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The Nunn-McCurdy Act: Background, Analysis, and Issues for Congress

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Summary

On September 8, 1982, President Ronald Reagan signed into law the Department of Defense (DOD) Authorization Act, 1983 (P.L. 97-252), which included what has come to be known as the Nunn-McCurdy Act (10 U.S.C. § 2433). The Nunn-McCurdy Act requires DOD to report to Congress whenever a major defense acquisition program experiences cost overruns that exceed certain thresholds. The purpose of the act was to help control cost growth in major defense systems by holding the appropriate Pentagon officials and defense contractors publicly accountable and responsible for managing costs.

A program that experiences cost growth exceeding any of the established thresholds is said to have a Nunn-McCurdy breach. There are two types of breaches: significant breaches and critical breaches. A "significant" breach is when the Program Acquisition Unit Cost (the total cost of development, procurement, and construction divided by the number of units procured) or the Procurement Unit Cost (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. A "critical" breach occurs when the program acquisition or the procurement unit cost increases 25% or more over the current baseline estimate or 50% or more over the original baseline estimate.

The Nunn-McCurdy Act has been statutorily amended a number of times over the years. One of the most significant changes to the reporting requirements occurred in the FY2006 National Defense Authorization Act (P.L. 109-163), when Congress added the original baseline estimate as a threshold against which to measure cost growth. The new standard prevents DOD from avoiding a Nunn-McCurdy breach by simply re-baselining a program. Another significant change occurred in the FY2009 Weapon Systems Acquisition Reform Act (P.L. 111-23), when Congress enacted a requirement that programs with critical breaches should be presumed terminated unless the Secretary of Defense certifies the program. For programs that are 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. These changes were fueled in part over Congressional concern that programs with chronic cost growth and schedule delays were not being terminated and Congress was not being provided specific information explaining what caused the cost growth.

Some analysts believe that the Nunn-McCurdy Act has been effective as a reporting mechanism for informing Congress of cost overruns in major acquisition programs. As a result of the Nunn-McCurdy process, Congress has increased its visibility into the cost performance of the acquisition stage of MDAPs. However, some analysts suggest that Nunn-McCurdy is not a sufficiently comprehensive reporting mechanism because program managers can sometimes take steps to avoid a breach and because Nunn-McCurdy does not apply to all elements of a weapon system's life-cycle costs, such as its operations, support, or disposal costs.

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Introduction

For more than 25 years, the Nunn-McCurdy Act (10 U.S.C. § 2433) has served as one of the principal mechanisms for notifying Congress of cost overruns in Major Defense Acquisition Programs (MDAPs).[1] Nunn-McCurdy establishes different thresholds to determine if an MDAP or designated major subprogram of an MDAP experiences a cost overrun (for purposes of this report, the term program will refer to MDAPs as well as designated major subprograms). [2] These thresholds are based on a comparison between a program's actual costs and the current baseline estimate or the original baseline estimate (defined below). A program that has cost growth that exceeds any of these thresholds is said to have a Nunn-McCurdy breach and must notify Congress of the breach.

Background

In the early days of the Reagan administration, a number of high-profile weapon systems, including the Black Hawk helicopter and the Patriot missile system, experienced substantial cost overruns. Responding to public concern over escalating cost growth, Senator Sam Nunn and Representative David McCurdy spearheaded the passage of the Nunn-McCurdy Act, which was intended to create a reporting requirement for programs experiencing cost overruns.[3] It was believed that publicly exposing cost overruns would force DOD to rein in cost growth. According to Representative McCurdy,

> The assumption behind the Nunn-McCurdy provision of the fiscal 1983 defense authorization bill was that the prospect of an adverse reaction from the Office of Management and Budget, Congress, or the public would force senior Pentagon officials to address the question of whether the program in question – at their newly reported, higher costs – were worth continuing.[4]

Nunn-McCurdy was not intended to create a mechanism for managing programs or allocating funds. The rationale for an after-the-fact report was a matter of some debate. During floor debate on the original amendment in 1981, former Senator John Tower, then Chairman of the Senate Armed Services Committee, said that the reporting requirements were like "closing the gate after the horse has galloped off into the boondocks."[5]

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[1] A Major Defense Acquisition Program is currently defined as 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 1982, when the Nunn-McCurdy Act was enacted, the procurement cost of a program had to be $1 billion (in FY 1980 constant dollars) to be considered an MDAP.

[2] If an MDAP has two or more major items that are significantly different from each other in form or function, DOD may designate the items as "major subprogram" for purposes of acquisition reporting requirements. This authority was established in Sec. 81 of The Duncan Hunter National Defense Authorization Act for Fiscal Year 2009 (P.L. 110-417).

[3] See [http://www.eia.org/news/pressreleases/2006-04-26.268.phtml].

[4] See [http://www.eia.org/news/pressreleases/2006-04-26.268.phtml].

[5] *Congressional Record* May 14th, 1981 pg. S5012.

What is 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.[6] 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.

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.

What is a Current Baseline Estimate and an Original Baseline Estimate?

According to Title X of the U.S. Code, the Department of Defense (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.[7] 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).[8]

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

1. at the milestone reviews or when full rate production begins,[9]
2. if there is a major program restructuring that is fully funded, or
3. as a result of a program breach if the breach is primarily the result of external causes beyond the control of the program manager.[10]

[6] 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.

[7] 10 U.S.C. § 2435(a).

[8] 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*, pp. Chapter 2, 2.1.1.

[9] 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.

[10] In all three cases, the APB can only be revised with the approval of the Milestone Decision Authority. See (continued...)

Under current DOD policy, current APBs cannot be revised just to avoid a Nunn-McCurdy breach.[11]

An *original baseline estimate* is the cost estimate included in the original (first) 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.[12] An original baseline estimate can only be revised if the program has a critical Nunn-McCurdy breach (see **Table 1**).[13]

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.

Nunn-McCurdy Timelines

Program managers are required to submit quarterly unit cost reports to the service's acquisition executive within 30 days of the end of the quarter.[14] If a program manager has reasonable cause to believe that a program has a significant Nunn-McCurdy breach, he must immediately submit a unit cost report.[15] This report is generally the first official indication that a program may have a Nunn-McCurdy breach.[16]

When a service acquisition executive receives a unit cost report, he must determine whether a Nunn-McCurdy breach has occurred. If there is no breach, no notification to Congress is required. If the service acquisition executive determines that there is in fact a Nunn-McCurdy breach, the service is required to notify Congress, in writing, of the breach.

If the service acquisition executive's determination is based on a quarterly unit cost report, the notification to Congress must be submitted within 45 days of the end of the quarter (see **Figure 1**).[17] If the determination in based on a unit cost report submitted in the middle of a quarter, then the written notification to Congress must be submitted within 45 days of when the program manager submitted the unit cost report to the service acquisition executive (see **Figure 2**).

(...continued)

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.

[11] 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.

[12] 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.

[13] 10 U.S.C. § 2435(d).

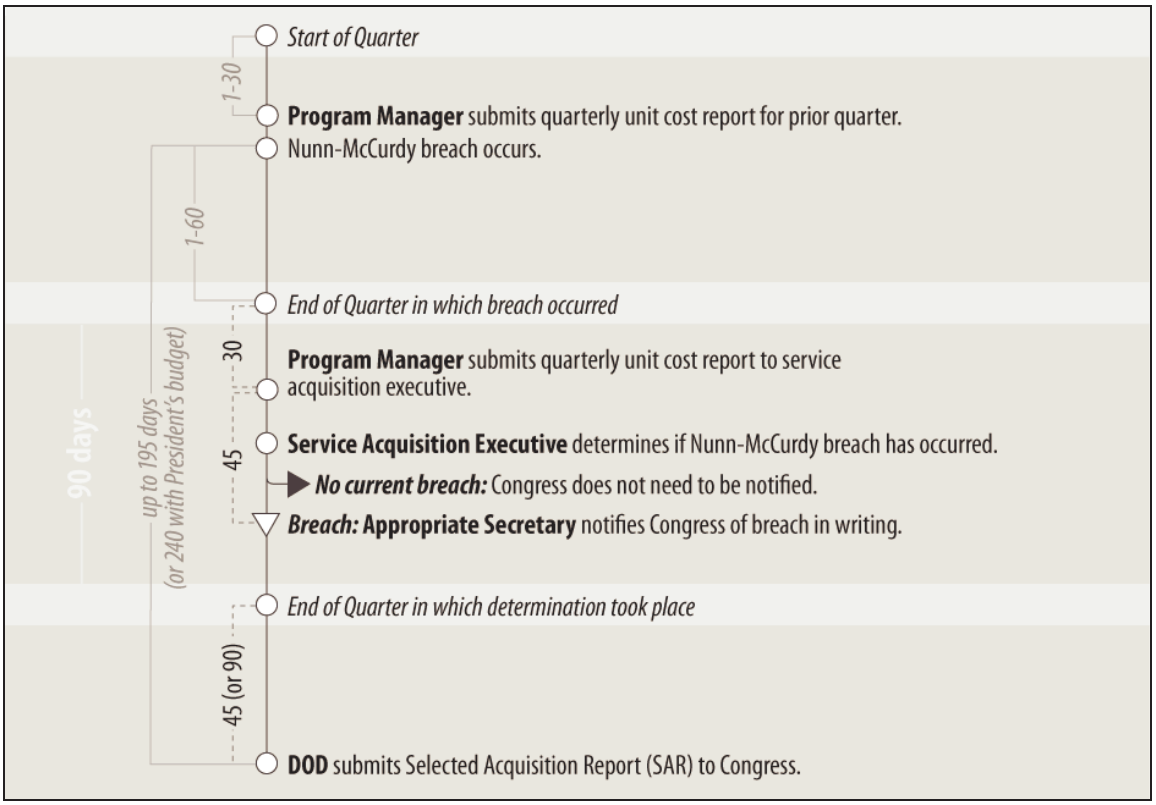
[14] 10 U.S.C. § 2435(b).

