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STATEMENT OF

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HEARING ON

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Chairman Carper, Ranking Member Brown, distinguished members of the subcommittee, thank you for the opportunity to appear before you today to discuss the Nunn-McCurdy Act and cost growth in major defense acquisition programs. As requested, this statement examines acquisition reform and options that Congress may choose to consider to improve the defense acquisition system. Specifically, this statement focuses on

- the history of the Nunn-McCurdy Act,
- consequences for weapon systems that experience Nunn-McCurdy breaches, and
- issues for Congress.

Background

Over the years, Major Defense Acquisition Programs (MDAPs) [1] have been plagued by substantial cost growth. Cost growth has been so systemic and widespread, that time and again, the Department of Defense has had to resort to terminating or substantially curtailing a host of programs.

Over the years, numerous Army programs have been terminated or substantially restructured, including the Crusader self-propelled artillery system, Comanche helicopter, Joint Common Missile, Armed Reconnaissance Helicopter, and more recently, most of the Future Combat System. The Navy recently curtailed the DDG-1000 destroyer program in favor of the less expensive DDG-51 design. The Virginia-class submarine, which has suffered its own cost growth, was intended to be a cost-effective replacement for the Seawolf, which was curtailed because of cost growth.[2] In addition, the Navy Area Defense (NAD), VXX presidential helicopter, and Marine Corps Expeditionary Fighting Vehicle programs were cancelled. For its part, the Air Force scaled back the F-22 and terminated the Combat Search and Rescue helicopter. Among satellite programs, terminations include much of the Future Imagery Architecture, the Transformational Communications Satellite (TSAT), and the Space Radar. Other space programs, such as the Space Tracking and Surveillance System (STSS), have been restructured.

Cost growth was a significant factor in many of these decisions. Had DOD and Congress known at the onset what the true cost of these systems would have been, different decisions could have been made, and billions of dollars spent on systems that were never fielded or prematurely cancelled could have been spent on other priorities.

For 25 years, the Nunn-McCurdy Act has served as one of the principal mechanisms for notifying Congress of cost overruns in Major Defense Acquisition Programs (MDAPs). The act's origins can be traced back to May 14, 1981, when Senator Sam Nunn offered a floor amendment requiring the Department of Defense (DOD) to notify Congress if, in Fiscal Year (FY) 1982, total program acquisition unit costs for any Major Defense Acquisition Program increased more than

[1] A Major Defense Acquisition Program (MDAP) is a program estimated to require research, development, test, and evaluation (RDT&E) costs of more than $365 million or procurement costs of more than $2.190 billion (in FY 2000 constant dollars). In 1983, the procurement cost of a program had to be one billion dollars (in FY1980 constant dollars) to be considered an MDAP.

[2] U.S. Government Accountability Office, *Defense Acquisitions: Improved Management Practices Could help Minimize Cost Growth in Navy Shipbuilding Programs*, GAO-05-183, February 28, 2005, p. 62.

15% beyond the cost estimate, and when costs increased more than 25%.[3] The amendment was included in the FY1982 Department of Defense Authorization.[4]

That same year, Representative Dave McCurdy, then chairman of the House Armed Services Committee Special Panel on Defense Procurement Procedures, held a series of hearings examining weapon system cost growth.[5] Together, Senator Nunn and Representative McCurdy successfully led the effort to pass the Nunn-McCurdy Act, which perpetuated the requirement that DOD notify Congress when cost overruns exceed certain thresholds.[6]

Why the Nunn-McCurdy Act Was Established

In the early 1980s, a number of major weapons systems programs were experiencing dramatic cost overruns, overruns which increased the defense budget by billions of dollars but resulted in the same number, or in some cases fewer, weapons. Programs experiencing cost growth included the Patriot missile system (37% cost growth), the Hellfire missile (48% growth), the Blackhawk helicopter (24% growth), and the F-18 (21% growth). According to the December 1980 Selected Acquisition Report, there was a $47 billion cost increase for 47 major weapon systems in just the last three months of 1980.[7]

Senator Nunn was not only concerned with escalating and unplanned cost growth; he was also concerned that Congress was spending too much time debating the relative merits of individual weapon systems and not focusing on the overall management and accountability of how DOD acquires major weapon systems. One of the reasons for enacting Nunn-McCurdy was to inform Congress whether the DOD acquisition process was working effectively. Referring to DOD's acquisition system, Senator Nunn concluded

> If the system works, if the cost estimates and the inflation estimates are anywhere near accurate, giving a 15-percent margin on R & D, a 10-percent margin on inflation in the procurement accounts, then the reports will not be necessary. If the system does not work, then, of course, we should know and we should be alerted.[8]

Another reason for enacting Nunn-McCurdy was to hold the department accountable for cost overruns. It was believed that publicly exposing cost overruns would force the Department of Defense to rein in cost growth. According to Representative McCurdy,

> The assumption behind the Nunn-McCurdy provision... was that the prospect of an adverse reaction from the Office of Management and Budget, Congress, or the public would force

[3] Specifically, the amendment required DOD to notify Congress if total program acquisition unit costs for any MDAP for which no procurement funds were authorized increased by more than 15%, and total program acquisition unit cost for any MDAP or current unit acquisition cost increased by more than 25%. See: *Congressional Record* May 14th, 1981 pg. S. 5014-15.

