

STATEMENT OF
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before the
Special Panel on Defense Procurement Procedures
House Armed Services Committee
October 22, 1981

Mr.Chairman:

I am pleased to appear before the panel this afternoon as you review the defense acquisition process. My testimony will review one of the major problems of this process: the unanticipated growth in the cost of weapon systems. It will treat some of the factors that **CBO** has identified as contributing to that growth. Finally, I will suggest some steps the Congress might consider to provide **itself** with earlier warning of unanticipated cost growth.

Unanticipated Cost Growth

A **CBO** review of 37 weapon systems that were proposed in the March fiscal year 1982 defense budget has found that, after adjusting for inflation, the budgeted unit cost of all these weapons was \$4.3 billion more than had been projected the year **before**. This is an increase of 24 percent in the cost of these weapons in a year. For example, the unit cost of the 1982 buy of the **Army's M-1** tank had increased 76 percent in one year, and that of the M-2 fighting vehicle **49** percent. The unit cost of the **Navy's F/A-18** fighter aircraft had grown 43 percent, while the unit cost of the HARM missile system had grown 58 percent. Even a mature system such as the **F-15** showed a 5 percent increase in unit cost.

The Administration has proposed a substantial acceleration of the buildup in defense investment that began in 1979. The revised budget submitted last month shows funding for new weapons, including the procurement, military construction, and research and development accounts, grow-

ing from \$68 billion in budget authority in fiscal year 1981 to \$89 billion in 1982 and \$175 billion in 1986. This growth in the funding of new weapon systems represents a real increase of 95 percent between 1981 and 1986 compared to a real growth for the defense budget as a whole of 52 percent over the same period. If the unanticipated cost growth we found in the 37 weapons in the 1982 budget were to increase annually at the same rate as the investment accounts in the defense budget are projected to increase between 1982 and 1986, it would amount to more than \$30 billion over the five-year period.

Factors Contributing to Unanticipated Cost Growth

Many factors contribute to the unanticipated cost growth of weapon systems. One is the nature of the weapons being acquired. They are complex systems, developed at the edge of technology and requiring numerous design changes even after production is under way. Such unanticipated cost changes may be unavoidable. There are other factors, however, that contribute to unanticipated cost growth, about which the Congress may be able to direct some specific action.

The first of these is the tendency to underestimate the rate of inflation in the economy. Past administrations have used overly optimistic assumptions about the future course of prices in their budget projections. In addition, the prices of goods purchased by the Department of Defense (DoD) have risen even faster than the general price level over the last several years. Between 1972 and 1980, for example, the average difference between the inflation rate for DoD purchases and that for the economy at

large amount to about 1.7 percent per year; in 1979 and 1980, it was 3 percent. The impact of **overly** optimistic inflation rates can be seen in the case of the **Army's Fighting Vehicle**. The December 1980 Selected Acquisition Report (SAR) reported a \$2.3 billion (30 percent) increase in the total dollar cost of this weapon system due to "estimating" change. Upon further review, our staff discovered that the increase was in fact a recognition that the inflation allowance provided in the DoD planning guidance had been insufficient to cover the inflation estimated by the program manager and the Department of the Army. As the purchase of weapons becomes a significantly larger percentage of the durable goods being produced in this country, it will be even more important to develop specialized price indexes (deflators) **for** defense expenditures.

The **CBO currently** uses specialized deflators in projecting all the defense budget accounts **for** coming years. The DoD has also developed its own specialized deflators, although it does not use them in preparing its budget. The department is currently reviewing its position on the use of specialized deflators. Given the impact of inflation estimates on the cost of weapons, the Congress may want to have some input to these reviews.

A second factor in weapons cost growth is inefficient purchasing or "stretching out" of particular weapon systems. Generally this results from a budget squeeze due in part to an underestimation of inflation. Budget constraints, when combined with an unwillingness to cancel a program or the desire to stretch it out to accommodate other systems, can result in substantial cost growth. An example of this can be seen in recent Administration budget proposals. The 1982 budget submitted in March

proposed to buy 60 **A-10** aircraft for \$9.1 million each. The October revision proposes to buy 20 **A-10s** for **\$13.4** million **each--a 47** percent increase in the cost of each aircraft due primarily to the less efficient buy size. Other examples of higher costs resulting from slipping the scheduled delivery of weapon systems or stretching out programs can be seen in the December 1980 SAR, which showed increased program costs of \$673 million (**14** percent) for the **AH-64** helicopter, \$856 million (21 percent) for the **DIVAD** gun, \$907 million (**4** percent) for the **F/A-18** aircraft, and \$1,063 million (8 percent) for the **F-16** fighter **aircraft--all** of them due to schedule changes.