[15] 10 U.S.C. § 2433(c). The unit cost report includes program acquisition unit cost, procurement unit cost (if appropriate), and cost or schedule variance. See 10 U.S.C. § 2433(b).

[16] Under certain circumstances, a program manager does not need to submit a mid-quarter unit cost report. For example, if a mid-quarter report had previously been filed indicating an equal or greater level of cost growth, then the program manager is not required to submit another mid-quarter report.

[17] 10 U.S.C. 2433(d).

Figure 1. Nunn-McCurdy Timeline based on End-of-Quarter Report



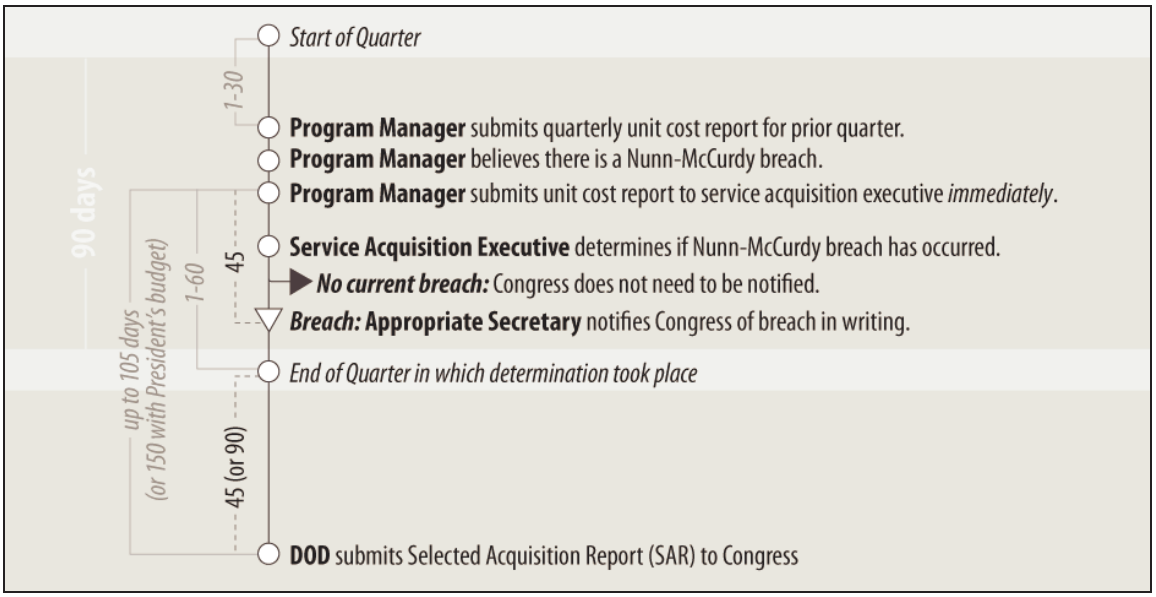
Source: CRS analysis of 10 U.S.C. § 2433.

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 first 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.

Figure 2. Nunn-McCurdy Timeline based on Mid-Quarter Report



Source: CRS analysis of 10 U.S.C. § 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 first 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.

The notification to Congress must include 17 different data elements, including

1. an explanation of the reasons for the cost increase,
2. the completion status of the program and designated major subprograms,
3. changes in the projected cost of the program,
4. names of the military and civilian personnel responsible for program management and cost control,
5. any changes in performance or schedule that contributed to cost growth,
6. action taken and proposed to be taken to control cost growth,
7. changes in the performance or schedule milestones and how such changes have affected the cost of the program, and
8. prior cost estimating information.

In addition to the notification, DOD must also submit to Congress a Selected Acquisition Report (SAR) for the fiscal quarter in which the breach occurred or in the quarter in which it was determined that a breach occurred.[18] For a significant breach, no further action is required.

[18] 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 (continued...)

However, if a program experiences a critical breach, DOD is required to take a number of additional steps.

Consequences of a Critical Nunn-McCurdy Breach

In the event of a critical breach, 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.[19]

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.[20] A certification, which uses the exact wording as 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.[21]

A certification must be accompanied by a copy of the root-cause analysis report.[22] In addition to submitting a certification and the root-cause analysis to Congress, a program that is not terminated must

(...continued)

(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 the determination was made 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 is made – which would be the quarter in which the breach actually occurred.

[19] 10 U.S.C. § 2433a(a).

[20] The requirement that a program be terminated if it is not certified was enacted is a recent change 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)).

[21] 10 U.S.C. § 2433a(b).

[22] 10 U.S.C. § 2433a(b)(3).

1. be restructured in a manner that addresses the root cause of the cost growth,
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. [23]

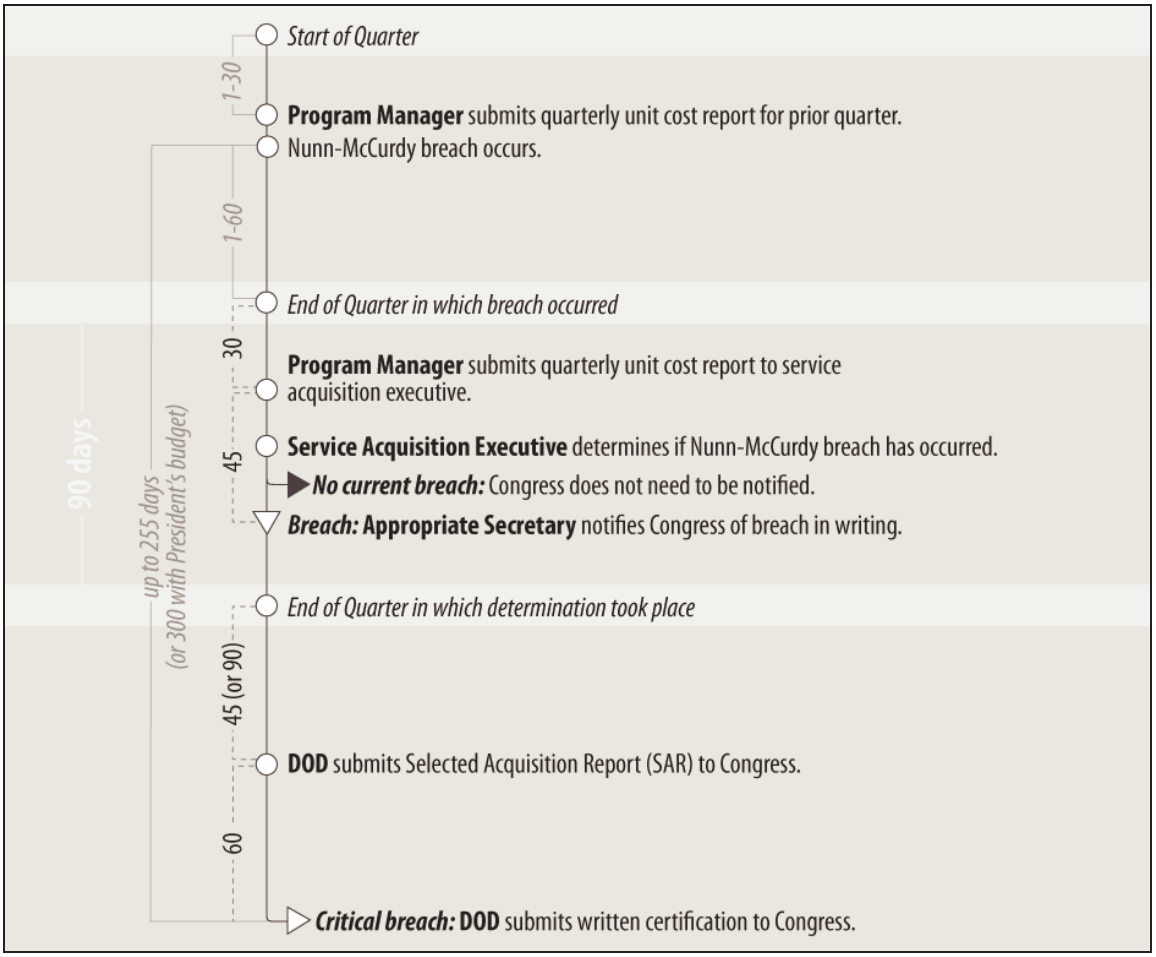
As reflected in **Figure 3**, from the time a program manager reasonably believes that a critical Nunn-McCurdy breach occurs to the time the Secretary of Defense certifies the program to Congress could be as long as 255 days (and as long as 300 days if the SAR is filed 60 days after the President's budget).[24]