[4] 95 Stat. 1129. See: *Congressional Record* May 14th, 1981 pg. S. 5016.

[5] U.S. Congress, House Armed Services Committee, Special Panel on Defense Procurement Procedures, *House Armed Services Hearings*, Vol. 11, 97th Cong., 1st sess. (Washington: GPO, 1981), p. 1.

[6] See, Department of Defense Authorization Act, 1983 (96 Stat. 718).

[7] Selected Acquisition Reports are DOD documents describing DOD acquisition programs.

[8] *Congressional Record,* May 14, 1981, p. S5012.

senior Pentagon officials to address the question of whether the program in question—at their newly reported, higher costs—were worth continuing.[9]

Nunn-McCurdy was not intended to create a mechanism for managing programs or allocating funds, which is why, as originally enacted, it was set up as an after-the-fact reporting requirement.

How the Nunn-McCurdy Act Operates

The Nunn-McCurdy Act requires DOD to report to Congress whenever a major defense acquisition program experiences cost overruns that exceed certain thresholds. A program that experiences cost growth exceeding any of the established thresholds is said to have a Nunn-McCurdy breach.

Nunn-McCurdy Thresholds

There are two categories of breaches: significant breaches and critical breaches. As shown in **Table 1**, a "significant" Nunn-McCurdy breach occurs when the Program Acquisition Unit Cost (PAUC- defined as the total cost of development, procurement, and construction divided by the number of units) or the Procurement Unit Cost (PUC- defined as the total procurement cost divided by the number of units to be procured) increases 15% or more over the current baseline estimate or 30% or more over the original baseline estimate.[10] A "critical" breach occurs when the PAUC or PUC increases 25% or more over the current baseline estimate or 50% or more over the original baseline estimate.[11]

Table 1. Nunn-McCurdy Breach Thresholds

	Significant Breach	Critical Breach
Current Baseline Estimate	≥15%	≥25%
Original Baseline Estimate	≥30%	≥50%

Source: 10 U.S.C. § 2433.

Consequences of a Nunn-McCurdy Breach

In the event of a significant breach, DOD must notify Congress of the breach and submit to Congress a Selected Acquisition Report (SAR) for the fiscal quarter in which the breach occurred

[9] Dave McCurdy, "Reassert Cost Controls," *DefenseNews*, April 24, 2006, p. 21.Ibid.

[10] Title X of the U.S. Code codifies the laws establishing and regulating the Department of Defense. Program acquisition unit cost and procurement unit cost are defined in 10 U.S.C. § 2432(a). DOD often uses the term Average Procurement Unit Cost (APUC) instead of Program Unit Cost (PUC), which is the term used in the statute.

[11] An *original baseline estimate* is the cost estimate included in the original program description (known as an Acquisition Program Baseline) that is prepared prior to a program entering "engineering and manufacturing development" (also known as "Milestone B"), or at program initiation, whichever occurs later. A *current baseline estimate* is the estimate that is included in the most recently revised program description (Acquisition Program Baseline). If the original baseline estimate has not been revised, the original baseline estimate is also the current baseline estimate. For a more detailed discussion on baselines, see Appendix.

or in the quarter in which it was determined that a breach occurred.[12] For a significant breach, no further action is required.

In the event of a critical breach, in addition to notifying Congress and submitting a SAR, the Secretary of Defense is required to conduct a root-cause analysis to determine what factors caused the cost growth that led to a critical breach and, in consultation with the Director of Cost Assessment and Program Evaluation, assess

1. the estimated cost of the program if no changes are made to the current requirements,
2. the estimated cost of the program if requirements are modified,
3. the estimated cost of reasonable alternatives to the program, and
4. the extent to which funding from other programs will need to be cut to cover the cost growth of this program.[13]

After the reassessment, the program must be terminated unless the Secretary of Defense certifies in writing no later than 60 days after a SAR is provided to Congress that the program will not be terminated because it meets certain requirements.[14] A certification, which uses the exact wording found in 10 U.S.C. § 2433a(b), essentially certifies that

