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# Government Accountability Office Bid Protests in Air Force Source Selections

## Evidence and Options

Frank Camm, Mary E. Chenoweth,  
John C. Graser, Thomas Light, Mark A. Lorell,  
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Prepared for the United States Air Force

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## Preface

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In 2008, the U.S. Air Force and the Office of the Secretary of Defense (OSD) began a series of intense reviews of Air Force source selection policies and practices. As part of this effort, during the summer of 2008, the Office of the Assistant Secretary of the Air Force for Acquisition (SAF/AQ) asked RAND Project AIR FORCE (PAF) to identify specific changes in policies and practices that could improve Air Force performance in Government Accountability Office (GAO) bid protests.

This documented briefing reports the findings of the resulting research project, “Air Force Source Selections: Lessons Learned and Best Practices,” which was conducted within the Resource Management Program of PAF in fiscal year (FY) 2009. This project studied the Air Force’s recent experience with bid protests before GAO and documented lessons that can be learned from that experience. The Air Force asked PAF to examine all source selections and give special attention to how the Air Force conducts source selections in large acquisitions.

PAF conducted this analysis at the request of Gen Donald Hoffman, as former Military Deputy to SAF/AQ; Lt Gen Mark D. Shackelford, former Military Deputy to SAF/AQ; and Roger S. Correll, then–Deputy Assistant Secretary of the Air Force for Contracting (SAF/AQC). They asked PAF to identify specific changes that the Air Force can make in its source selection policies and processes for complex acquisitions to reduce the rate of successful protests.

To do that, this study used a variety of analytic methods, including a review of relevant government documents, interviews with relevant officials inside and outside the Air Force, econometric analysis of data from administrative federal databases, and a detailed review of the protests associated with two Air Force programs, the Combat Search and Rescue Recovery Vehicle (CSAR-X) program and the Aerial Refueling Tanker Aircraft (KC-X) program. The study findings should interest policymakers and their staffs with responsibility for these programs, for source selection more generally, and for federal policies associated with bid protests in source selections. The econometric methods may also interest those seeking to use administrative databases to test hypotheses about factors that affect policy outcomes that can be described with quantitative data.

The companion documents for this report are:

- *Analysis of Government Accountability Office Bid Protests in Air Force Source Selections over the Past Two Decades*, Thomas Light, Frank Camm, Mary E. Chenoweth, Peter Anthony Lewis, and Rena Rudavsky (TR-883-AF). This provides details on the methods and findings of our statistical analyses of patterns in Air Force experience with GAO bid protests since 1990.

- *Government Accountability Office Bid Protests in Air Force Source Selections: Evidence and Options—Executive Summary*, Frank Camm, Mary E. Chenoweth, John C. Graser, Thomas Light, Mark A. Lorell, and Susan K. Woodward (MG-1077-AF). This summarizes project findings for an executive audience.

## **RAND Project AIR FORCE**

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## Summary

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When an offeror in an Air Force source selection believes that the Air Force has made an error that is large enough to change the outcome of the source selection, the offeror can file a protest with the Office of General Counsel of the GAO. Following review, if GAO agrees that a significant error has occurred, it can suggest how the Air Force should correct the error. GAO cannot force the Air Force to follow its recommendation, but if the Air Force does not, GAO must report this to Congress. The Air Force almost always follows GAO recommendations when GAO sustains a bid protest.

GAO sustained protests in two recent, large, and highly visible Air Force acquisitions—the CSAR-X helicopter program in 2007 and the KC-X aircraft program in 2008. Both precipitated broad criticism of how the Air Force conducts source selections. OSD temporarily suspended the Air Force’s control of the KC-X source selection. Complications caused by the CSAR-X protest sustainments ultimately helped lead OSD to cancel the program. The Air Force and OSD began a series of intense reviews of Air Force source selection policies and practices. As part of this effort, during the summer of 2008, the Office of the Air Force’s Service Acquisition Executive asked PAF to identify specific changes in policies and practices that could improve Air Force performance in GAO bid protests. The Air Force asked PAF to give special attention to how the Air Force conducts source selections in large acquisitions. This documented briefing reports the findings of that PAF analysis.

### **Corrective Actions and Sustained Protests Both Impose Costs on the Air Force**

Although broad criticism of the Air Force has emphasized recent protests sustained by GAO, they are only part of the picture. When a protest occurs, the Air Force can offer corrective action to correct any error. For example, it can offer to reevaluate proposals submitted, to reopen evaluation and give offerors an opportunity to adjust their proposals, to change the offerors included in the source selection, to rewrite the request for proposal (RFP) and start the source selection from scratch, or even to change a final source selection decision and award a contract to a different winner. If a protester accepts such action, there is no further need for GAO to review the protest. During 2000–2008, the Air Force experienced 836 protests—about 93 a year. It offered corrective action that offerors accepted in 273, or 33 percent, of these. It ultimately suffered sustained protests in only 29, or 3 percent, of these.

What can we make of this pattern? Presumably, the Air Force offers a corrective action when it believes that GAO will sustain a protest and suggest a corrective action at least as onerous as the one the Air Force offers. A protester accepts a corrective action early when it believes

that GAO will offer nothing better. That is, an early corrective action is likely to prevail if the protester and Air Force have similar beliefs about how GAO would treat a protest. Under these circumstances, corrective actions accepted up front are likely, on average, to impose costs comparable to corrective actions suggested by GAO at the end of a review.