[23] 10 U.S.C. § 2433A(c).

[24] 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, which is some 30 days after the end of the quarter (which is December 31, 2010). Granting of an extra 15 days to submit a SAR after the budget is submitted (60 days vs. 45 days) and the 30 day delay between the end of the quarter and when the budget is submitted in the first week in February, combines to add at least 45 days to the SAR filing deadline.

Figure 3. Timeline for Critical Nunn-McCurdy Breach

Based on Unit Cost Report Submitted at the end of a quarter



Source: CRS analysis of 10 U.S.C. § 2433.

Note:

(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 first 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.

How the Nunn-McCurdy Act Has Evolved

The Nunn-McCurdy Act has been statutorily amended a number of times over the years (see **Figure 4**). One of the most significant changes to the reporting requirements occurred in the FY2006 National Defense Authorization Act (P.L. 109-163), when an additional threshold was added against which to measure cost growth – an original baseline. The new standard, which prevents DOD from avoiding a Nunn-McCurdy breach by simply re-baselining a program, has

increased the number of programs breaching Nunn-McCurdy.[25] For example, according to DOD, 11 programs that did not have a Nunn-McCurdy breach prior to the new FY2006 requirements were re-categorized as having significant breaches as a result of the FY2006 legislation's new original baseline.[26] Congress also believed that the FY2006 changes to Nunn-McCurdy would help "encourage the Department of Defense both to establish more realistic and achievable cost and performance estimates at the outset of MDAPs and to more aggressively manage MDAPs to avoid undesirable cost growth on these programs."[27]

Another significant change occurred in the FY2009 Weapon Systems Acquisition Reform (P.L. 111-23), when Congress enacted a requirement that programs with critical breaches should be presumed terminated unless the Secretary of Defense certifies the program. For programs that are 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. These changes were fueled in part over Congressional 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. For an expanded discussion on the legislative evolution of Nunn-McCurdy, see **Appendix**.

[25] 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.

[26] Based on documentation provided by DOD. See also : Larry Axtell and Wendell Irby, "APB, SAR, and Nunn-McCurdy Status," Damir Conference, October 30, 2007, p. 29, http://www.acq.osd.mil/damir/ConferenceDocs/Axtell.ppt.

[27] U.S. Congress, House of Representatives, *National Defense Authorization Act for Fiscal Year 2006*, Conference Report to Accompany H.R. 1815, 109th Cong., 1st sess., Dec. 18, 2005, H.Rept. 109-360 (Washington: GPO, 2005), p. 755.

Figure 4. Evolution of the Nunn-McCurdy Act

1982 - Present

1982

Thresholds

Cost growth measured against Baseline SAR[2]

- Cost increases include expected inflation.
- >15% growth of PUC or PAUC1
- additional reports for every >5% increase above the originial 15% growth
- >25% growth of PUC or PAUC

Reporting Requirements

- PM submits written UCR to secretary within 7 days of the end of each quarter.
- PM submits written UCR if >15% PUC or PAUC cost breach, or cost or schedule variance of a major contract4 results in 15% cost increase of the contract.
- PM submits written UCR for subsequent >5% increases of PUC, PAUC, or in a major contract due to cost or schedule variance.
- Notify Congress of >15% or >25% breach within 30 days of receiving UCR.
- If 25% breach, submit to Congress written certification within 60 days of Secretary' s determination of breach.

Other

- If DOD fails to submit written notifications and certifications, funds may not be obligated for the program.
- HASC and SAC can waive prohibition on obligations.

1984

Thresholds

Cost growth measured against Baseline SAR or prior FY UCR reporting a breach.

- Definition of PUC changed to all funds programed for obligation for procurement in a fiscal year.[3]

Reporting Requirements

- Definition of major contract changed: requires associate contracts to have a minimum value > $2M. In 1986 the threshold was changed to $40M.[7]
- Reporting requirements do not apply to programs where 90% of units have been delivered or 90% of planned spending is complete.

Time Line Changes

- SAR submission deadline changed from within 30 days of the President's budget and 30 from the end of the quarter to within 60 days of the President's budget and 45 days from the end of the quarter.
- UCR submitted to secretary within 7 days of President's budget submitted to Congress; for all other quarters within 7 days of the end of the quarter.

1989

Thresholds

Cost growth measured against Baseline SAR or prior FY SAR submitted as a result of a breach.

Time Line Changes

- Notification of breach due to Congress within 30 days of service acquisition executive submitting determination report to Secretary.
- If 25% breach, submit to Congress written certification within 30 days of deadline for submitting SAR.
- UCR submitted to secretary within 7 days of the end of the first quarter.

Other

- If DOD fails to submit reports Congress in a timely manner, funds can not be obligated for a major contract.[5]
- Role of the Service Acquisition Executive added

1992

Thresholds

- Thresholds changed from >15%, >25%, and >5% to at least 5%, 25%, and 5%.

Reporting Requirements

- SAR to be submitted must be for the first quarter ending on or after the day the breach was determined or the fiscal year quarter which immediately precedes the first fiscal-year quarter ending on or after that date.

Time Line Changes

- Quarterly unit cost report deadline changed from seven business days to 30 calendar days.
- If breach determined based on quarterly UCR, DOD must submit notification to Congress within 45 days of the end of the quarter. If breach based on mid-quarter UCR, DOD notifes Congress within 45 days of the SAE's report.

1994

Thresholds

Cost growth measured against 'baseline estimate'[8]

- Cost growth to be measured in constant base year dollars (excluding inflationary effect).
- Definition of PUC changed to all funds programed for obligation for procurement (deleting in a fiscal year and advanced procurement).[6]

2006

Thresholds

Baseline estimate redefined to mean the description prepared before milestone B or program initiation, whichever is later.

- Cost growth measured against current baseline estimate and original baseline estimate.

2008

Other

- Designated major subprograms fall within Nunn-McCurdy requirements.

2009

Reporting Requirements

For Critical breaches, if program not terminated:

- additional certification to Congress required, stating program is higher priority than programs whose funding must be cut to cover the cost growth of current program.
- revokation of most recent milestone approval (no new contracts without new milestone approval or MDA approval).
- Analysis conducted to determine root cause of cost growth.
- Program must be restructured to address root causes of cost growth.
- Failure to certify to Congress results in program termination

Source: CRS analysis of Legislative History. See **Appendix** for full citations.