1. the program is essential to national security,
2. there is no viable cost-effective alternative to the program that meets the joint military requirements,
3. the new cost estimates have been determined by the Director of Cost Assessment and Program Evaluation to be reasonable,
4. the program is a higher priority than programs whose funding will be reduced to cover the increased cost of this program, and
5. the management structure is sufficient to control additional cost growth.[15]

This certification must be provided to Congress with a copy of the root-cause analysis report.[16] In addition to the certification and the root-cause analysis, a program that is not terminated must

1. be restructured in a manner that addresses the root cause of the cost growth,

[12] 10 U.S.C. § 2433. A Selected Acquisition Report includes the (1) quantity of items to be purchased, (2) program acquisition cost, (3) program acquisition unit cost, (4) current procurement cost, (5) current procurement unit cost, and (6) the reasons for changes in any of these costs. See 10 U.S.C. § 2432(b),(e). Originally, DOD was required to submit a SAR for the quarter in which it was determined that a breach occurred. In some circumstances, a breach will occur in one quarter but the formal determination that the breach occurred takes place in the following quarter. To address this issue, Congress gave DOD the flexibility to submit a SAR for the quarter immediately preceding the quarter in which the determination was made—which would be the quarter in which the breach actually occurred.

[13] 10 U.S.C. § 2433a(a).

[14] The requirement that a program be terminated if it is not certified by the Secretary of Defense was added to the Nunn-McCurdy Act on May 22, 2009, as part of the Weapon Systems Acquisition Reform Act of 2009. According to the amended act, if a program is terminated, the Secretary of Defense must submit a written report explaining (1) why the program was terminated, (2) the alternatives that were considered to fix the program, and (3) how DOD intends to meet the requirement that the program was intended to fill (10 U.S.C. § 2433a(d)).

[15] 10 U.S.C. § 2433a(b).

[16] 10 U.S.C. § 2433a(b)(3).

2. have its prior milestone approval rescinded, and
3. receive a new milestone approval before taking any contract action—including signing new contracts or exercising options—without approval from the Milestone Decision Authority.

DOD must also (1) notify Congress of all funding changes made to other programs to cover the cost growth of the program in question and (2) hold regular reviews of the program.[17]

How the Nunn-McCurdy Act Has Evolved

Some analysts argue that Nunn-McCurdy has been effective as a reporting mechanism for informing Congress of cost overruns in Major Defense Acquisition Programs. As discussed above, Congress is (1) notified when the cost of a program increases beyond established thresholds and (2) provided with additional information on such programs (i.e., Selected Acquisition Reports). As a result of the Nunn-McCurdy process, Congress has substantial visibility into the cost performance of the acquisition stage of MDAPs. The increased visibility into DOD cost performance has painted a picture of widespread cost growth in major defense acquisition programs. However, some analyses show that despite Nunn-McCurdy and other defense acquisition reform efforts, the size of MDAP cost overruns have grown over time and may continue to grow in the foreseeable future.[18]

Responding to the accumulation of data on cost growth, Congress has statutorily amended Nunn-McCurdy a number of times over the years, transforming Nunn-McCurdy from being primarily a reporting system aimed at determining whether the acquisition system is working, to a more robust information-gathering and management tool. These changes were fueled in part by concerns that programs with chronic cost growth and schedule delays were not being terminated and Congress was not being provided specific information on what was causing the cost growth.

One of the most significant changes to Nunn-McCurdy occurred in the FY2006 National Defense Authorization Act, when Congress added the original baseline as a threshold against which to measure cost growth to improve visibility into the cost growth experienced by a program from its inception. The new standard gave Congress more visibility into cost performance by preventing DOD from avoiding a Nunn-McCurdy breach by simply re-baselining a program. The new law resulted in an increase in the Nunn-McCurdy breaches.[19]

A number of other significant changes to Nunn-McCurdy were enacted in the Weapon System Acquisition Reform Act of 2009 (P.L. 111-23). Many of the changes included in the act imply that

[17] 10 U.S.C. § 2433A(c).

[18] See Obaid Younossi, Mark V. Arena, and Robert S. Leonard, et al., *Is Weapon System Cost Growth Increasing?*, RAND Corporation, A Quantitative Assessment of Completed and Ongoing Programs, Santa Monica, CA, 2007. One analysis found that "cost overruns are increasing by an average of 1.86 percentage points per year. If this trend is allowed to continue, the analysis suggests that in 10 years the average overrun will exceed 56 percent...." See: Deloitte Consulting LLP, *Can We Afford Our Own Future? Why A&D Programs are Late and Over-budget—and What Can Be Done to Fix the Problem*, 2008, p. 2. See also Mark V. Arena, Irv Blickstein, and Obaid Younossi, et al., *Why Has the Cost of Navy Ships Risen? A Macroscopic Examination of the Trends in U.S. Naval Ship Costs Over the Past Several Decades*, RAND Corporation, 2006, p. xiv.

