



U. S. House of Representatives
Committee on Transportation and Infrastructure
Washington, DC 20515

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SUMMARY OF SUBJECT MATTER

TO: Members of the Subcommittee on Coast Guard and Maritime Transportation

FROM: Subcommittee on Coast Guard and Maritime Transportation Staff

SUBJECT: Overview of Coast Guard Acquisitions Policies and Programs

PURPOSE OF THE HEARING

On Tuesday, March 24, 2009, at 10:00 a.m., in Room 2167 of the Rayburn House Office Building, the Subcommittee on Coast Guard and Maritime Transportation will meet to examine the Coast Guard's current acquisition programs, as well as the policies and procedures the service is implementing to strengthen its management of the entire acquisition process. This hearing is being conducted as one of several hearings that meet the oversight requirements under clauses 2(n), (o), and (p) of Rule XI of the Rules of the House of Representatives.

BACKGROUND

Coast Guard's Acquisition, Construction, and Improvement Budget

Coast Guard capital expenditures are funded through the appropriations made by Congress to it for the Acquisition, Construction, and Improvement (AC&I) account, which funds expenses related to "acquisition, construction, renovation, and improvement of aids to navigation, shore facilities, vessels, and aircraft, including equipment related thereto; and maintenance, rehabilitation, lease and operation of facilities and equipment."¹ The total Coast Guard AC&I appropriation for fiscal year 2009 is just under \$1.5 billion; this figure was an increase of approximately \$369 million (32.8 percent) over the fiscal year 2008 appropriated level of \$1.2 billion.

¹ Consolidated Security, Disaster Assistance, and Continuing Appropriations Act, 2009 (P.L. 110-329).

The largest single acquisition program funded through the AC&I budget is the Deepwater acquisition program, which received just over \$1 billion through the fiscal year 2009 appropriation (to be available until September 30, 2013). Of the funds made available for the Deepwater program, approximately \$245 million was appropriated for aircraft and approximately \$571 million was appropriated for surface ships.

Coast Guard AC&I Projects

As of January 2009, the Coast Guard's Acquisition Directorate (discussed in more detail below) was implementing 18 AC&I acquisition initiatives with individual acquisition baseline costs exceeding \$10 million. (see attached chart)

Integrated Deepwater Acquisition Program

The Coast Guard's Deepwater program is a multi-year acquisition program that will upgrade or replace the service's existing surface and air assets; the program will also modernize the command and control information technology systems that the service relies on to manage asset deployments. According to the most recent acquisition program baseline (APB) for the Deepwater program (APB 1.1, adopted May 15, 2007), the Deepwater acquisitions are currently projected to cost a total of \$24 billion and to require 25 years to complete.

In the early 1990s, as its existing assets began to meet and exceed their planned service lives, the Coast Guard began developing what eventually became the Deepwater procurements. After assessing its mission needs and measuring these against the obsolescence of its existing technology, the service decided that rather than simply buy single new assets to replace its existing assets, it would pursue a system-of-systems acquisition approach, through which it would acquire an integrated suite of assets that together could provide the "functional capabilities" required to fulfill its mission needs.² In its original Mission Needs Statement for what became the Deepwater procurements, the Coast Guard wrote that "It is critical that the Deepwater system be viewed in its totality in order to develop a unified, strategic overview, ensure asset comparability and interoperability, and provide the most affordable solution for the taxpayer."³

Given the complexity of the acquisition effort to be undertaken, the Coast Guard decided that it would follow the example of Department of Defense agencies by engaging a private firm to serve as the Lead Systems Integrator (LSI). The Deepwater LSI was to be responsible for managing the development of the system-of-systems – including selecting the individual assets to be included in the system and managing their integration around a common operating picture (displays of current operational views that could be shared by all assets and stations).

In 1998, the Coast Guard provided \$20 million to each of three major industry teams and asked them to analyze the alternatives available in a variety of asset classes (air, surface, information technology etc.) and develop proposals detailing the system-of-systems each would build to meet the

² Coast Guard, Deepwater Capabilities Project – Mission Needs Statement, 3 May 1996, Page 18.

³ Ibid, Page 19.

Coast Guard's mission requirements.⁴ The three industry teams that participated in this process were led by Science Applications International Corporation, Lockheed Martin and Northrop Grumman (which formed a joint venture called the Integrated Coast Guard System [ICGS]), and Litton/Avondale Industries. The ICGS team won this competition, and the Coast Guard awarded it a \$17 billion, Indefinite Delivery/ Indefinite Quantity (IDIQ) in June 2002. The initial five-year contract included five additional five-year options – meaning that the contract could have been in place for up to 25 years.⁵

During the early years of Deepwater, the project was managed outside the Coast Guard's existing acquisition management structure. The Coast Guard's conception of the Deepwater acquisitions at this time held that the LSI was to exercise primary responsibility for the management and implementation of Deepwater. The LSI's management power extended to such matters as deciding whether it would produce the assets contained in its proposed Deepwater suite itself or conduct a competition to select other contractors to produce the assets.

The Coast Guard's approach to Deepwater in the early years of that acquisition effort is succinctly stated in a report written by the Coast Guard to accompany the 2005 Deepwater baseline as required by the House Conference Report 108-774, accompanying the fiscal year 2005 Department of Homeland Security appropriations bill. In that report, the service wrote that "the original design for the Deepwater solution came from industry," which the Coast Guard empowered through the IDIQ "to leverage state-of-the-art market technologies to achieve Deepwater's overarching goal of maintaining and improving operational performance while managing total ownership costs within an aggressive baseline."⁶ In many senses, the Coast Guard appeared to view the ICGS team as its 'partner' in the implementation of the Deepwater acquisitions, with whom it would work to achieve a common objective. Thus, the service wrote in that same report that if budget fluctuations occurred, "The Coast Guard and ICGS will together choose which DTOs [Delivery Task Orders] to execute based on mission, requirements and funding factors."⁷

The terror attacks of September 11, 2001, eventually led to the placement of the Coast Guard inside the newly formed Department of Homeland Security (DHS) – and caused the Coast Guard to take on significant new homeland security missions (such as port security) in addition to its traditional missions (such as search and rescue). As the asset needs that arose from its new homeland security missions had not been anticipated in the early planning for Deepwater or addressed by the teams competing to win the LSI contract, the Coast Guard began to alter the performance requirements for the assets to be produced under the Deepwater IDIQ after that contract had been awarded.⁸

Almost from the signing of the Deepwater contract, the Coast Guard encountered challenges in managing the LSI. An investigation of the 123-foot patrol boat project conducted by the Committee on Transportation and Infrastructure found that a culture of rigid adherence to schedule drove many decisions – and that the Coast Guard had an inadequate number of personnel

⁴ *The Challenge of Contracting for Large Complex Projects: A Case Study of the Coast Guard's Deepwater Program*, Trevor L. Brown, David M. Van Slyke, and Matthew Potoski, IBM Center for The Business of Government, 2008.