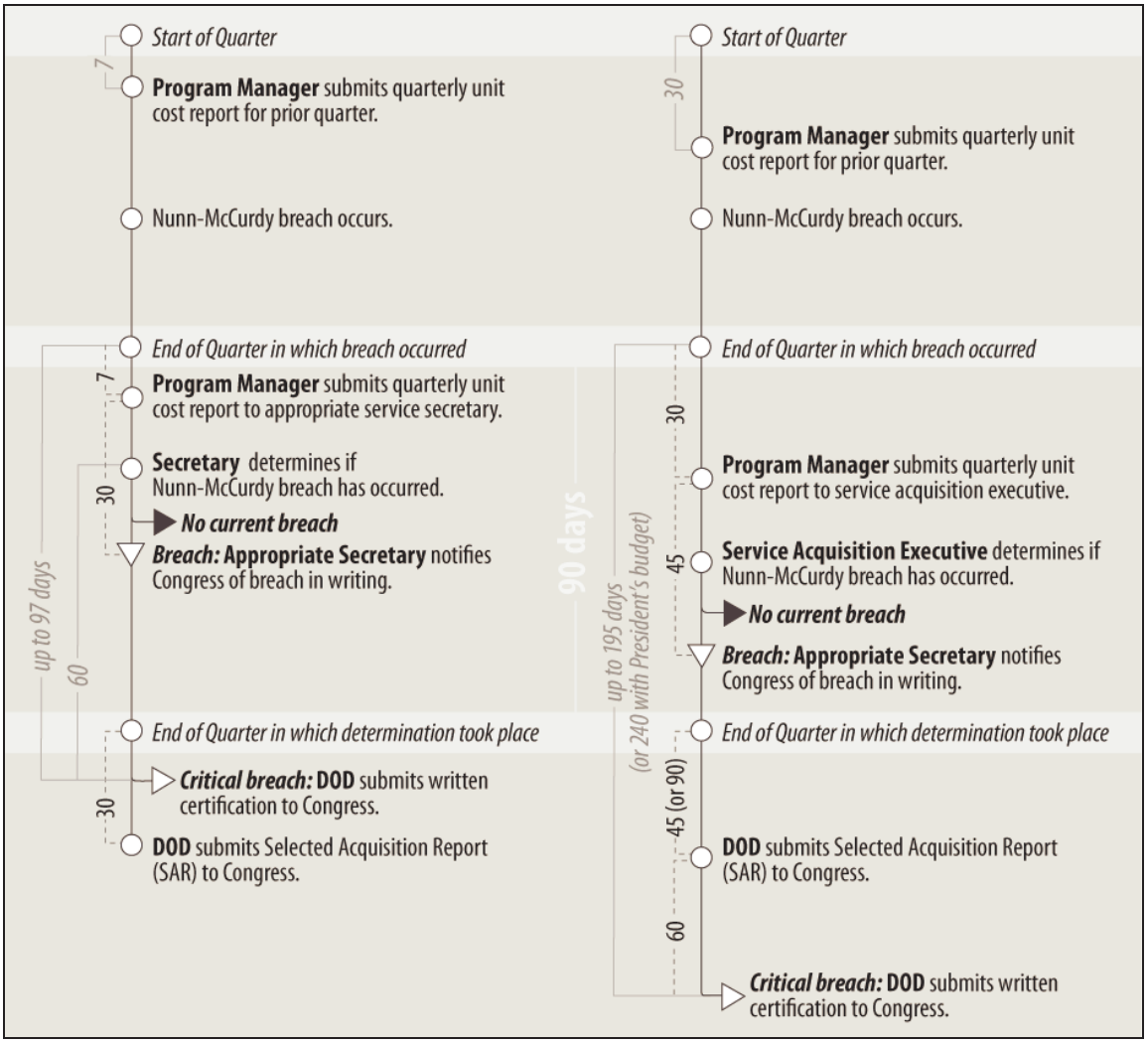
Notes:

[1] PUC - total procurement funds appropriated in a fiscal year minus advanced procurement appropriated for future years, plus advanced procurement appropriated in prior years for use in the current fiscal year divided by number of units procured with such funds in the same fiscal year; PAUC - total cost of development, procurement, and construction divided by the number of units. [2] Baseline SAR - First SAR containing program information or comprehensive annual SAR for prior fiscal year. [3] PUC (1984 definition) - total funds programmed to be available for obligation for procurement for a fiscal year, minus funds programmed to be available in current fiscal year for obligation for advanced procurement in future years, plus advanced procurement appropriated in prior years for use in the current fiscal year, divided by number of units procured with such funds in the same fiscal year. [4] Major Contract - each prime contract and the six largest associate contracts measured by dollar value. [5] If DOD subsequently submits the SAR report, prohibition ends 30 days after continuous session of Congress. [6] PUC (1994 definition) - total funds programmed to be available for obligation for procurement for the program divided by number of units procured. [7] P.L. 99-500 and P.L. 99-591 Sec. 101(c). [8] Baseline Estimate - DOD required to develop a baseline description for MDAPs that includes a cost estimate. The description must be prepared before major milestones.

The timeline for when DOD must notify Congress of a breach and certify a program has changed since the Nunn-McCurdy Act was first enacted in 1983. In 1983, no more than 97 days could elapse from the end of the quarter in which a critical breach occurred to when the Secretary of Defense certified the program to Congress. Today, it could take as long as 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 5**).

Figure 5. Evolution of Nunn-McCurdy Reporting Timelines

Comparison of FY 1983 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.

Effectiveness of the Nunn-McCurdy Act

Many MDAPs continue to suffer from the cost growth that led to the passage of the Nunn-McCurdy Act.[28] For example, GAO reported that 42% of programs in the FY2008 portfolio

[28] According to a RAND study that looked at a 50 year time horizon, annual cost escalation rates for amphibious ships, (continued...)

experienced acquisition unit cost growth of at least 25%, compared with 37% of programs experiencing such cost growth in the FY2000 portfolio.[29] GAO also reported that the total acquisition costs for MDAPs in the FY2007 portfolio increased 25% from first cost estimates, compared with a 6% increase in 2000.[30] In addition, the percentage of programs with a 25% or more increase in PAUC has increased from 37% in fiscal year 2000 to 42% in fiscal year 2008.[31]

Nunn-McCurdy as a Reporting Mechanism

Some analysts believe 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. According to DOD, from early 2001 through April 2009, 21 programs had critical Nunn-McCurdy thresholds.[32] In the December 2009 reporting period, seven programs had Nunn-McCurdy breaches.[33]

Other analysts suggest that Nunn-McCurdy is not a sufficiently comprehensive reporting mechanism because program managers can sometimes take steps to avoid a Nunn-McCurdy breach when Congress might want to be notified of cost growth. For example, according to a media report, the Marine Corps AH-1Z attack helicopter program reduced the number of helicopters it planned to buy in order to lower the overall program cost and avoid a breach.[34] The program manager reportedly stated that the program reduced its planned purchase from 105 to 58 helicopters "to avoid a critical Nunn-McCurdy breach."[35] Reducing the planned purchase to avoid reporting cost growth to Congress could deprive Congress of information that it needs to make budgetary decisions. Some analysts point out that while Nunn-McCurdy might be effective in notifying Congress of incurred cost growth, it does not provide Congress insight into why the

(...continued)

surface combatants, attack submarines, and nuclear aircraft carriers have ranged from 7% to 11%, and the annual cost escalation rate for U.S. fighter aircraft was about 10% See: 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. Another 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.

[29] Government Accountability Office. *Defense Acquisitions: Assessments of Selected Weapons Programs*. GAO-09-326SP. March 30, 2009. In comparing cost growth of different fiscal years, the GAO assessments quantify total portfolio cost growth in a given year and do not adjust data to account for changes in the mix of acquisition programs from year to year.

[30] FY 2000 figures, see: Government Accountability Office. *Defense Acquisitions: Assessments of Selected Weapons Programs*. GAO-08-467SP. March 31, 2008. Highlights Page. For FY 2008 figures, see: Government Accountability Office. *Defense Acquisitions: Assessments of Selected Weapons Programs*. GAO-09-326SP. March 30, 2009. Highlights Page.

[31] Ibid.

[32] Based on documentation provided by DOD.

[33] Department of Defense, *Summary Explanation of Significant SAR Cost Changes*, Nunn-McCurdy Breaches, as of December 31, 2009.

[34] Dan Taylor, "New-build AH-1Z Helos Cut in Half to Avoid Nunn-McCurdy Breach," *Inside the Navy*, October 27, 2008, Vol. 21, No. 43.

[35] ibid.

cost growth occurred. To help address this issue, Congress amended the Nunn-McCurdy Act in 2009 to require DOD to provide a root-cause analysis report whenever a program that has a critical breach is certified.

Programs That Have Administrative Nunn-McCurdy Breaches

Some analysts argue that the Nunn-McCurdy Act does not distinguish between programs that have a breach because of poor program management (e.g., unrealistic cost estimates, changes to requirements) and programs that are performing well, but experience a breach for administrative reasons, such as a change in the number of units being acquired.[36] These analysts argue that without such a distinction, programs that have an administrative breach can be unduly penalized, potentially costing DOD millions of dollars and adding unnecessary delay. Other analysts argue that the real cause of many of these administrative breaches, such as cutting the number of units, is earlier poor program management. These analysts argue that allowing some programs to avoid Nunn-McCurdy reporting requirements for administrative reasons could prevent Congress from making its own determination as to the reason for a program's cost growth.