[19] For an analysis of how some DOD MDAPs were frequently rebaselined, thereby avoiding the Nunn-McCurdy requirements, see U.S. Government Accountability Office, *Defense Acquisitions: Information for Congress on Performance on Major Programs Can Be More Complete, Timely, and Accessible*, GAO-05-182, March 28, 2005.

Congress is also using Nunn-McCurdy as a management tool. For example, the 2009 act mandated that a program with a critical breach be presumed terminated unless the Secretary of Defense certified the program. The 2009 act also required that when a program is certified, DOD must (1) revoke the prior milestone approval, (2) restructure the program, and (3) provide Congress a written explanation of the root-cause of the cost growth.

Unrealistic Cost Estimates Contribute to Nunn-McCurdy Breaches

Poor cost estimating was a recurring theme during the McCurdy hearings and has been identified by various DOD officials, analysts, and industry officials as a primary cause of cost growth in DOD acquisitions.[20] Low cost estimates can make future cost growth almost inevitable. Michael Gilmore, then of the Congressional Budget Office and currently the Director of Operational Test and Evaluation, stated when discussing overly optimistic cost estimates, "no program manager in the world is going to be able to manage the program in such a way that the costs will not grow... it's not really so much cost growth as cost realism setting in."[21] Unrealistically low cost estimates set the stage for future Nunn-McCurdy breaches.

In 2006, Gary Payton, Air Force Deputy Under Secretary for Space Programs, made a direct link between unrealistically optimistic estimates and Nunn-McCurdy breaches. In a presentation entitled *Nunn-McCurdys Aren't Fun*, he argued that "[U]nbridled optimism regarding cost, schedule, performance, and risks is a recipe for failure."[22] As set forth in the presentation,

> Understated costs leads to lower budget → leads to industry bidding price less than budget → leads to lower award price → leads to government repeatedly changing scope, schedule, budget profile → leads to five to ten years later recognition "real" cost multiple of bid → leads to Nunn-McCurdy Breach.[23]

GAO has also linked optimistic cost estimates with significant cost growth, finding that "the Navy tends to underestimate the costs needed to construct ships—resulting in unrealistic budgets and large cost increases after ship construction has begun."[24] Cost growth on Navy shipbuilding programs complicates the Navy's task of building ships in desired quantities while also adequately funding other Navy program priorities.

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[20] For example, during the McCurdy hearings, then Director of the Program Analysis and Evaluation Office, Maj. Gen. Patrick M. Roddy stated that there are three fundamental cost growth drivers: inflation, poor cost estimating, and scheduling. GAO testified that "[C]ost estimating is probably the key ingredient in reducing cost growth ... [A]s far back as the early 1970's, GAO has reported that both planning and development cost estimates on Federal acquisitions in many cases are quite optimistic...unrealistically low contractor and agency estimates on the front end aggravates cost growth. What is needed is more candor up front in presenting programs to the Congress and not promising more than can be realistically delivered." And then Deputy Secretary of Defense Frank C. Carlucci, in a written statement to Congress, stated that "early cost, schedule, and performance estimates are overly optimistic." See: House Armed Services Hearings, 97th Cong., 1st Sess., Volume 11, 1981. Op. Cit. P. 74, 1009, and 1085, respectively.

[21] U.S. Congress, House Committee on the Budget, *Long-Term Sustainability of Current Defense Plans*, 111th Cong., 1st sess., February 4, 2009.

[22] See http://www.dtic.mil/ndia/2006systems/Wednesday/payton.pdf, p. 10. Last visited December 23, 2008.

[23] Ibid.

[24] Government Accountability Office. Defense Acquisitions: Realistic Business Cases Needed to Execute Navy Shipbuilding Programs. GAO-07-943T. July 24, 2007, p. 17.

Why Cost Estimates Are Sometimes Unrealistically Optimistic

Senior Defense officials, both past and current, acknowledge that program advocates have strong incentives to underestimate program acquisition costs. Contractors use low cost estimates to win the contract; program representatives use low estimates to argue for approval of the system against competing systems.[25] In 1981, then-Deputy Secretary of Defense Frank C. Carlucci testified that low cost estimates "are fueled by optimistic contractor proposals to win competitions and program managers who want to see their programs funded."[26] Almost 30 years later, then-Under Secretary of Defense for Acquisition, Technology, and Logistics John Young echoed this sentiment, stating "the enterprise will often pressure acquisition teams and industry to provide low, optimistic estimates to help start programs."[27]