⁵ United States Coast Guard, "Report on the Revised Deepwater Implementation Plan 2005," page 3.

⁶ United States Coast Guard, "Report on the Revised Deepwater Implementation Plan 2005," page 2.

⁷ *Ibid*, page 3.

⁸ *Ibid*, page 3.

in place to manage contract decisions effectively. Coast Guard program managers, who should have been ultimately responsible for the performance of individual procurement efforts under Deepwater, functioned more as “team members” rather than as managers with full authority over all project decisions.

A 2004 GAO report on Deepwater found that “More than a year and a half into the Deepwater contract, the key components needed to manage the program and oversee the system integrator’s performance have not been effectively implemented.”⁹ This report also found that “The Coast Guard has not developed quantifiable metrics or adhered to effective procedures for holding the system integrator accountable for its ongoing performance” and it had “not begun to measure the system integrator’s performance on the three overarching goals of the Deepwater program” despite the fact that this was a system-of-systems contracting approach.¹⁰ As a result, “the first annual award fee determination was based largely on unsupported calculations.”¹¹ This determination yielded an overall rating of 87 percent, “which fell in the ‘very good’ range” and “resulted in an award fee of \$4 million of the maximum \$4.6 million”, even though there were “documented problems in schedule, performance, cost control, and contract administration throughout the first year” of the contract.¹²

Several of the individual acquisition efforts undertaken in the early years of Deepwater failed or proved too impractical to pursue. Perhaps the most highly publicized failure was the effort to lengthen existing 110-foot patrol boats to 123 feet and install new, upgraded information technology suites into the boats. The original task order for this procurement was issued on August 2, 2002; in June 2005, the Coast Guard decided that the conversion process would be suspended at 8 boats because “the converted cutters lacked adequate capabilities to meet their expanded post 9/11 operational requirements.”¹³ In November 2006, the eight converted boats were removed from service due to concerns about their operational safety. Examinations of the vessels conducted just prior to their removal from service found that they had “significant buckling,” “displayed deck cracking and hull deformation,” and had “developed shaft alignment problems related to other structure issues.”¹⁴

Other procurement efforts initiated in the early years of the Deepwater contract, including the first effort to procure a vertical unmanned aerial vehicle and the first effort to develop a Fast Response Cutter (FRC), were never built after failing to pass design or prototype testing.

On May 19, 2006, the Coast Guard awarded an additional award term totaling 43 months to the ICGS consortium, which extended the contract through January 2011.¹⁵ Unlike the first contract

⁹ Government Accountability Office, *Coast Guard’s Deepwater Program Needs Increased Attention to Management and Contractor Oversight*, GAO-04-380, March 2004, page 3.

¹⁰ *Ibid.*, page 4.

¹¹ Government Accountability Office, Testimony Before the Subcommittee on Coast Guard and Maritime Transportation, “Coast Guard: Status of Efforts to Improve Deepwater Program Management and Address Operational Challenges,” Delivered by Stephen L. Caldwell, Acting Director of Homeland Security and Justice Issues, March 8, 2007, GAO-07575T, page 15.

¹² *Ibid.*

¹³ Coast Guard Press Release, “Coast Guard Suspends Converted Patrol Boat Operations,” November 30, 2006. Accessed on March 17, 2009 at <<https://www.piersystem.com/go/doc/786/138897/>>.

¹⁴ *Ibid.*

¹⁵ Government Accountability Office, *Status of Selected Aspects of the Coast Guard’s Deepwater Program*, GAO-08-270R, March 11, 2008, pages 1-2.

award, however, this contract extension did not guarantee any quantity of assets to be procured from ICGS.

In August 2006, the Department of Homeland Security's Office of Inspector General (DHS OIG) examined the Coast Guard's procurement of information technology systems through the Deepwater program and found that many of the management shortcomings that GAO had already identified remained problems – at least so far as the management of information technology procurements was concerned. Thus, the DHS OIG found that “Although Coast Guard officials are involved in high-level Deepwater IT requirements definition processes, they have limited influence over contractor decisions toward meeting these requirements” and consequently, “the agency cannot ensure that the contractor is making the best decisions toward accomplishing Deepwater IT goals.”¹⁶

In February 2007, the Defense Acquisition University (DAU) published a “quick look” study on the Deepwater program which had been requested by the Coast Guard. A summary of the DAU's findings about the Deepwater program is presented below.

- Many design changes were added to the program even after key engineering milestones had been crossed to respond to the Coast Guard's new mission needs after 9/11;
- Funding provided to the Deepwater effort was often below the levels negotiated in the Coast Guard's contract with ICGS;
- The contract structure of the initial Deepwater contract was inappropriate to the changing missions and requirements of the assets to be acquired under Deepwater and to the systems integration tasks required under the program;
- ICGS endeavored to keep work within its own team rather than maximize competition throughout U.S. industry and draw on existing Coast Guard infrastructure;
- There were insufficient numbers of Coast Guard acquisition personnel in place and these personnel had insufficient experience with the management of major systems acquisition efforts; and
- The Coast Guard lacked a management model and management processes adequate for the efficient management of acquisition programs as large as the Deepwater program.¹⁷

In April 2007, the Coast Guard announced a series of major changes in its management of Deepwater – changes that would also affect its management of all its acquisition efforts. Specifically, Admiral Thad Allen, Commandant of the Coast Guard, announced that the service would:

- Assume the role as lead systems integrator for all Deepwater assets and other major acquisitions as appropriate;
- Assume responsibility for life cycle logistics functions for Deepwater assets;
- Expand the role of the American Bureau of Shipping and other third-parties as appropriate to ensure assets meet design and construction standards;
- Work with the ICGS team to resolve outstanding contract issues pertaining to the National Security Cutter;

¹⁶ Department of Homeland Security, Office of the Inspector General, *Improvements Needed in the U.S. Coast Guard's Acquisition and Implementation of Deepwater Information Technology Systems*, OIG-06-55, August 2006, page 1.