A final factor **affecting** cost growth is what may be called competitive **optimism--that** is, the natural desire of the program manager, the service, and the contractor to support a program by presenting its costs in the most favorable light. In most cases, a weapon is selected for development and procurement because it presents the most **cost-effective** means of performing a particular mission. Program managers, contractors, and other service officials become identified with the weapon and naturally tend to favor the most optimistic estimate. Given a range of cost estimates, the tendency is to take the low end of the range. Partially in recognition of this problem, the department established independent cost analysis groups within the services and in the Office of the Secretary of Defense (OSD) to provide alternative cost estimates to those of the program managers and contractors. Often, but not always, these independent cost estimates are higher than those provided by the contractors and the program managers.

One of the major problems resulting from competitive optimism is that true costs usually do not surface until a program is through the engineering development phase and into production. By this time the alternatives to a particular weapon system may no longer be viable, and in any case they would result in substantial **delay**.

In some cases it is several months **after** the program manager becomes aware of unanticipated program cost growth before the Congress is informed. This delay further reduces the Congress's flexibility to consider alternatives. For **example**, in **January** 1979 the contractor and program manager for the Fighting Vehicle **reestimated** its unit cost in constant dollars upward by 65 percent. This change was first reflected in the December 1979 SAR, received by the Congress in February 1980.

Reporting Potential Cost Overruns

This brings me to the final item I will address this afternoon, the Congressional reporting system on weapons acquisitions and possible improvements that might be made in it. The Congress cannot solve the problem of unanticipated cost growth alone; indeed, the Department of Defense should take the lead in providing needed management. But the Congress may be able to help through **closer** scrutiny of prices; such scrutiny may change the incentives that lead to underestimates.

Currently the Selected Acquisition Report covering approximately 50 major weapon systems is the most extensive report the Congress receives on weapons acquisition. Because it is so extensive (over 1,000 pages), the

historical information overwhelms current management information and it is seldom read in its entirety. At the request of several Congressional staff members, including staff of this committee, the **CBO** has made a review of the **June 30, 1980, SAR**. This review highlights in ten pages the changes from the previous SAR and any information indicating potential changes in costs. Response to this review has been very favorable, and we plan to continue preparing this report quarterly. In addition, Senator **Nunn's** amendment to the **Senate's** defense authorization bill would require DoD to report to the Congress whenever the program unit cost of a weapon **system--as** reflected in the **Selected Acquisition Reports--increases** by more than 10 percent for production systems or 15 percent for systems in research and development. Such a report should **help** focus attention on unanticipated growth of weapons costs.

To reduce the costs of weapon system acquisition, the Congress needs to focus on the various alternatives for accomplishing specific defense missions and their costs. That assessment of alternatives ought to occur early in the acquisition process. If the Congress wanted to provide itself with a range of cost estimates early in the review process, it could require the DoD to submit the cost estimates prepared by the independent cost analysis groups along with the initial budget requests for full-scale engineering development.

The management information, cost, and performance data provided to the Congress also must support that early assessment. SAR reports do not provide sufficient cost performance data to permit adequate early warning

of potential cost overruns. For example, one **preproduction** prototype contract was found in April to be over cost by 55 percent and behind schedule by 12 percent. If the preproduction prototype contract was over cost by 55 percent, one could conclude that the production program might incur a similar overrun. The June SAR did not include this information—which is not **required--or** its impact on **total** program cost. At the end of July the contract was over cost by 58 percent and behind schedule by **14** percent.

The Congress could consider requiring earlier warning of cost overruns based on the cost performance reports now submitted to program offices by defense **contractors**. These reports, which are currently not made available to the Congress, are detailed comparisons of the portion of money spent for each piece of the weapon system with the amount of the work completed. If the proportion of money spent greatly exceeds the budgeted cost of the work completed, this suggests a potential cost overrun. The report also quantifies the contractor's schedule **performance** in dollar terms.

I am aware that the Congress must weigh the value of reports such as these against the possibility of excessive Congressional oversight. The Office of the Secretary of Defense, recognizing that the SAR does not provide the type of cost performance information needed, requires an abbreviated one-page cost performance report. This report is called the Supplemental Contractor Cost Report and is prepared for the major contracts of each SAR system. These reports are prepared quarterly by the program offices and are submitted to OSD by the services about one week

after the SAR is submitted to it. One way of providing the Congress with information on cost performance without causing extra work for the services would be to establish thresholds similar to those of the **Nunn** amendment. Thus OSD could be required to submit the Supplemental Contractor Cost Report on any contract for a SAR system that was some percentage over cost and/or behind **schedule**. This should ensure that only the most critical problems would be brought up. In addition, the submission could **include** a statement of the impact of unfavorable cost and schedule **performance** on future program costs and an indication of any corrective action being taken.

I am glad to have had this opportunity to appear before you and will be happy to answer any questions you may have.