Creating More Realistic Cost Estimates

The extent to which cost estimates are useful depends in part on the reliability of the cost estimates. The absence of more reliable cost estimates denies Congress the ability to decide on competing strategic and budget priorities based on realistic cost assumptions and denies DOD the opportunity to develop a well-conceived acquisition plan. As the 2010 *Quadrennial Defense Review* stated, "our system of defining requirements and developing capability too often encourages reliance on overly optimistic cost estimates. In order for the Pentagon to produce weapons systems efficiently, it is critical to have budget stability—but it is impossible to attain such stability in DOD's modernization budgets if we continue to underestimate the cost of such systems from the start."[28]

Congress and DOD have undertaken a number of initiatives over the years to improve MDAP cost estimates, including establishing the Cost Analysis Improvement Group in 1972 (an independent cost analysis office within DOD),[29] the Defense Acquisition Board in 1987,[30] and the Director of Cost Assessment and Program Evaluation (CAPE) in 2009.[31] The CAPE was established to "ensure that the cost estimation and cost analysis processes of the Department of Defense provide accurate information and realistic estimates of cost" for MDAPs.[32]

The CAPE is contributing to the understanding and development of budgeting and contracting decisions for major defense acquisition programs, such as the F-35 Joint Strike Fighter program. However, given how recently the CAPE was established, only time will tell to what extent the CAPE will be more effective than past efforts to inject more realism into the Department's cost estimates for acquisition programs. We just do not yet have data to compare CAPE estimates to

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[25] See: House Armed Services Hearings, 97th Cong., 1st Sess., Volume 11, 1981. Op. Cit. p. 883.

[26] House Armed Services Hearings, 97th Cong., 1st Sess., Volume 11, 1981. Op. Cit. p. 1086.

[27] John J. Young, Jr., *Reasons for Cost Changes for Selected Major Defense Acquisition Programs (MDAPs)*, Memorandum, January 30, 2009.

[28] Department of Defense, *Quadrennial Defense Review Report*, February 2010, p. 76.

[29] The CAIG was established on January 25, 1972, in a memo by Secretary of Defense Melvin Laird. See Donald Srull, *The Cost Analysis Improvement Group: A History*, Logistics Management Institute, McLean, VA, 1998, p. 12.

[30] Ibid., p. 31. The Defense Acquisition Board succeeded the Defense Systems Acquisition Review Council (DSARC). the establishment of the Defense Acquisition Board resulted in an increasing demand for independent cost estimates generated by the CAIG.

[31] Weapon Systems Acquisition Reform Act of 2009 (P.L. 111-23).

[32] Ibid., 123 STAT. 1706.

actual costs, or more importantly, to determine whether the CAPE is helping DOD generate more realistic cost estimates.

One option for Congress could be to consider requiring the CAPE to include in its annual report to Congress data on DOD cost estimates and confidence levels, CAPE cost estimates and confidence levels, and analyses of how such cost estimates compare to actual MDAP costs.[33] Such a report could provide Congress with a single source for measuring, over time, the effectiveness of cost estimates and confidence levels that were developed by program offices and the CAPE. A comprehensive annual report could also provide Congress additional cost information that could be used to help decide between competing strategic and budget priorities.

Other Drivers of Cost Growth

Unrealistic cost estimation is just one factor contributing to cost growth. Other factors include programs not getting stable funding, insufficient testing early in the acquisition process, adding requirements, and poor contractor management and oversight. Each of these factors can undermine a program's ability to execute on time and within budget. For example, adding requirements to a program after a cost estimate has been completed will likely undermine the accuracy and usefulness of the estimate because the assumptions upon which the estimate was based are no longer valid. Similarly, early developmental testing can identify flaws in a system at a stage in development where it is cheaper to identify and fix problems.

Some analysts have argued that it simply takes too long to develop and field major weapon systems. Ten to twenty year development programs are often an indication that the program is seeking ill-defined capabilities or is pursuing technologies that are not yet achievable, which in turn will result in cost growth. As a result, some have suggested instituting time-certain development, which would set a limit on the time available to develop and field a new system. Such an approach was suggested by the Quadrennial Defense Review Independent Panel. The panel recommended that "[W]ith rare exceptions, increments of military capability should be defined and designed for delivery within 5 to 7 years with no more than moderate risk."[34]

Limitations of Nunn-McCurdy

Nunn-McCurdy Does Not Require Reporting on Operations & Support Costs

The Nunn-McCurdy Act does not apply to all elements of a weapon system's life-cycle costs. For example, the Act does not apply to costs incurred during operations, support, or disposal.[35] Analysts have estimated that operations & support (O&S) costs account for two-thirds or more of

[33] One method of evaluating the reliability of a cost estimate is through the use of confidence levels, which is generated by conducting uncertainty analyses that measure the probability of cost growth. Programs with a 50 percent confidence level have a 50 percent chance of staying within the estimated cost; programs with an 80 percent confidence level have an 80 percent chance of staying with the estimated costs.