Well managed programs can have a Nunn-McCurdy breach for reasons that are not related to program management, such as a strategic change in the needs of the military. For example, in an effort to provide additional airlift capability to commanders in Iraq and Afghanistan, DOD earmarked an additional $2.5 billion through FY15 to buy 56 additional new Apache helicopters. These funds were assigned to the Apache AD-64D Block III program.[37] Adding the additional money to acquire new helicopters caused a Nunn-McCurdy unit cost breach because the new helicopters are substantially more expensive than the other helicopters already in the program. As one DOD official reportedly explained, "these new-build aircraft, approximately three times the cost of a remanufactured aircraft, have skewed the average unit cost to the point that we've encountered a breach."[38] As a result, according to DOD the program was required to go through the Nunn-McCurdy process even though the program itself was performing well.

Cutting the number of units can also trigger a breach even when the cost of buying a single unit actually decreases. For example, DOD originally planned on buying 24,000 Small Diameter Bomb Increment I units but cut the order almost in half to 12,600. According to DOD officials, the reduction was based on "updated inventory assessment and usage projection for this weapon." The actual per unit cost of buying each small diameter bomb decreased from $24,000 to $23,000. However, in calculating program acquisition unit costs, Nunn-McCurdy includes fixed development, production, and military construction costs that have already been committed to the program. Cutting the number of units means that these sunk costs are amortized, or spread out, over fewer units, which in turn, increases the program acquisition unit cost by 17%, triggering a significant breach.[39]

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[36] The term administrative breach is not found in law. For purposes of this report, the term administrative breach is used to clarify the argument that some analysts make in differentiating between programs that have cost growth due to poor program management and programs that have cost growth due to other factors. DOD uses the term "technical" breach to describe these programs.

[37] The Apache AD-64D Block III program, which began in 2006, aims to upgrade over 600 Apaches with the Longbow radar.

[38] "New Apache Orders 'Skew" Unit Cost, Cause 'Critical' Nunn-McCurdy Breach," *Inside the Pentagon*, April 1, 2010. See also "Apache Block III On/Ahead of Schedule, Officials Say," *Helicopter News*, vol. 36, no. 9 (April 27, 2010).

[39] In this case, Ashton Carter downgraded the program, thereby exempting it from Nunn-McCurdy. See Letter form

(continued...)

Because programs that suffer critical administrative breaches are required to adhere to all of the statutory requirements of Nunn-McCurdy (including performing a root-cause analysis, restructuring the program, and having its most recent milestone approval revoked), some analysts argue that Nunn-McCurdy requirements should be waived for programs with administrative breaches.

Other analysts argue that exceptions to the Nunn-McCurdy Act should not be made for administrative breaches. These analysts argue the real cause of many of these administrative breaches, such as cutting the number of units, is a result of earlier poor program management and that exempting such programs from reporting requirements could mask poor program performance. These analysts also argue that administrative reasons could be invoked to hide other cost issues. These analysts could also point to the Apache AD-64D Block III program, arguing that even though the declared critical breach was a result of adding new helicopter purchases to the existing program, according to DOD's Cost Assessment and Program Evaluation Office (CAPE), even if all the new helicopters are excluded from a cost growth analysis, the program would still have had a critical Nunn-McCurdy Breach.[40] Analysts could further argue that the cost and schedule delay associated with the Nunn-McCurdy requirements is not onerous when considered within the context of expensive weapon acquisition programs.

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

Some analysts suggest that Nunn-McCurdy is not a sufficiently comprehensive reporting mechanism because it does not apply to all elements of a weapon system's life-cycle costs, such as operations, support, or disposal.[41] Analysts have estimated that O&S costs account for two-thirds or more of a system's total life-cycle cost. [42] Unbudgeted cost growth in O&S costs can reduce the funds available to acquire new or upgrade existing weapon systems.

Many of the decisions that determine O&S costs are made early in the acquisition process, prior to significant O&S costs being incurred. Because O&S costs are not incurred until much later in the life-cycle, these costs may not always receive the same attention as acquisition costs at Milestone B (the engineering and manufacturing development and demonstration phase) and Milestone C (the production and deployment phase). Decisions made at these key decision points could result in lower acquisition costs at the expense of higher long term O&S costs — and ultimately higher overall life-cycle costs.

(...continued)

Ashton Carter, Under Secretary of Defense for Acquisition, Technology & Logistics, to Joseph Biden, President of the Senate, March 11, 2010. See also, "Small Diameter Bomb Program Dodges 'Significant' Nunn-McCurdy Breach." *Inside the Pentagon*, March 25, 2010.

[40] According to a CAPE analysis, for remanufactured aircraft alone, program acquisition unit costs would have increased 43% from the original August 2006 APB estimate and 37% from the current APB estimate set in June 2007. The result of such cost growth would be a significant breach based on the original baseline and a critical breach based on the current baseline. Data provided by the CAPE to CRS, June 9, 2010.

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

[42] 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.

Without good cost data on O&S costs, DOD and Congress may not have important information upon which to make budget decisions. While gathering O&S data may not help manage costs for deployed systems, the data can be used to gauge the reliability of DOD O&S cost estimates for future programs. Such data can also give Congress insight into the impact of trade-offs that are being made during the acquisition process that affect both short-term and long-term cost.

Nunn-McCurdy as a Mechanism for Controlling Cost Growth

Most analysts argue that the Nunn-McCurdy Act has not succeeded in controlling cost growth in MDAPs. Some of these analysts have called for strengthening Nunn-McCurdy as a vehicle to manage MDAPs, with one analyst reportedly arguing for a "Nunn-McCurdy on steroids that really punishes programs that have failed."[43]

Others have argued that while Nunn-McCurdy is a good reporting mechanism, it is not set up to be an effective program management tool. UnderSecretary 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."[44] Setting up such mechanisms, might get to the root causes of cost growth and improve program management more effectively than Nunn-McCurdy.

Have Critical Nunn-McCurdy Breaches Led to Program Cancellations?

Generally, a Nunn-McCurdy breach does not result in a program being cancelled. However, there have been some exceptions. In December 2001, the Navy Area Defense (NAD) program was cancelled. [45] According to DOD, "the cancellation came, in part, as a result of a Nunn-McCurdy Selected Acquisition Report breach of the existing program."[46] This was the first acquisition program that analysts and officials recalled having been cancelled as a result of a Nunn-McCurdy breach.[47]

Most recently, in July 2008, Congress was notified that the Armed Reconnaissance Helicopter (ARH) program had suffered a critical Nunn-McCurdy breach. Shortly thereafter, John Young, then Under Secretary of Defense for Acquisition, Technology, and Logistics, in consultation with senior Army officials, cancelled the ARH program. Secretary of the Army Pete Geren justified the cancellation, stating that "The cost and schedule that were the focus of the decision to award the contract to Bell Helicopter are no longer valid. We have a duty to the Army and the taxpayer to move ahead with an

[43] Christopher J. Castelli, "DEFENSE: Acquisition Shop Prepares for Shift in Administrations," *Inside Missile Defense*, November 5, 2008, Vol. 14, No. 23.

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

[45] NAD was intended to track, detect, and engage tactical ballistic missiles in the terminal phase of flight using the AEGIS Weapon System platform.

[46] "Navy Area Missile Defense Program Cancelled", Department of Defense News Release No. 637-01, December 14, 2001.

[47] Archived version of CRS Report RL33745, *Navy Aegis Ballistic Missile Defense (BMD) Program: Background and Issues for Congress*, by Ronald O'Rourke

alternative course of action to meet this critical capability for our soldiers at the best price and as soon as possible."[48]

In the Weapon Systems Acquisition Reform Act of 2009, Congress amended the Nunn-McCurdy Act, stating that there is a "presumption of termination" for programs that experience a critical breach.[49] According to the statute, "the Secretary shall terminate the program unless the Secretary" submits a certification to Congress.

Case Study: Unrealistic Cost Estimates as a Root Cause of Cost Growth that Leads to Nunn-McCurdy Breaches

While there are a number of factors that lead to cost growth in MDAPs, for some 30 years, various DOD officials, analysts, and industry officials have argued that a primary cause of cost growth is unrealistically low cost estimates at the inception of programs.[50] Unrealistically optimistic cost estimates can make future cost growth almost inevitable.[51] Such unrealistically low cost estimates can 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 "Unbridled optimism regarding cost, schedule, performance, and risks is a recipe for failure."[52] 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.