¹⁷ Defense Acquisition University, *Quick Look Study: United States Coast Guard Deepwater Program*, February 2007.

- Consider procuring assets directly from prime vendors when this was in the best interests of the government; and,
- Convene regular meetings between the Commandant and the ICGS team to adjudicate and resolve Deepwater contracting issues.¹⁸

Concomitant with these changes, the Coast Guard began reorganizing its acquisition processes. The Coast Guard also began to move away from the system-of-systems acquisition approach and toward a more traditional, asset-by-asset acquisition approach in which the acquisition of each asset is to be managed and assessed as an individual procurement.

The current APB for the Deepwater program was adopted on May 15, 2007. The baseline has not been updated since that time and the Coast Guard has advised that as it is now approving APBs for each acquisition project contained within the Deepwater program, the overall Deepwater APB will not be updated again.

Acquisition Processes

The Coast Guard is now one of the 22 federal agencies combined within DHS.

DHS's current acquisition policy is established in the Department's Acquisition Directive 102-01; interim version 9.1 of this Directive was issued November 7, 2008. Within each constituent agency of DHS, the agency can nominate a Component Acquisition Executive (CAE) who is responsible for managing the acquisition portfolio within that agency; this individual may also execute acquisition management authorities within the agency for Level III investments as directed by the head of the agency and Level II acquisitions as delegated.

As set forth in Directive 102-01, acquisition efforts are divided into three levels, as set forth in the table below, based on the life cycle cost of the acquisition. The term "life cycle cost" is broadly defined to include all costs associated with the development of an acquisition effort, including the cost of developing the technology needed within a given asset, the cost of acquiring and deploying the asset, and the cost of operating and eventually disposing of the asset. The use of the life cycle cost metric provides a more complete picture of the total costs associated with acquiring and operating an asset over time (including as the asset ages).

Levels of Acquisition Programs within the Coast Guard

Investment Level	Definition
Level I	Programs that exceed \$1 billion in life cycle costs.
Level II	Programs with life cycle costs between \$300 million and \$1 billion.
Level III	Programs with life cycle costs that are less than \$300 million; oversight resides with the Component Head.

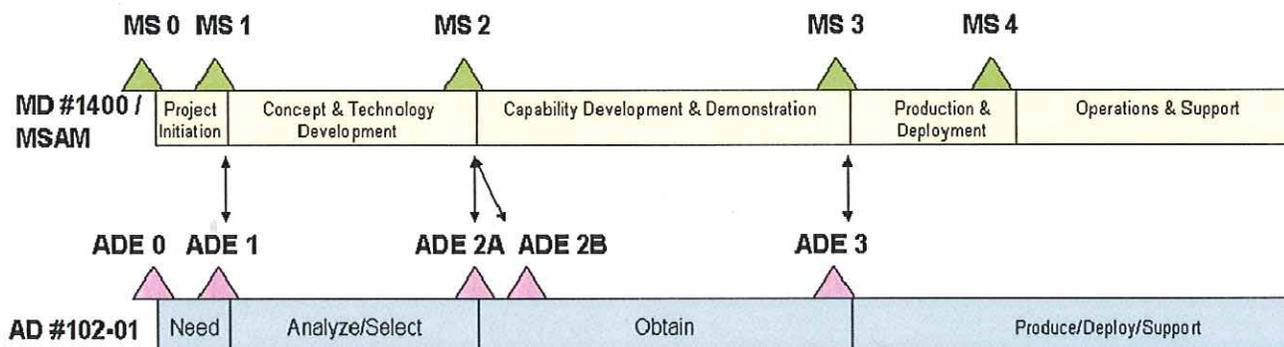
¹⁸ Coast Guard Press Release, "Statement by ADM Thad Allen on the Converted 123-Foot Patrol Boats and Changes to the Deepwater Acquisition Program," April 17, 2007. <<https://www.piersystem.com/go/doc/786/154307/>>

Individual acquisition programs are led by program managers (PM). In the Coast Guard, PMs can be either military officers or members of the civil service. PMs achieve varying levels of certification based on their education and professional experience in acquisition management; Level III certification is the highest level of certification available to a PM. There is currently no law specifying that Level III-certified PMs are required to be assigned to the largest procurement efforts; however, the Coast Guard has indicated that it assigns a Level III-certified PM to each of its largest acquisition efforts (Level I procurements).

According to Directive 102-01, the individual PMs assigned to each acquisition program are “responsible for managing their assigned acquisitions and for ensuring that they effectively deliver required capability (i.e., performance) to their customers while remaining within the allocated resources (i.e., cost and schedule) provided by their organizations. If a program breaches an approved APB parameter threshold (or the PM determines that the program will breach in the near future), the PM is responsible for promptly notifying the Component leadership.”¹⁹

Directive 102-01 requires each acquisition effort to complete a series of acquisition decision events (ADE) (formerly called “milestones”) as the effort moves through the acquisition process. The decision making authority for the various ADEs resides with different officials depending on the investment level of the program (I, II, or III). Before an acquisition effort can cross a specific ADE, there are a number of documents that must be developed and submitted to the appropriate decision authority to justify the advancement of the program through the ADE. These documentation requirements are intended to ensure that acquisition efforts respond to clear and valid asset needs; that the functions the asset will be built to serve are clearly specified; that the technical plan for building the asset is in place and is reasonable; that the costs and schedules associated with the acquisition process are clearly identified; and that the total costs of constructing, operating, and eventually disposing of the assets are known. The chart below shows the current ADEs through which an acquisition effort advances; the chart also illustrates the acquisition effort stages and milestones that were previously used.