[34] QDR Independent Panel, *The QDR In Perspective: Meeting America's National Security Needs in the 21st Century*, The Final Report of the Quadrennial Defense Review Independent Panel, August 2010, p. xviii.

[35] Operations and support costs are funded from Military Personnel, Operations and Maintenance, Procurement, and occasionally RDT&E appropriations.

a system's total life-cycle cost.[36] Weapon systems have experienced O&S cost growth as well as acquisition cost growth. Cost growth in O&S can reduce the funds available to acquire new or upgrade existing weapon systems in years far beyond the current fiscal year. Given the costs associated with operations and support, Congress may want to consider applying Nunn-McCurdy-type reporting requirements to O&S costs.

Many of the decisions that determine O&S costs are made early in the acquisition process—before significant O&S costs are actually incurred. Because O&S costs are such a significant percentage of a system's lifecycle cost, and because decisions affecting these costs are made so early in the acquisition process, understanding and validating O&S cost estimates are critical to making informed decisions on major systems that will require substantial funding in the future. Precisely because O&S costs are not incurred until much later in the life-cycle, these costs do not always get the same attention as acquisition costs at Milestone B (the engineering and manufacturing development and demonstration phase) or Milestone C (the production and deployment phase). Some decisions made earlier in the acquisition process could result in lower acquisition costs at the expense of higher long-term O&S costs—and ultimately higher overall life-cycle costs.

Applying a Nunn-McCurdy type of reporting requirement to O&S costs might help Congress set its budgetary priorities as well as gather and track cost data for future analysis.[37] Another option for Congress would be to require the CAPE to include in an annual report to Congress a comparison of original O&S cost estimates to current actual costs (adjusted for inflation) for ongoing programs. The extent to which these options may be viable depends on the reliability of the data available. Without good data on O&S costs, DOD and Congress may not have important information upon which to make budget decisions.

Nunn-McCurdy Timelines

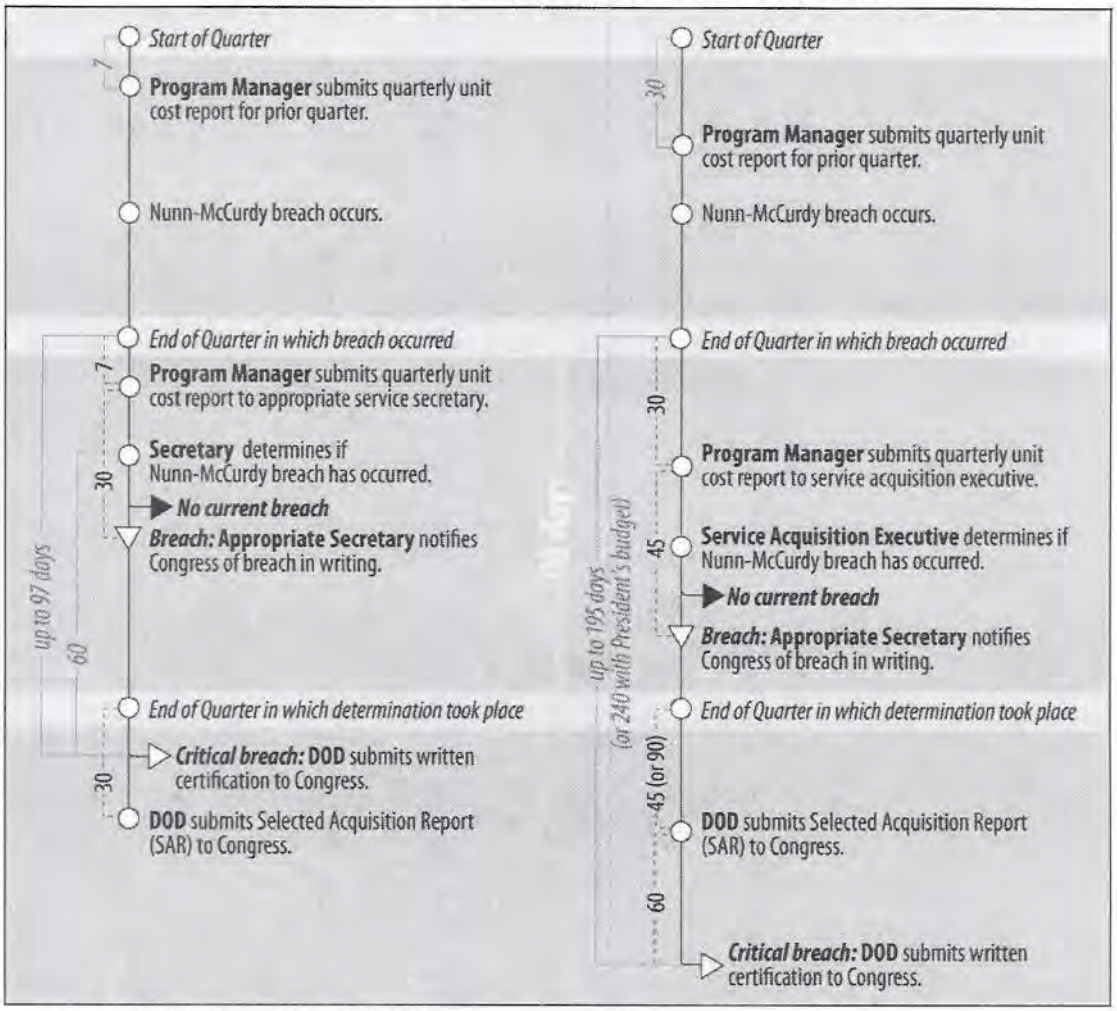
The timeline for when DOD must notify Congress of a breach and certify a program has changed since Nunn-McCurdy was first enacted in 1983. Originally, no more than 97 days elapsed from the end of the quarter in which a critical breach occurred to when the Secretary of Defense certified a program to Congress. Today, it could be up to 195 days (6.5 months), or 240 days in a quarter when the SAR is filed following the submission of the President's budget (see **Figure 1**).