Given the connection between unrealistic cost estimates and Nunn-McCurdy breaches, one question that can be asked is whether Nunn-McCurdy can be used as a mechanism for forcing more realistic cost estimates.

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[48] Department of Defense, "DoD Announces Non-Certification Of Armed Reconnaissance Helicopter Program," press release, October 16, 2008, http://www.defenselink.mil/releases/release.aspx?releaseid=12288.

[49] P.L. 111-23, Sec. 206.

[50] Poor cost estimating was a recurring theme during the McCurdy hearings. For example, 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 stated "Cost estimating is probably the key ingredient in reducing cost growth...As 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." Former 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. Michael Gilmore, then of the Congressional Budget Office, stated when discussing overly optimistic cost estimates, that "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." See: U.S. Congress, House Committee on the Budget, *Long-Term Sustainability of Current Defense Plans*, 111th Cong., 1st sess., February 4, 2009.

[51] Michael Gilmore, *Long-Term Sustainability of Current Defense Plans.*

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

Issues for Congress

Nunn-McCurdy as a Reporting and Management Tool

One issue for Congress is to determine whether Nunn-McCurdy should be used as

1. only a reporting mechanism to measure the extent to which DOD is effectively managing its weapon system acquisitions or
2. both a reporting and management tool.

Congress appears to view Nunn-McCurdy as both a reporting and a management tool. To enhance the effectiveness of the act as a reporting tool, Congress has amended it over the last 25 years to increase visibility into MDAP cost growth and improve the reliability of the data reported. For example, as discussed above, in the FY2006 National Defense Authorization Act, Congress added an additional threshold against which to measure cost growth to improve visibility into the cost growth experienced by a program from its inception.

At the same time, Congress has taken actions which imply that Nunn-McCurdy is also a management tool. For example, in the Weapon System Acquisition Reform Act of 2009, Congress mandated that a program that has a critical breach must be restructured to address the root causes of cost growth and have its most recent milestone approval revoked.

Clarifying what role Nunn-McCurdy should play in helping Congress exercise its oversight role could help Congress determine how best to amend the act in the future.

Shortening the Nunn-McCurdy Timeline

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.

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 (which is used in Earned Value Management) indicates that a program has breached a Nunn-McCurdy threshold.[53]

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

[53] A Contractor Performance Report (CPR) is intended to provide "timely, reliable summary-level data with which to assess current and projected contract performance." A CPR is a management tool whose value is in its "ability to reflect current contract status and reasonably project future program performance." See OUSD(AT&L)ARA/AM(SO), Date Item Description: Contract Performance Report (CPR), DI-MGMT-81466A, March 30, 2005, p. 1, http://www.acq.osd.mil/pm/currentpolicy/cpr_cfsr/CPR%20Final%203-30-05.pdf.

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 descope the program. [54] 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 reasonable steps to rein in cost growth.

Managing Administrative Breaches

Some analysts argue that requiring programs with administrative breaches to go through all of the Nunn-McCurdy requirements adds undue cost and time to programs that are working well. These analysts could argue that Nunn-McCurdy should be amended to allow programs that experience an administrative critical breach to avoid some of the statutory requirements, such as having to restructure the program, revoke the prior milestone approval, and conduct a root-cause analysis.

Other analysts argue that the real cause of many of these administrative breaches, such as cutting the number of units, is earlier poor program management and that only through adhering to all of the Nunn-McCurdy requirements can Congress determine for itself the true cause of cost growth. These analysts could further argue that the cost and schedule delay associated with the Nunn-McCurdy requirements is not too onerous when considered within the context of expensive weapon acquisition programs.

One option for Congress could be to authorize the Secretary of Defense to categorize a breach as an administrative breach and submit to Congress an explanation as to why the program should be categorized as an administrative breach. For programs that are designated as administrative breaches, the statutory requirements for a critical breach could be automatically waived unless one of the Armed Services Committees requests DOD to adhere to all of the statutory requirements.

Another option for Congress could be to authorize the statutory requirements for a critical breach to be waived only by consent of the House and Senate Armed Services Committees.[55] Such an approach would allow Congress to waive the statutory requirements only in those instances where it agrees that the cost growth was not caused by poor program management.

Applying Nunn-McCurdy-Type Reporting Requirements to O&S Costs

Given the costs associated with operations and support, Congress may want to consider applying Nunn-McCurdy-type reporting requirements to O&S costs. Applying a reporting requirement to O&S costs might help Congress set its budgetary priorities, as well as gather and track cost data for future analysis. Another option for Congress could be to

[54] Based on written answers provided to CRS by DOD on April 1, 2009.

[55] A similar approach was used in the original Nunn-McCurdy Act, which allowed the funding prohibition to be waived by consent of the House and Senate Armed Services Committees.

require the Cost Assessment and Program Evaluation office to include in its 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.

Appendix. Legislative History

On September 8, 1982, President Ronald Reagan signed into law the Department of Defense Authorization Act for Fiscal Year 1983 (P.L. 97-252), which included what has come to be known as the Nunn-McCurdy Act.[56] This Appendix traces the most significant change to the Nunn-McCurdy Act and the legislative intent behind these changes.

Department of Defense Authorization Act, 1982 (P.L. 97-86)

Antecedents of the Nunn-McCurdy Act

On May 14, 1981, Senator Sam Nunn offered a floor amendment to the Department of Defense Authorization Act of 1982 requiring DOD to notify Congress if the cost growth of an MDAP (referred to in the amendment as a major defense system) exceeded certain thresholds. [57] The purpose of the measure was to "help control the increasing costs of major defense systems."[58] In arguing for the amendment, Senator Nunn raised a number of issues, including the need to ensure that DOD's "spending priorities are being established within the context of a coherent national strategy." He argued that "the unit costs of major defense weapon systems are increasing at rates far beyond the rate of inflation, adding billions to the budget just to buy the same quantities of weapons that were planned before."[59] Senator Nunn believed that the amendment "holds the appropriate Pentagon officials and defense contractors publicly accountable and responsible for managing costs."[60] But ultimately, the amendment was intended to inform Congress whether DOD's acquisition process is working effectively. In arguing in support of the amendment, 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.

Despite initial opposition by Senator John Tower,[61] then Chairman of the Senate Armed Services Committee, the amendment passed by a vote of 94-0 and was included in the Department of Defense Authorization Act of 1982.[62]

As shown in **Table A-1**, the thresholds set forth in the 1982 act were similar to the significant and critical breach levels that exist in the Nunn-McCurdy Act today (the original statute did not use the terms significant or critical breach; these terms are used below for comparison with the

[56] 10 U.S.C. § 2433.

[57] *Congressional Record* May 14th, 1981 pg. S5010.

[58] Ibid.

[59] *Congressional Record* May 14th, 1981 pg. S5011.

[60] *Congressional Record* May 14th, 1981 pg. S5011.

[61] Sen. Tower opposed the amendment, in part because he believed that "in some respects it [the threshold] is closing the gate after the horse has galloped off into the boondocks." However, he acknowledge "this amendment is going to be adopted, because it is like motherhood. You cannot vote against motherhood or apple pie or all these other fine things." See *Congressional Record* May 14th, 1981 pg. S5012.

[62] P.L. 97-86 sec. 917; 95 Stat. 1129.

current statute). According to the act, a significant breach occurred when the Program Acquisition Unit Cost (PAUC- total cost of development, procurement, and construction divided by the number of units) or the Procurement Unit Cost (PUC- total procurement funds appropriated in a fiscal year divided by the number of end units to be procured with such funds in the same fiscal year) for an MDAP increased by more than 15%. A "critical" breach occurs when the PAUC or PUC increased by more than 25%. Inflation costs were included in the cost growth analysis.

Table A-1. FY1982 Authorization Act Breach Thresholds

	Significant Breach	Critical Breach
UAC or PAUC	> 15%	>25%

Source: P.L. 97-86 sec. 917.

Under the Act, a program manager was required to submit a quarterly unit cost reports to the appropriate secretary within seven days of the end of the quarter. However if a program manager had "reasonable cause" to believe that a program had a breach, the program manager was required to immediately submit a report to the service secretary concerned. If the secretary concerned determined that a breach had occurred, he had to 'promptly' notify Congress of the breach in writing and submit a written report to Congress within 30 days that included

1. an explanation of the reasons for the cost increase,
2. the names of the military and civilian personnel responsible for program management and cost control,
3. action taken and proposed to control future cost increases,
4. any changes in performance or schedule that contributed to cost growth,
5. the identities of the principal contractors, and
6. an index of all testimony and documents previously provided to Congress on the program's estimated costs.