Stages of an Acquisition Effort within the Coast Guard
(showing old milestones as well as the new Acquisition Decision Events adopted in Directive 102-01)



Source: U.S. Coast Guard

¹⁹ Directive 102-01, page 6-7.

In a report issued in November 2008 and entitled “Department of Homeland Security: Billions Invested in Major Programs Lack Appropriate Oversight,” the Government Accountability Office (GAO) found that DHS has consistently failed to implement its own acquisition oversight policies. Thus, GAO stated that its analysis of 48 major investments within DHS requiring specific oversight reviews at the departmental level found that “45 were not reviewed in accordance with the department’s investment review policy, and 18 were not reviewed at all.”²⁰ These implementation failures are attributed by GAO to DHS’s failure to ensure that the investment review boards it established had the time and the resources to carry out their oversight responsibilities – and to follow-up on corrective action when it was required. GAO also found that many major acquisition efforts lacked documentation required to support the decision making process; as a result, DHS could not always validate the needs and requirements that assets were ostensibly being built to achieve. GAO concluded that as a result of these failures of oversight, decisions about DHS’ budget have not always been appropriately linked to the findings of acquisition review processes and mission requirements.

Coast Guard Acquisition Directorate

The Coast Guard created its current Acquisition Directorate (known as CG-9) on July 13, 2007. The Acquisition Directorate was created to better integrate the Coast Guard’s acquisition-related functions into a single unit employing standard processes for managing acquisition efforts.

The Directorate now includes program management personnel, contracting management personnel, and personnel with expertise in cost estimation, risk assessment, training and certification, and strategic planning. Also located within the Directorate – and reporting to the Assistant Commandant for Acquisition – is the Program Executive Officer for the Deepwater acquisition effort (who simultaneously serves as the Director of Acquisition Programs).

The Acquisition Directorate is supervised by the Assistant Commandant for Acquisition (CG-9). Currently, the Assistant Commandant for Acquisition reports directly to the Chief of Staff, who in turn reports to the Vice Commandant, who then reports to the Commandant. On January 22, 2009, DHS requested that the Coast Guard nominate a Component Acquisition Executive (CAE). On March 2, the Coast Guard nominated the Vice Commandant to be the CAE; DHS has not yet finalized the appointment. If the appointment is finalized, the Vice Commandant would have authority over Level III acquisitions and Level II acquisitions as delegated by DHS.

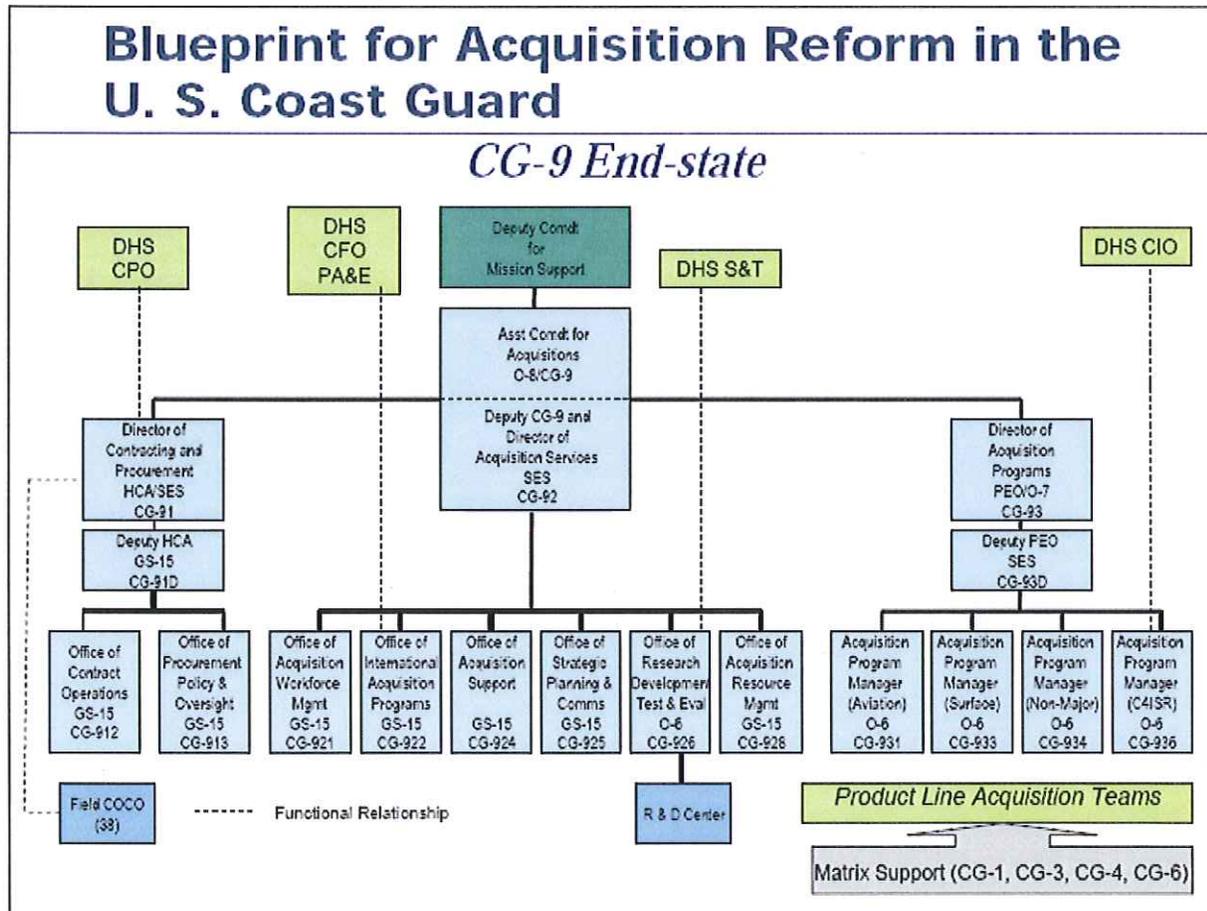
The Coast Guard has proposed re-organizing its top-level military leadership. Under the proposed reorganization, the Vice Commandant position would become a 4-star position (it is currently a 3-star position); additionally, the Chief of Staff’s position as well as the Atlantic Area and Pacific Area Commander positions would be eliminated and four new 3-star positions would be created (each of which would report directly to the Vice Commandant). One of the four Deputy Commandant positions to be created is the Deputy Commandant for Mission Support, who in turn is to have four direct reports:

- Assistant Commandant for Acquisition (which currently is and would remain a 2-star position),

²⁰ Government Accountability Office, *Department of Homeland Security: Billions Invested in Major Programs Lack Appropriate Oversight*, GAO-09-29, November 2008, page 2.

- Chief Information Officer,
- Chief Sustainment Officer (essentially overseeing lifecycle maintenance), and
- Chief Human Resource Officer.

The Coast Guard believes that its projected organization of the Acquisition Directorate – and its placement under the Deputy Commandant for Mission Support – would enable the service to better manage the entire life cycle of an acquired asset. The end-state organization of the Acquisition Directorate is illustrated in the chart below, which also projects the placement of the Assistant Commandant for Acquisition under the Deputy Commandant for Mission Support.



Source: U.S. Coast Guard

The Coast Guard issued a “Blueprint for Acquisition Reform” to guide the implementation of new policies and procedures to strengthen the management of Coast Guard acquisition initiatives and to guide the organization of the Acquisition Directorate. The first version was issued on July 9, 2007; the most recent version was issued in July 2008 and the document is to be updated in July of each year. The “Blueprint” lays out the Coast Guard’s plans for organizational alignment and leadership, the development of new policies and procedures, human capital management and development, and information management and stewardship.

The Blueprint itself highlights the challenges it is intended to overcome. Thus, it notes that prior to the Coast Guard’s implementation of acquisition reforms, “Acquisition capability lagged

behind the expanded operational requirements and budget revitalization experienced post 9/11” (page 4-1).²¹ There were no standard acquisition management systems, personnel with acquisition-related responsibilities were spread among multiple units, and accountability was lacking. Further, “there was no accepted doctrine for the collaborative integration of requirements generation, design, acquisition, sustainment, planned obsolescence or planning for future acquisitions. In short, major systems were not managed from a lifecycle perspective. Governance of individual projects has become problematic, causing confusion within headquarters staffs and operational sponsors regarding where the responsibility for project execution lies”.²²

The release of the Blueprint and the concomitant creation of the Acquisition Directorate are intended to guide the Coast Guard in overcoming these problems and to ensure the standardization of acquisition procedures by bringing major new capability acquisitions (including the Deepwater program) under a single authority. The Blueprint and Acquisition Directorate are also intended to ensure that the service is equipped to control costs and that acquisition efforts adhere to set schedules; further, they are intended to empower PMs to effectively manage acquisition efforts (previously, PMs were at best “partners” to LSI personnel).

The Coast Guard is still working to implement all of the reforms contained in the Blueprint. As of December 2008, the Coast Guard indicated that it had assigned a Level III-certified PM to each of its 14 Level I acquisitions; 7 of the Level III-certified PMs assigned to Level I acquisitions were military officers and 5 were members of the civil service (two PMs were each managing two separate Level I acquisitions). As of February 2009, the Coast Guard had 27 military officers who had achieved Level III PM certification, including three Admirals, 12 Captains, 11 Commanders, and 4 Lieutenant Commanders.

In 2008, the Coast Guard assigned the Admiral currently serving as the Assistant Commandant for Acquisition (who is a Level III-certified PM) to be the commander of District 13 (headquartered in Seattle); this was part of the Coast Guard’s regular process for rotating its personnel. The Program Executive Officer for the Deepwater acquisition effort, also a Level-III certified PM, was assigned to be the Assistant Commandant for Acquisition. A Captain recently promoted to Rear Admiral who lacked a Level III PM certification at the time of his selection was named to be the Program Executive Officer for Deepwater. These assignments are to take effect on or about July 1, 2009.

The Coast Guard has indicated that the overall mix of personnel to be assigned to the Acquisition Directorate is evolving. However, it anticipates that when the Directorate is finally organized, there will be anywhere from 30 percent to 40 percent military to 70 percent to 60 percent civilian mix of personnel assigned to the Directorate.

In a study on the Deepwater procurements issued in June 2008 entitled “Coast Guard: Change in Course Improves Deepwater Management and Oversight, but Outcome Still Uncertain”, the GAO found that the changes in the Deepwater management and the creation of the Acquisition Directorate has “increased accountability”, because “Coast Guard project managers and technical experts now hold the greater balance of management responsibility and accountability for program

²¹ U.S. Coast Guard, “Blueprint for Acquisition Reform”, July 2008, page 4-1.

²² Ibid, page 4-2.

outcomes.”²³ Nonetheless, the GAO found that the Coast Guard still “faces challenges in building a capable government workforce to manage this large acquisition.”²⁴

In the report, the GAO indicates that as the Coast Guard assumes responsibility for individual assets, there are some system-level aspects of the program that the service is “not fully positioned to manage.”²⁵ Thus, GAO states that the Coast Guard “has not developed an acquisition strategy for C4ISR [Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance] and lacks, at present, the ability to model the capabilities of planned and existing assets in a manner that informs decisions on the numbers of Deepwater assets needed.”²⁶ GAO states that the Coast Guard responded to this criticism by stating that “it must proceed with its acquisitions in the absence of this information.”²⁷

Among the challenges that GAO identifies in the Coast Guard’s new Acquisition Directorate are an on-going shortage of civilian acquisition staff members (which is a problem throughout the federal government), the lack of an acquisition career path within the Coast Guard for military personnel, and continued reliance on contractors for technical and programmatic expertise.²⁸

Among other recommendations, the GAO recommended in this June 2008 report that DHS “rescind the delegation of Deepwater acquisition decision authority” that had been granted to the Coast Guard.²⁹ Following the issuance of the GAO report, explanatory language was written to accompany the *Consolidated Security, Disaster Assistance, and Continuing Appropriations Act of 2009*, which stated, “Due to the Coast Guard’s failure to adequately oversee the Deepwater program, the Secretary shall rescind the delegation of acquisition authority provided to the Coast Guard for Deepwater in order to keep oversight within the OCPO, as recommended by GAO.”³⁰ On November 4, 2008, the Secretary of DHS implemented the GAO recommendation and the instructions in the language accompanying the 2009 Homeland Security appropriations act by formally rescinding the Coast Guard’s decision authority and re-designating DHS as the acquisition decision authority for Deepwater projects within the parameters of Directive 102-01.

