in any specific product area.

#### AEC policy on allowance of contractor IR&D costs

The costs described in question 8 are excluded from acceptance by AEC's procurement regulations, which allow IR&D costs only to the extent to which they provide a direct or indirect benefit to the particular contract work. AEC's rationale for restricting its support of these costs is due to a large extent to its type of operation.

AEC's procurement has been concentrated in relatively narrow technical fields where the Government has developed and continues to develop most of the technology. AEC does not rely primarily upon private industry using contractor-owned facilities and is not concerned with contractors maintaining a nuclear research and development capability, since most of AEC's activities are conducted and financed in a Government-owned, contractor-operated environment.

On the other hand, a part of DOD's rationale for supporting IR&D is the development and maintenance of competition. DOD concludes that the complexities of the technological areas, the many avenues and alternatives requiring exploration within any one technology, and the need for two or more competent and competitive contractors in each technology, all combine to justify the current approach to IR&D as not being unwarranted duplication of other research and development work sponsored by DOD.

#### Negotiating, promotional, nontechnical costs in B&P

ASPR distinguishes between B&P costs and selling costs, defining the latter as sales promotion, negotiation, liaison between Government representatives and contractor personnel, and other related activities. DOD, therefore, stated that selling and promotional costs of the type usually associated with these words are not allowed as part of B&P.

ASPR defines B&P to include two types of costs incurred in preparing, submitting, and supporting bids and proposals on potential contracts--(1) administrative costs incurred for nontechnical effort in the physical preparation of the technical proposal documents and for technical and nontechnical effort in the preparation and publication of supporting cost and other administrative data and (2) technical costs incurred to specifically support a bid or proposal, including systems and concept formulation studies and the development of engineering data.

An allocable share of B&P is recoverable on Government contracts as an indirect cost, subject to any limiting agreement negotiated in advance.

The contractor's negotiation team that meets with Government personnel will include nontechnical people concerned with the negotiation of price and other nonengineering aspects of the contract. DOD said that these people may charge their time to the B&P project established by the contractor for the solicitation under consideration. Other nonengineering personnel at the contractor's facility who assist in preparing cost and pricing data and proposed contract provisions may also charge their time to B&P. However, this practice is not followed by all contractors; frequently such personnel charge their time to the overhead organization in which they work, such as the Controller's or General Counsel's offices. Either practice is permitted under ASPR.

According to resident auditors at two contractors' plants, B&P costs generally do not include nontechnical services as direct charges. Direct charges to B&P are almost exclusively technical support. However, B&P costs are burdened with a proportionate share of allowable nontechnical effort other than general and administrative overhead.

A defense audit agency official located at another defense contractor's plant said that the ASPR definition of B&P does not include marketing functions of sales promotions, negotiations, and related activities. ASPR allows contractors to recover, as indirect costs not considered B&P costs, the full amount of selling costs for marketing their products, subject only to tests for allocability and reasonableness.

The defense contract audit manual specifies that selling costs should be appraised for a recognizable benefit to the Government in consonance with the amount included in the contractor's claims or cost representations. If it can be established that useful and desirable information on technical matters concerning existing contracts were discussed during visits by contractor personnel to Government procurement offices, the resulting costs may be considered to result in benefit to the Government.

Our limited inquiry of contractors' practices indicated that most B&P activity involves preparation of proposals or quotations in response to known needs of customers. Contractors' accounting manuals generally correspond to the ASPR provisions. We did not find in any B&P projects examples of personnel engaged in accelerated advertising or promotional activities. For each contractor in our sample, the resident auditor had similar negative findings from his more in-depth reviews over the past several years.

We conclude that, since contractors can recover reasonable amounts of selling expenses in their entirety, they have no incentive to charge them to B&P. B&P expenses, recovery of which may be limited, are primarily used for technical activities responding to stated, or in some instances anticipated, needs of customers.

## QUESTION 10

### DOD PROCEDURES FOR CONTRACTORS

#### BELOW \$2 MILLION THRESHOLD

Question 10. Public Law 91-441, Section 203, provides that appropriated funds may not be spent for IR&D unless the Secretary of Defense determines that the IR&D has potential military value. However, it appears that DOD does not technically review IR&D proposals in cases where it is charged less than \$2 million a year. What is your evaluation of the adequacy of DOD's technical review of such program? Of the \$700 million in IR&D expenses in 1972, how much goes to contractors under the \$2 million ceiling? What is the Comptroller General's opinion of the legality of IR&D payments made in the absence of any technical review as to potential military value? Would it be feasible to lower the technical review threshold below \$2 million?

Section 203 precludes payment by DOD of IR&D or B&P unless the work has, in the opinion of the Secretary of Defense, a potential military relationship and other requirements are met, one of which is the negotiation of advance agreements with all companies which, during the last preceding year, received more than \$2 million of IR&D or B&P from DOD.