[36] Walt Cooper, *O&S Trends and Current Issues*, Office of the Secretary of Defense, Cost Analysis Improvement Group, Washington, D.C., May 2007. See also, Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics, *Report of the Defense Science Board on Developmental Test & Evaluation*, Washington, D.C., May 2008, p. 22.

[37] Some drivers of O&S cost growth are difficult to project and may be unavoidable, such a fuel costs and tempo of operations.

Figure 1. Evolution of Nunn-McCurdy Reporting Timelines

Comparison of FY1983 requirements vs. current requirements



Source: CRS analysis of 10 USC § 2433.

Notes:

(1) Assumes that a Nunn-McCurdy breach does not occur within the first 30 days of the quarter, when the prior quarter's unit cost report has not yet been filed.

(2) A SAR must be submitted within 45 days from the end of a quarter except for the first fiscal quarter, when the SAR must be submitted within 60 days from the time when the President submits the budget to Congress (10 U.S.C. § 2432(f)). The President's budget is generally submitted the fist week of February. For purposes of this figure, it is assumed that the President's budget is submitted 30 days after the end of the quarter.

Some analysts have argued that under the current statute, too much time elapses from when a critical breach is first identified to when DOD certifies the program to Congress. According to these analysts, the Nunn-McCurdy timelines often span two budget cycles, and in some cases can exceed 300 days from when a program manager accurately suspects that a critical Nunn-McCurdy breach has taken place. One option for Congress could be to consider shortening some

of the Nunn-McCurdy timeframes. Condensing the timeframes could give Congress more of an opportunity to consider budgeting options for troubled programs.[38]

Congress took such an approach when it enacted the Intelligence Authorization Act for FY2010 (P.L. 111-259). The intelligence authorization act included provisions that essentially applied Nunn-McCurdy to major intelligence acquisition programs.[39] One of the few substantive differences in the intelligence bill was the timeline for when the Director of Intelligence must certify a program. In the event that a program with a critical breach is not terminated, the Director of National Intelligence must submit a report and certification to Congress no later than 120 days from the end of the quarter in which the critical breach occurred. By way of comparison, the Secretary of Defense has more than 190 days to submit such a certification to Congress.

Others have argued that while Nunn-McCurdy is a good reporting mechanism, it is not set up to be an effective program management tool. The after-the-fact nature of the reporting requirements prompted Senator John Tower, then Chairman of the Senate Armed Services Committee, to declare Nunn-McCurdy as being akin to "closing the gate after the horse has galloped off into the boondocks."[40] Then Under Secretary of Defense Ashton Carter reportedly stated that DOD needs a mechanism that is similar to Nunn-McCurdy but that comes into effect before a program has already experienced significant cost growth, a mechanism "that gives the managerial tip-off earlier than Nunn-McCurdy."[41] DOD is working to identify programs that are starting to experience cost and schedule growth before a Nunn-McCurdy breach occurs.

Mr. Chairman, distinguished members of the subcommittee, when weapon systems end up costing far more than originally anticipated, the scramble to plug budget shortfalls undermines long-term strategic planning. Systemic cost growth jeopardizes the ability of the United States to execute a long-term, coherent, and stable strategy that will give U.S. armed forces the weapons they need to meet future threats.