Current Major Acquisitions

Presented below is a review of pending issues with current AC&I procurements with acquisition baselines exceeding \$10 million.

National Security Cutter

The National Security Cutter (NSC) is the largest individual cutter to be acquired under the Deepwater program and will be the most technologically advanced cutter the Coast Guard has ever

²³ Government Accountability Office, *Coast Guard: Change in Course Improves Deepwater Management and Oversight, but Outcome Still Uncertain*, GAO-08-745, June 2008, page 3.

²⁴ Ibid.

²⁵ Ibid, page 4.

²⁶ Ibid.

²⁷ Ibid.

²⁸ Ibid, pages 13-14.

²⁹ Ibid, page 30.

³⁰ Consolidated Security, Disaster Assistance, and Continuing Appropriations Act, 2009 (P.L. 110-329).

sailed. The NSC, which is being manufactured by the ICGS team, will be 418 feet in length and will replace the existing 378-foot high endurance cutters. A total of 8 NSCs are to be acquired through the Deepwater procurements. NSC 1 was commissioned on August 4, 2008; the second NSC is approximately 76 percent complete; and the keel of the third cutter is to be laid this year.

In an audit of the acquisition of the NSC released in January 2007, DHS OIG found that the NSC's hull structure "provides insufficient fatigue strength to be deployed underway for 230 days per year over its 30-year operational service life under Caribbean (General Atlantic) and Gulf of Alaska (North Pacific) sea conditions."³¹ The DHS OIG indicated that the flaws with the NSC's hull were "fundamentally the result of the Coast Guard's failure to exercise technical oversight over the design and construction of its Deepwater assets."³²

In an effort to address the hull fatigue problems identified with the NSC, the Coast Guard developed a new design for cutters 3 through 8 and has proposed enhancements for hulls 1 and 2 in an effort to ensure that they meet a 30-year underway operating profile. The Coast Guard submitted these proposed design changes to an analysis conducted by the Naval Surface Warfare Center, Carderock Division. Carderock had analyzed the initial NSC design and, according to the DHS OIG, reported in August 2006 that "fatigue cracks will initiate well before the ship reaches its 30-year service life."³³

After studying the Coast Guard's proposed NSC design changes, Carderock indicated that the proposed changes to NSCs 3 through 8 "are effective, and produce fatigue lives of at least 30 years," albeit these hulls (like hulls 1 and 2) may "exhibit localized fatigue issues around structural details at openings, passageways, stiffener terminals, and areas where the deckhouse has been cut."³⁴ However, the Navy found that the Coast Guard's proposed changes to NSCs 1 and 2 are not adequate to address the fatigue problems found with these hulls. Specifically, the Navy states that "For NSC 1 & 2 the hull girder structure in two areas remains problematic and is not predicted to achieve the 30 year design fatigue life." The Coast Guard has indicated that it will continue to gather data on NSCs 1 and 2 – and for that purpose, NSC 1 has been outfitted with sensors to monitor the stresses and fatigues it experiences – and will continue to modify design enhancements. The Coast Guard anticipates performing hull strengthening work on NSCs 1 and 2 during those vessels' first drydock availability (approximately five years after preliminary acceptance of the vessels).

Additionally, the costs of the NSCs have continued to rise, due in part to increases in labor rates and in the costs of raw materials and to the decline of the dollar against the Euro; additional costs were incurred through the consolidated contracting action taken by the Coast Guard to resolve ICGS' outstanding costs and claims associated with the production of NSCs 1 and 2. In December 2008, the acquisition baseline for the purchase of 8 NSCs rose to \$4.75 billion. The original NSC acquisition baseline cost for 8 NSCs approved in November 2005 was \$2.875 billion; this figure increased to \$3.45 billion in May 2007. Thus, from November 2005 through December 2008, the

³¹ Department of Homeland Security, Office of the Inspector General, *Acquisition of the National Security Cutter* (OIG-07-23), January 2007, page 1.

³² *Ibid.*

³³ *Ibid.*, page 8.

³⁴ Department of the Navy, Naval Sea Systems Command, 30 January 2009.

total projected cost of the 8 NSCs has risen by \$1.875 billion – and the average cost of each NSC has increased from approximately \$359 million to approximately \$593 million.

Fast Response Cutter

The Fast Response Cutter (FRC) will eventually replace the Coast Guard's existing 110-foot patrol boats. The FRC is expected to be 153 feet long and will be built to achieve speeds of or exceeding 28 knots. The FRC had originally been expected to be procured by the LSI; however, efforts by the ICGS team to develop a FRC using a composite hull failed (at a cost of approximately \$35 million), and the Coast Guard eventually decided to manage this project itself rather than through the LSI.³⁵

In June 2007, the Coast Guard issued a Request for Proposals (RFP) for the procurement of a FRC. Among other requirements, the RFP specified that bidders had to propose a boat that used the design of a vessel already in service somewhere in the world as a patrol boat; some modifications to the parent-craft design were to be allowed while others were prohibited. The GAO reports that the Coast Guard received six proposals from five separate offerors.³⁶ Bollinger Shipyards, Inc. was selected as the winning bidder; its proposed patrol boat was based on the Damen 4708 design of a patrol boat currently in service in South Africa. The contract awarded to Bollinger is worth \$88 million. Under the contract, the Coast Guard could order up to 34 FRCs at a cost of \$1.5 billion. However, the contract also allows the Coast Guard to end its relationship with Bollinger at any of a number of points, including after ordering only one FRC. To ensure maximum flexibility to the Coast Guard, the contract includes 6 individual 1-year options.³⁷ The Coast Guard anticipates that the first FRC will be delivered in 2011.