DOD interpreted the statute to require a relevancy test only for projects of major companies, those which received payment of more than \$2 million from DOD for IR&D and B&P. DOD believed that the following factors supported this conclusion.

1. DOD deals with thousands of contractors, an unknown number of which may incur IR&D expense and all of which incur B&P expense.
2. DOD does not have the personnel resources to perform technical and relevancy reviews for hundreds or thousands of contractors.

3. Many contractors with limited amounts of Government sales would probably not assume the burden of submitting IR&D and B&P data.

DOD told us that, before section 203 was implemented, DOD furnished and discussed drafts of its implementation policy with staff personnel of the Senate and House Committees on Armed Services. Although no official concurrence was requested or received, no opposition was expressed.

In our April 1972 report to the Chairman of the Senate Committee on Armed Services, we agreed that DOD's interpretation was administratively sound but suggested that the Congress might want to clarify the intent of the law. In the absence of further guidance, DOD does not make a technical review or relevancy determination for IR&D and B&P projects of contractors under the \$2 million threshold.

It is our opinion that section 203(a)(2) does not expressly call for a technical review of the projects of a contractor with which an advance agreement is not required. For such cases, the act merely states that the opinion of the Secretary of Defense that the contractor's work has a potential military relationship is required. Since the word "opinion" implies an element of discretion and the act does not specifically require that such "opinion" be based on a technical review of the contractor's projects, we are unable to conclude that DOD payments of IR&D in the circumstances described are contrary to law.

Amount paid by DOD to contractors  
under the \$2 million ceiling

Of the \$698 million reported to the Congress by DCAA as paid by DOD in 1972 for IR&D and B&P, about \$20 million was paid to contractors who received less than \$2 million from DOD for IR&D costs during 1971. These contractors were included in the report because they met other criteria (auditable volume of costs, etc.). In addition, an unknown amount of IR&D and B&P was paid to other contractors under the \$2 million threshold and not included in the report. DCAA has no practicable means of estimating the amount paid to contractors not meeting the criteria for inclusion in its report. We plan to explore the matter. (See question 4.)

## Lowering of the \$2 million threshold

DOD does not recommend any change in the \$2 million threshold. It feels the present language covers all major contractors and the number should not be increased because of the additional workload involved. Neither does it want to lessen its surveillance, so it does not advocate any change that would reduce the number of contractors with which advance agreements are negotiated.

One contractor told us that it had observed the volume of effort involved with evaluating programs and the limited number of projects that had been determined not to be relevant. Therefore, in its judgment it would not be practicable or cost effective to attempt to lower significantly the threshold above which a relevancy determination would be required of DOD.

WEMA, an industry association representing many smaller companies, expressed the opinion that Congress recognized the administrative burden and expense involved in the negotiation of advance agreements and therefore, in drafting the statute, limited its application by establishing a threshold of \$2 million of IR&D or \$2 million of B&P expense. WEMA believes that DOD, by establishing the threshold at \$2 million of IR&D and B&P combined, extended these controls beyond the congressional interest and added to contractors' indirect expenses.

A formula for determining the allowability of IR&D and B&P is used by DOD for contractors below the \$2 million threshold. WEMA believes the formula is highly practical and economical for these numerous cases that represent a small fraction of the dollars. Because the formula does not provide for a precise determination of potential military relationship and the lack of such a determination has been questioned, WEMA hopes that any inquiry will not lead to stricter interpretation and enforcement where administrative expense would exceed any possible return.

We believe that the pros and cons of changing the threshold should be evaluated thoroughly before any change is made in the \$2 million standard. Lowering the threshold significantly might not justify the additional administrative costs to DOD and the contractors. On the contrary,



assuming that relevancy determinations will be a continuing requirement and that inflation will continue, additional companies could exceed the \$2 million threshold and advance agreements and the accompanying reviews and evaluations could become necessary.

Copies of this report are available at a cost of \$1 from the U.S. General Accounting Office, Room 4522, 441 G Street, N.W., Washington, D.C. 20548. Orders should be accompanied by a check or money order. Please do not send cash.

When ordering a GAO report please use the B-Number, Date and Title, if available, to expedite filling your order.

Copies of GAO reports are provided without charge to Members of Congress, congressional committee staff members, Government officials, news media, college libraries, faculty members and students.

**AN EQUAL OPPORTUNITY EMPLOYER**

UNITED STATES  
GENERAL ACCOUNTING OFFICE  
WASHINGTON, D.C. 20548

OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE, \$300

POSTAGE AND FEES PAID  
U. S. GENERAL ACCOUNTING OFFICE



**THIRD CLASS**

Mr. T. E. Sullivan  
Transportation  
Room 5049