This concludes my testimony. Thank you again for the opportunity to appear before you to discuss these issues. I will be pleased to respond to any questions you might have.

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[38] Some analysts have gone further, arguing that the time it takes to report a breach to Congress could be shortened by notifying Congress when a Unit Cost Report or when a Contract Performance Report indicates that a program has breached a Nunn-McCurdy threshold. However, according to DOD, "The timing of breach determinations is one of the most difficult parts of Nunn-McCurdy." Within the Department, there is a great deal of discussion and deliberation at all levels prior to the formal breach determination and notification to Congress. Initial breach indications from the contractor or program manager could be premature. For example, even if the program manager has reasonable cause to believe there is a Nunn-McCurdy breach, senior leadership could initiate cost reductions or scale back the program. Using the Unit Cost Reports or Contractor Performance Reports to determine a Nunn-McCurdy breach could deprive DOD of the opportunity to manage programs and take steps to rein in cost growth.

[39] See U.S. Congress, Senate Select Committee on Intelligence, *Intelligence Authorization Act for Fiscal Year 2010*, To accompany S. 1494, 111th Cong., 1st sess., July 22, 2009, S.Rept. 111-55 (Washington: GPO, 2009), p. Sec. 324. Sections 323 (Reports on the Acquisition of Major Systems) and 324 (Critical Cost Growth in Major Systems) outline the reporting requirements for programs whose total acquisition cost experiences cost growth of 15% or 25% above the baseline estimate.

[40] *Congressional Record*, May 14, 1981, p. S5012.

[41] Marina Malenic, "Pentagon Pledges Support for Bomber Industrial Base," *Defense Daily*, March 30, 2010, p. 1.

Appendix. What Is a Current Baseline Estimate and an Original Baseline Estimate?

According to Title X of the U.S. Code, DOD is required to establish a baseline description of all major defense acquisition programs when the program is officially started. This baseline description includes information on the program's planned cost, schedule, and performance.[42] The cost information is referred to as the "baseline estimate." The baseline description (including the cost estimate) is contained in the Acquisition Program Baseline (APB).[43]

APBs are required to initiate a program, and can only be revised

- at the milestone reviews or when full rate production begins,[44]
- if there is a major program restructuring that is fully funded, or
- as a result of a program breach if the breach is primarily the result of external causes beyond the control of the program manager.[45]

Under current DOD policy, current APBs cannot be revised to avoid a Nunn-McCurdy breach.[46]

An *original baseline estimate* is the cost estimate included in the original APB that is prepared prior to the program entering "engineering and manufacturing development" (also knows as "Milestone B"), or at program initiation, whichever occurs later.[47] An original baseline estimate can only be revised if the program has a critical Nunn-McCurdy breach (see **Table 1**).[48]

A *current baseline estimate* is the baseline estimate that is included in the most recently revised APB. If the original baseline estimate has not been revised, the original baseline estimate is also the current baseline estimate.

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[42] 10 U.S.C. § 2435(a).

[43] The APB contains the key cost, schedule, and performance parameters (both objectives and thresholds). According to the *Defense Acquisition Guidebook*, the program, as described by the APB, "should represent the program as it is expected to be developed, produced and/or deployed, sustained and funded." See Department of Defense, *Defense Acquisition Guidebook*, Chapter 2, 2.1.1.

[44] For a discussion on the defense acquisition system and milestones, see CRS Report RL34026, *Defense Acquisitions: How DOD Acquires Weapon Systems and Recent Efforts to Reform the Process*, by Moshe Schwartz.

[45] In all three cases, the APB can only be revised with the approval of the Milestone Decision Authority. See Department of Defense, *Defense Acquisition Guidebook*, pp. Chapter 2, 2.1.1. The Defense Acquisition Guidebook is in revision to reflect the new DoDI 5000.02 that was issued December 8, 2008. See also Kenneth J. Krieg, *Memorandum: Acquisition Program Baselines (APBs) for Major Defense Acquisition Programs (MDAPs)*, Undersecretary of Defense, Acquisition, Technology, and Logistics, July 17, 2007.

[46] Kenneth J. Krieg, *Memorandum: Acquisition Program Baselines (APBs) for Major Defense Acquisition Programs (MDAPs)*, Undersecretary of Defense, Acquisition, Technology, and Logistics, p. 2, July 17, 2007.

[47] 10 U.S.C. § 2435(d). For programs with an acquisition unit cost or procurement unit cost that exceeded the original baseline estimate by more than 50 percent as of January 6, 2006, the original baseline estimate for the program for purposes of Nunn-McCurdy is defined as the current baseline estimate that existed as of January 6, 2006.

[48] 10 U.S.C. § 2435(d).

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