Following the award of the FRC contract to Bollinger, Marinette Marine Corporation filed a protest with the GAO contesting the Coast Guard's decision. The GAO ruled against Marinette Marine and in favor of the Coast Guard's award on January 12, 2009. On February 9, 2009, Marinette notified the U.S. Department of Justice of its intent to file a post-award protest seeking a preliminary injunction and a temporary restraining order to prevent the Coast Guard from moving ahead with the Bollinger award. On February 12, 2009, the U.S. Court of Federal Claims denied Marinette's request for a temporary restraining order and on February 17, 2009, Marinette filed a Notice of Voluntary Dismissal with the Court of Federal Claims, effectively dropping their protest of the FRC award to Bollinger.

Non-Deepwater Procurements

The largest current non-Deepwater acquisition being implemented by the Coast Guard is the Rescue 21 command, control, and communications system procurement. Rescue 21 is intended to replace the Coast Guard's National Distress Response System, which was activated in the 1970s, with an upgraded Very High Frequency-Frequency Modulated (VHF-FM) communications system

³⁵ Government Accountability Office, *Status of Selected Aspects of the Coast Guard's Deepwater Program*, GAO-08-270R, March 11, 2008, page 3.

³⁶ Government Accountability Office, "Decision on Marinette Marine Corporation protest of Coast Guard Fast Response Cutter procurement," January 12, 2009.

³⁷ Government Accountability Office, *Status of Selected Aspects of the Coast Guard's Deepwater Program*, GAO-08-270R, March 11, 2008, page 3.

that will improve the service's ability to locate mariners in distress, coordinate with federal, state, and local first responders, and reduce communication coverage gaps in coastal areas.

The original acquisition baseline for the Rescue 21 project was adopted on April 16, 1999; at that time, the system was projected to cost \$250 million and the acquisition was projected to be completed in fiscal year 2006. The baseline for this project was revised five times between 1999 and 2008. The acquisition baseline now stands at nearly \$1.1 billion and the projected completion date is fiscal year 2017; this most recent acquisition program baseline was adopted on May 27, 2008.

In a Report to Congressional Committees issued in May 2006, the GAO found that the "Key factors that contributed to Rescue 21 cost overruns and schedule delays were inadequacies in requirements management, project monitoring, risk management, contractor cost and schedule estimation and delivery, and executive-level oversight."³⁸

H.R. ___, The Coast Guard Acquisition Reform Act of 2009

H.R. ___, *The Coast Guard Acquisition Reform Act of 2009*, would strengthen the Coast Guard's acquisition management processes by building on the reforms the Coast Guard has already put in place. Specifically, the legislation would ensure the effective definition of operational requirements to guide acquisition efforts and require the service to develop processes to ensure that the trade-offs among performance, cost, and schedule are understood and assessed for each acquisition; require complete testing and evaluation of all assets acquired by the Coast Guard to ensure that they meet the highest standards of quality and all contractual requirements; and require the development of independent cost estimates for the service's largest acquisitions. The legislation will also require the appointment of a Chief Acquisition Officer who, at the Commandant's choice, can be either a civilian or military officer, but who must be a Level III-certified PM and have at least 10 years of professional experience in acquisition management. Further, the legislation will require the appointment of Level III-certified PMs to manage the Coast Guard's largest acquisitions. The legislation would bar the Coast Guard's use of LSI beginning on September 30, 2011.

PREVIOUS COMMITTEE ACTION

In the 110th Congress, the Subcommittee on Coast Guard and Maritime Transportation held two hearings on Deepwater.

The Subcommittee met on January 30, 2007, to receive testimony regarding the Deepwater acquisitions. At that time, the Subcommittee heard testimony from the Coast Guard Commandant, Admiral Thad Allen; Dr. Leo Mackay, President of Integrated Coast Guard Systems; and Mr. Phillip Teel, President of Northrop Grumman Ship Systems.

The Subcommittee met on March 8, 2007, to consider the Administration's fiscal year 2008 budget requests for the U.S. Coast Guard. At that time, the Subcommittee also received additional testimony from the Coast Guard, the Inspector General of the Department of Homeland Security (DHS IG) and GAO on the Deepwater Acquisition Program.

³⁸ Government Accountability Office, Report to Congressional Committees, *United States Coast Guard: Improvements Needed in Management and Oversight of Rescue Systems Acquisition*, GAO-06-623, May 2006, page 3.

Regarding the Deepwater procurements, the DHS IG, Mr. Richard Skinner, testified that the Coast Guard had had difficulty holding contractors working on the Deepwater procurements accountable, because asset operational and performance requirements were poorly defined. He also testified that the Coast Guard did not have the right number of staff – or the right mix of professional expertise – to manage the Deepwater acquisitions. Mr. Skinner also emphasized that because there is no career path for military personnel in the Coast Guard to pursue appointment to acquisition-related positions, it is difficult to ensure that these personnel receive the training and experience they need to manage a major acquisition.

The full Committee on Transportation and Infrastructure convened a hearing on April 18, 2007, to review the results of an investigation of the Deepwater program conducted by Committee investigation staff that probed deeply into the contract management and decision-making processes within the Coast Guard and ICGS. The hearing also examined the specific failures of the effort to lengthen the 110-foot patrol boats.