If the secretary concerned determined that a critical breach had occurred, in addition to the above requirements, the secretary had to certify to Congress in writing within 60 days of the determination that

1. the program was essential to national security,
2. there was no viable cost effective alternative to the program,
3. the new cost estimate was reasonable, and
4. the management structure was sufficient to control additional cost growth.

If the secretary did not submit the 30 or 60 day reports in a timely manner, than no additional funds were allowed to be obligated for the program. The statute only applied to programs with cost overruns that occurred in fiscal year 1982.

Department of Defense Authorization Act, 1983 (P.L. 97-86)

Passage of the Nunn-McCurdy Act

In 1981, 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.[63] According to Representative McCurdy, the intent of the panel was "to identify and recommend a method which will allow the Congress to more effectively review and evaluate cost categories for major weapons systems."[64]

Subsequently, Senator Nunn and Representative McCurdy led an effort to permanently enact the reporting requirements established in the FY1982 Defense Authorization Act. In the Department of Defense Authorization Act of 1983 (96 Stat. 718), Congress passed a modified version of the FY1982 reporting requirements. On September 8, 1982, President Ronald Reagan signed into law the Department of Defense Authorization Act, 1983 (P.L. 97-252), which included what has come to be known as the Nunn-McCurdy Act.

Statutory Structure of the FY1983 Nunn-McCurdy Act

The Nunn-McCurdy Act made a number of modification to the reporting requirements that were included in the FY1982 act.

Definition of Program Acquisition Unit Cost and Procurement Unit Cost

The Nunn-McCurdy Act changed the definition of PUC was changed to mean (changes in italics) total procurement funds appropriated in a fiscal year *minus advanced procurement funds appropriated that year for use in future fiscal years, plus advanced procurement funds appropriated in prior years for use in the current fiscal year* divided by the number of end units to be procured with such funds in the same fiscal year.[65] PAUC continued to be defined as the total cost of development, procurement, and construction divided by the number of units.

Thresholds

The Nunn-McCurdy Act established the baseline for measuring cost growth as the "baseline selected acquisition report", defined as the Selected Acquisition Report in which information on the program is first included or the comprehensive annual Selected Acquisition Report for the prior fiscal year, whichever is later.[66]

The thresholds remained unchanged from the original Nunn Amendment of the FY1982 authorization act (the terms "significant" and "critical" breach were not included in the statute but

[63] 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.

[64] 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.

[65] P.L. 97-252 sec. 139a; 96 Stat. 740

[66] P.L. 97-252 sec. 139b(a)(2)

are used below for comparison with the current statute). Unlike the current Nunn-McCurdy statute, the original act included inflation in determining if a breach had occurred.[67]

Table A-2. FY1983 Authorization Act Breach Thresholds

	Significant Breach	Critical Breach
UAC or PAUC	> 15%	>25%

Source: 10 U.S.C. § 139b(d)(1),(2), 1982.

Reporting

Under the act, a program manager was required to submit a written quarterly unit cost reports to the appropriate secretary within seven days of the end of the quarter.[68] However if a program manager had 'reasonable cause' to believe that a program had a breach, the program manager was required to immediately submit a report to the secretary concerned.[69] The program manager was also required to submit a unit cost report if a cost or schedule variance of a major contract under the program resulted in more than 15% cost growth compared to the date the contract was signed.[70] After a breach occurred, if the program subsequently experienced additional cost growth of more than 5% in PUC or APUC, or additional cost growth of a major contract of at least 5% (due to cost or schedule variance), then the program manager was required to submit an additional unit cost report.[71]

The FY1983 NDAA changed some of the information required for the 30-day report to Congress, removing the requirement to provide an index of all testimony and documents previously provided to Congress on the program's estimated costs and adding a number of other requirements, including

1. cost and schedule variance information,
2. changes to the performance or schedule milestones of the program that have contributed to cost growth, and
3. prior cost estimating information.

Timelines

The service secretary was required to review the unit cost reports and determine whether there was a breach. If the secretary determined that a breach occurred, he was required to notify Congress of the breach in writing and submit a written report to Congress within 30 days of the

[67] P.L. 97-252 sec. 139b(f); 96 Stat. 744.

[68] P.L. 97-252 sec. 139b(b); 96 Stat. 742.

[69] P.L. 97-252 sec. 139b(c)(1); 96 Stat. 742.

[70] Defined as the prime contract or one of the six largest associate contracts (including for government furnished equipment), by dollar value. P.L. 97-252 sec. 139a(a)(4).

[71] P.L. 97-252 sec. 139b(c)(2); 96 Stat. 742, 743.

unit cost report being submitted to him (the FY1982 act required the secretary to "promptly" notify Congress of the determination).[72]

If the secretary did not submit the 30- or 60- day report in a timely manner, then additional funds could not be obligated for the program. The funding prohibition could be waived by consent of the House and Senate Armed Services Committees.

FY1985 Department of Defense Authorization Act (P.L. 98-525)

Definition of Procurement Unit Cost and Major Contract

The FY1985 Department of Defense Authorization Act changed the meaning of procurement unit cost to mean total funds programmed to be available for obligation for procurement for a fiscal year, minus funds programmed to be available in the current fiscal year for obligation for advanced procurement in future years, plus advanced procurement appropriated in prior years for use in the current fiscal, divided by number of units procured with such funds in the same fiscal year.[73]

The authorization act also changed the definition of a major contract (changes in italics) to mean each prime contract and each of the six largest associate contracts (including for government-furnished equipment) *that is in excess of $2,000,000*.[74] In 1986 the threshold was changed to $40,000,000.[75]

Reporting Requirements

Prior to the FY1985 Authorization Act, SARs did not need to include a status report for an MDAP for the 2nd, 3rd, and 4th fiscal quarters if such a report was included in a previous SAR for that fiscal year and there were no changes in program cost, performance, or schedule. The FY85 act changed the standard, stating that a SAR did not need to include a status report if there was less than a 5% change in the total program cost and less than a three-month delay in the milestone schedule was shown in a previous SAR for the same fiscal year.[76]

The act also added that reporting requirements under Nunn-McCurdy do not apply to a program that has delivered 90% of the end units or expended 90% of planned expenditures.[77]

The baseline against which to measure a breach was amended slightly (changes in italics) to be the baseline SAR submitted in the previous fiscal year, *or if there was a breach in the previous fiscal year, the unit cost report that reported the breach*.[78]

Timeline Changes

[72] P.L. 97-252 sec. 139b(d)(2); 96 Stat. 743.

[73] P.L. 98-525 sec 1242 (a)(1); 98 Stat. 2606, 2607.

[74] P.L. 98-525 sec 1242 (a)(2); 98 Stat. 2607.

[75] P.L. 99-500 and P.L. 99-591 Sec. 101(c).

[76] P.L. 98-525 sec 1242 (a)(3); 98 Stat. 2607.

[77] P.L. 98-525 sec 1242 (a)(5); 98 Stat. 2607.

[78] P.L. 98-525 sec 1242 (b)(1); 98 Stat. 2607.

The FY1985 act changed the timeline for requiring the submission of a SAR to Congress. Previously, SARs had to be submitted to Congress within 30 days of when the President submitted the budget to Congress and within 30 days after the end of the quarter for all other quarters. The FY1985 extended the SAR submission date to within 60 days after the President sends the budget to Congress and 45 after the end of all other quarters.[79] The Act also changed the deadline by which a program manager must submit a unit for the first quarter of a fiscal year from within seven days of the end of the quarter to within seven days of the submission of the President's budget.[80]

FY1990 and 1991 National Defense Authorization Act (P.L. 101-189)

The FY1990 and 1991 NDAA added the role of the Service Acquisition Executive to the Nunn-McCurdy Act. Under Title X, as amended, the program manager submits unit cost reports to the Service Acquisition Executive, who then determines whether a Nunn-McCurdy breach has taken place. A determination of a breach by the service acquisition executive is sent to the secretary concerned for a further determination.[81]

Reporting Requirements

The FY1990 and 1991 act amended Section 2432 of Title X to state that a SAR did not need to include a status report if there was less than a 15% increase in program acquisition unit cost and current acquisition unit cost as shown in a previous SAR for the same fiscal year.[82] Previously, a SAR had to include a status report if there was a 5% change in the total program cost.