WITNESSES

Panel I

Rear Admiral Gary Blore
Assistant Commandant for Acquisition
United States Coast Guard

Panel II

Mr. John P. Hutton
Director, Acquisition and Sourcing Management
United States Government Accountability Office

**Coast Guard Acquisition Directorate
AC&I Projects with Baseline Costs Exceeding \$10 Million**

DEEPWATER ACQUISITION PROJECTS			
<u>Name of Project</u>	<u>Brief Description</u>	<u>Acquisition Baseline Cost (\$ in Millions)</u>	<u>Anticipated Date of Completion</u>
National Security Cutter (Legacy Class)*	Acquire 8 National Security Cutters to replace 12 existing 378-foot high endurance cutters.	\$4,749	FY16
Offshore Patrol Cutter***	Acquire 25 cutters to replace existing 270-foot and 210-foot medium endurance cutters.	\$8,098	FY21
Fast Response Cutter (Sentinel Class)**	Acquire up to 58 153.5-foot cutters to provide coastal and high seas response capability.	\$3,206 ¹	FY12
Deepwater Small Boats***	Acquire 33 Long Range Interceptors (35 feet in length) and 99 Short Range Prosecutors (25 feet in length) to launch from and support cutter operations.	\$110	FY27
110-foot to 123-foot Patrol Boat Extension	Program was intended to extend existing 110-foot patrol boats to 123 feet. Program was discontinued after failure of 8 extended vessels.	\$95	Discontinued
HC-144A (Maritime Patrol Aircraft)*	Purchase 36 new Maritime Patrol Aircraft (CASA models).	\$2,222.6	FY20
C4ISR**	Install C4ISR information technology in CG stations to enable all units to view a common operating picture and utilize modern radio, satellite communications, and networking systems as well as information security systems.	\$1,353	FY14
HC-130J Fleet Introduction**	Missionize 6 existing long range surveillance aircraft by installing mission electronics, C4ISR upgrades, surface search radar, and other information technology systems. The current baseline includes only the costs associated with fleet introduction of the	\$138.8	FY09

¹ The current acquisition project baseline (APB) for the FRC is the APB approved on May 15, 2007, which includes baselines for what was then expected to be the FRC-A and the FRC-B. The Coast Guard anticipates the issuance of an asset-specific APB for the current FRC acquisition. The fourth quarter fiscal year 2008 Acquisition Report indicated total AC&I funds to be \$593 million for 12 FRCs expected to be completed in fiscal year 2012.

* APB is approved.

** APB is under review.

*** APB is to be developed.

DEEPWATER ACQUISITION PROJECTS			
<u>Name of Project</u>	<u>Brief Description</u>	<u>Acquisition Baseline Cost</u> (\$ in Millions)	<u>Anticipated Date of Completion</u>
	missionized aircraft. Mission systems acquisition and logistics cost were not included.		
HC-130H Conversion/Sustainment**	Install structural enhancements, surface search radar, and upgraded digital electronics on 16 existing HC-130H aircraft to extend their service lives to 2033.	\$610	FY17
HH-60J Conversion**	Provide avionics upgrades, engine sustainment upgrades, and other improvements to extend the lives of 42 existing medium recovery aircraft.	\$451	FY19
HH-65 Conversion/Sustainment**	Provide upgrades to extend the service lives of 102 existing HH-65 helicopters, including installing airborne use of force equipment and C4ISR multi-function display screens.	\$901.2	FY13
Vertical Unmanned Aerial Vehicle (VUAV)***	Obtain a VUAV for use on the National Security Cutter and other assets. The Acquisition Program Baseline reflects costs associated with the original program, which was discontinued. The program has, however, now been reinstated with the USCG Unmanned Aircraft Systems Strategy.	\$503	TBD
Patrol Boat Sustainment*	Provide system upgrades to sustain 20 existing 110-foot patrol boats by installing major system upgrades and completing repairs to internal structures	\$179.7	FY13
Medium Endurance Cutter Sustainment*	Sustain 14 existing 210-foot cutters and 26 270-foot cutters by providing mission effectiveness upgrades.	\$296.8	FY16
Deepwater Logistics/LIMS***	Strengthen Coast Guard logistics integration management systems to support operational effectiveness, including development of Coast Guard Logistics Information Management System (LIMS) and modification of shore facilities to support Deepwater assets.	\$481	TBD
Total for Deepwater Acquisition Projects		23,395.1	

ADDITIONAL DEEPWATER PROGRAM ACQUISITION ACTIVITIES

<u>Name of Project</u>	<u>Brief Description</u>	<u>Acquisition Baseline Cost</u> (\$ in Millions)	<u>Anticipated Date of Completion</u>
Government Program Management Costs	Cost of management provided by Coast Guard Acquisition Directorate personnel and other personnel, encompassing such activities as technical reviews, technology analysis, testing and evaluation, and performance monitoring.	\$1,518	N/A
Systems Engineering	Perform necessary systems engineering activities to support acquisition efforts and ensure effective integration of acquired assets.	\$1,118	N/A
Technology Obsolescence Prevention	Encompasses pre-planned replacement costs for C4ISR hardware and software associated with the multi-year nature of this acquisition effort.	\$345	N/A
Total for Additional Deepwater Program Acquisition Activities		2,981	
Total for all Deepwater		\$26,376.1	

NON-DEEPWATER ACQUISITIONS

<u>Name of Project</u>	<u>Brief Description</u>	<u>Acquisition Baseline Cost</u> (\$ in Millions)	<u>Anticipated Date of Completion</u>
Coastal Patrol Boat*	Acquire 69 multi-mission 87-foot patrol boats to replace aging 82-foot patrol boats.	\$357	FY09
Response Boat-Medium*	Acquire 180 new station boats to replace aging 41-foot utility boats.	\$610	FY 15
Rescue 21*	Install advanced command, control, and communications system in all 39 Coast Guard sectors to upgrade search and rescue capabilities and improve mission performance in coastal zones.	\$1,066	FY17
Nationwide Automatic Identification System (NAIS)**	NAIS is a system by which ships provide notification of their positions. This project involves the installation of the necessary communications, network, and processing equipment to enable the Coast Guard to track vessels' NAIS notifications.	\$276.8	FY13
Command 21***	Per section 108 of the Safe Port Act, create Sector Command Centers and establish new joint, coordinated interagency operations centers combining personnel from the Coast Guard, the Federal Bureau of Investigation, Customs and Border Protection, to ensure effective situational awareness and emergency response. Command-21 encompasses the development of these centers.	TBD	TBD