The baseline against which to measure a breach was amended slightly (changes in italics) to be the baseline SAR submitted in the previous fiscal year, *or if there was a breach in the previous fiscal year, the SAR submitted to Congress in connection with the breach.*[83]

The other significant change to Nunn-McCurdy in the Act is the consequence of DOD failing to submit a SAR for a 15% breach or a certification for a 25% breach. Previously, if DOD failed to provide the required reports in a timely manner, no funds could be obligated for the program unless the House and Senate Armed Services Committees waived the funding prohibition. The Act changed the penalty, stating that if the required reports are not filed in a timely manner, appropriated funds could not be obligated for construction, RDT&E, and procurement for a major contract under the program. However, once DOD submits the required reports, the prohibition ends at the end of 30 days of continuous session of Congress.[84]

Timeline Changes

The Act changed the deadline by which a program manager must submit a unit cost report for the first quarter of a fiscal year from within seven days of the submission of the

[79] P.L. 98-525 sec 1242 (a)(4); 98 Stat. 2607.

[80] P.L. 98-525 sec 1242 (b)(2); 98 Stat. 2607

[81] P.L. 101-189 sec. 811(a); 103 Stat. 1490.

[82] P.L. 101-189 sec. 811(c); 103 Stat. 1493.

[83] P.L. 101-189 sec. 811(a); 103 Stat. 1490.

[84] P.L. 101-189 sec. 811(a); 103 Stat. 1492.

President's budget to within seven days of the end of the quarter.[85] The Act also changed the timeline for the secretary to submit notifications and certifications to Congress. Specifically, the Secretary must submit a notification of a breach to Congress within 30 days of the service acquisition executive submitting his determination report to the Secretary. [86] For a 25% breach, DOD must submit the written certification to Congress within 30 days of the deadline for submitting the SAR.[87]

FY1993 National Defense Authorization Act (P.L. 102-484)

Threshold Changes

In the FY1993 NDAA, Congress slightly modified the Nunn-McCurdy thresholds from more than 15% and 25% to at least 15% and at least 25%.[88]

Reporting Requirements

When a program breaches the Nunn-McCurdy thresholds, DOD is required to submit a SAR to Congress. The FY1993 NDAA provided some flexibility to this requirement (changes in italics), stating that a SAR shall be submitted to Congress for the quarter in which the determination is made that a breach occurred, *or for the quarter which immediately precedes the quarter in which the determination is made*.[89] This added flexibility means that if a program has a breach in one quarter but the determination that a breach occurred does not happen until the next quarter, the Secretary can submit a SAR for either quarter.

Timeline Changes

The FY1993 NDAA changed the deadline for the program manager submitting a quarterly unit cost report to the service acquisition executive from seven business days to 30 calendar days after the end of the quarter.[90] In addition, the act changed the timeline for notifying Congress of a breach if the breach was determined based on a quarterly unit cost report. Previously, the Secretary had to notify Congress of a breach within 30 days of the service acquisition executive reporting his determination to the secretary. Under the amended statute, the secretary must notify Congress within 45 days of the end of the quarter in which the breach took place.[91]

Federal Acquisition Streamlining Act of 1994 (P.L. 103-355)

[85] P.L. 101-189 sec. 811(a); 103 Stat. 1490.

[86] P.L. 101-189 sec. 811(a)(4)(C); 103 Stat. 1491.

[87] P.L. 101-189 sec. 811(a)(5)(A); 103 Stat. 1492.

[88] P.L. 102-484 sec 817(d)(3) and (4); 106 Stat. 2457. The threshold for requiring the program manager to submit an additional unit cost report to the SAE for a program that breached Nunn-McCurdy and has since experienced further cost growth was modified from more than 5% to *at least* 5% over the most recent cost report.

[89] P.L. 102-484 sec 817(d)(5)(A); 106 Stat. 2457.

[90] P.L. 102-484 sec 817(d)(2); 106 Stat. 2456.

[91] P.L. 102-484 sec 817(d)(3); 106 Stat. 2457.

Definition of Procurement Unit Cost and Baseline Estimate

The Federal Acquisition Streamlining Act of 1994 (FASA) changed the definition of Procurement Unit Cost to mean total funds programmed to be available for obligation for procurement for the program divided by number of units procured.[92] FASA also changed the benchmark against which cost growth is to be measured. FASA required the Secretary of the department managing an MDAP to develop a baseline description for the program.[93] The description must include a cost estimate. The baseline description must be prepared prior to each major milestone.[94]

Threshold Changes

FASA changed the way cost growth is measured, stating that cost growth should be measured in constant base year dollars, thereby excluding inflation as a factor for cost growth.[95]

FY2006 National Defense Authorization Act (P.L. 109-163)

The FY2006 National Defense Authorization Act amended Nunn-McCurdy to include the original baseline estimate as a standard against which to measure cost growth.[96] The FY2006 NDAA also introduced the terms significant and critical cost growth that are used in the current Nunn-McCurdy Act. The new standard was intended to prevent DOD from avoiding a Nunn-McCurdy breach by simply re-baselining a program. Congress believed that these changes to Nunn-McCurdy would help "encourage the Department of Defense both to establish more realistic and achievable cost and performance estimates at the outset of MDAPs and to more aggressively manage MDAPs to avoid undesirable cost growth on these programs."[97]

The introduction of the original baseline threshold increased the number of programs triggering a reporting requirement to Congress. For example, according to DOD, 11 programs that did not have a Nunn-McCurdy breach prior to the new FY2006 requirements were re-categorized as having significant breaches as a result of the FY2006 legislation. The first SAR submitted by DOD after enactment of the FY2006 NDAA contained 36 programs that were in breach of one of the Nunn-McCurdy thresholds.[98]

FY2007 John Warner National Defense Authorization Act (P.L. 109-364)

[92] P.L. 103-355 sec. 3002(a)(1); 108 Stat. 3328.

[93] P.L. 103-355 sec. 3003(a); 108 Stat. 3329.

[94] P.L. 103-355 sec. 3005(a); 108 Stat. 3330.

[95] P.L. 103-355 sec. 3003(d); 108 Stat. 3329.

[96] P.L. 109-163 sec. 802; 119 Stat. 3367.

[97] U.S. Congress, House of Representatives, *National Defense Authorization Act for Fiscal Year 2006*, Conference Report to Accompany H.R. 1815, 109th Cong., 1st sess., Dec. 18, 2005, H.Rept. 109-360 (Washington: GPO, 2005), p. 755.

[98] U.S. Congress, House Committee on Armed Services, *National Defense Authorization Act for Fiscal Year 2007*, report on H.R. 5122 , 109th Cong., 2nd sess., May 5, 2006, H.Rept. 109-452 (Washington: GPO, 2006), p. 352.

The FY2007 NDAA added to the definition of the baseline estimate, stating that the original baseline estimate is the description established for the program *prepared before it enters system development and demonstration (Milestone B) or at program initiation, whichever is later, without adjustment or revision.*[99]

FY2009 Duncan Hunter National Defense Authorization Act (P.L. 110-417)

The FY2007 NDAA applied Nunn-McCurdy to all major subprograms of MDAPs designated by the Secretary of Defense as major subprograms. To qualify as a major subprogram, an MDAP must have "two or more categories of end items which differ significantly from each other in form and function."[100]

Weapon System Acquisition Reform Act of 2009 (P.L. 111-23)

This act introduced a number of changes to the Nunn-McCurdy Act, primarily by adding section 2433a to Title X.[101] Pursuant to section 2433a, whenever a program suffers a critical breach, an analysis must be conducted to determine the root cause of the critical cost growth, as well as an assessment projecting the cost for

- completing the program as is,
- completing the program with modifications to the requirements, and
- alternative systems or capabilities.

The assessment must also include the extent to which funding for other programs needs to be reduced to cover the increased cost of the breaching program.[102]

According to section 2433a, the program must be terminated unless the Secretary of Defense submits the required certifications and the root-cause analysis to Congress, including a new certification – that the program is a higher priority than those programs whose funding is reduced to cover the cost increases of the breaching program.[103] If the program is not terminated, the program must

1. be restructured to address the root causes of cost growth,
2. have its most recent milestone approval revoked and have a new approval before entering into a new contract or exercising a contract option (the milestone decision authority can approve necessary contract actions),
3. include in the report all funding changes, including reductions in funding in other programs, to cover the cost growth.[104]

[99] P.L. 109-364 sec. 806; 120 Stat. 2315.

[100] P.L. 110-417; 122 Stat. 4520.

[101] 10 U.S.C. 2433a, which became part of Title X through the Weapons System Acquisition Reform Act of 2009.

[102] 10 U.S.C. 2433a(a).

[103] 10 U.S.C. 2433a(b).

[104] 10 U.S.C. 2433a(c).

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