That said, the Air Force need not offer such proactive corrective action unless it determines that GAO is likely to sustain the protest. GAO has denied 86 percent of the protests that it reviewed when the Air Force did not offer early corrective action. As a result, there are good reasons to believe the Air Force (1) will offer less early corrective action than GAO would require if it ruled against the Air Force and (2) will not offer early corrective action on uncertain cases where corrective action would impose large costs on it, even though going to a GAO review imposes its own administrative costs and delays. Hence, although no reliable cost data are available to verify this, on average, we believe that the costs to the Air Force of an observed sustained protest probably exceed those of an observed early corrective action. Nonetheless, because early corrective action is so much more common, both impose significant costs. The Air Force leadership should track both.

### **Overall Air Force Experience with Bid Protests Has Been Positive**

To keep protests in perspective, it is useful to express them in terms of the total number of contract awards the Air Force makes. The number of protests as a percentage of total contract awards fell fairly steadily from about 1.7 percent in 1995 to 0.5 percent in 2008. Sustained protests are so unusual that they hardly register relative to the total number or the value of contract awards. On average, during 2000 to 2008, GAO sustained one protest for every \$20 billion the Air Force spent in acquisitions. So few sustained protests have occurred that it is impossible to discern any trend in them. On the other hand, the Air Force has offered corrective actions in noticeable numbers. Through the 1990s, it offered corrective actions in about 0.3 percent of contract awards. From 2001 to 2008, the percentage fell fairly steadily, ending well under 0.2 percent of contract awards. All of these trends point to steady improvement over time, resulting in a need to adjust fewer than 0.2 percent of the source selections associated with contract awards by 2008.

### **Significant Trouble Will Persist in a Small Number of Sophisticated Protests**

All that said, the Air Force continues to experience serious protests in large, complex acquisitions that present high stakes to their participants. The CSAR-X and KC-X acquisitions are examples of such acquisitions, but they are not entirely representative of the acquisitions where we expect continuing trouble. Two special characteristics of these acquisitions made protests and sustainments more likely than usual. (1) They both use preexisting designs with characteristics that are relatively well known to all potential offerors. This has made it difficult for the Air Force to state its source selection criteria clearly without foreclosing more than one offer and so preventing a successful competition. Lack of clarity ultimately provided one of the grounds for the sustained protest in the KC-X program. (2) They both involve foreign offerors. The Air Force never expressed any preferences for an American source in these acquisitions so

long as the award complied with the Buy American Act,<sup>1</sup> but the possibility that an Air Force decision might push jobs outside the United States significantly increased the political heat surrounding these acquisitions. High political interest at a minimum complicated decisionmaking by drawing more pointed external attention than usual to these acquisitions.

But these acquisitions share two other characteristics that we expect to see repeatedly in a small number of Air Force acquisitions for the future. (1) They are both large. The net revenues associated with large acquisitions are likely to encourage any loser in a source selection to launch an aggressive protest, even if the cost of that protest is substantial. (2) The winner of either of these source selections could expect to dominate the global market for similar systems for the foreseeable future. That is, losing a source selection such as one of these has profound strategic implications for a global company that, again, are likely to encourage any loser to launch an aggressive protest.

The experience of the CSAR-X and KC-X protests also suggests that large firms are learning how to launch successful, sophisticated protests. They and their outside counsel can surge protest resources, imposing a heavy burden on the Air Force to respond effectively to a surge. They may see a growing opportunity in large, sophisticated protests designed to stretch Air Force capabilities. As their outside counsel learns how to do this, we expect them to offer this capability to other companies with smaller stakes when they lose Air Force competitions. All of these factors point to the likelihood that the Air Force will continue to face aggressive protests in a small number of large, complex acquisitions that present high stakes to the participants.

## **Proactive Defenses Are Available**

The Air Force should focus on changing source selection policies and practices in ways that help it counter such sophisticated protests. As it does so, it should be cautious not to make changes that could hurt its long-term success in dealing with the vast majority of GAO bid protests. It should also be cautious about focusing too much on issues specific to the CSAR-X and KC-X protests. Rather, it should seek proactive defense against sophisticated protests in large, complex acquisitions that present particularly high stakes to the participants. We see opportunities to make changes in five areas. The Air Force Acquisition Improvement Plan (AIP) has already begun to implement changes that move the Air Force in the direction we suggest here. But several opportunities exist to refine the AIP or move beyond it.

## **Increase Awareness of Finely Tuned GAO Bid Protest Rules**

Air Force personnel are often puzzled by GAO's arm's-length stance during bid protests. GAO basically believes that Congress has given it the authority and responsibility to protect the integrity of the federal acquisition system by acting as a counterweight to federal agencies that buy things, such as the Air Force. Where the Air Force gives close attention to the needs of the warfighter as it enforces federal regulations within its own acquisition system, GAO focuses

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<sup>1</sup> The Buy American Act (BAA 41 U.S.C. § 10a–10d, passed in 1933) exempts contractors in “qualifying countries” from the BAA, treating them the same as U.S. companies for contract award purposes. U.S. firms are treated (reciprocally) as domestic contractors in procurements that occur in qualifying countries.

on the regulations themselves and deliberately keeps its distance from any substantive issues in Air Force acquisitions where protests arise. By the very nature of its mission, GAO is likely to see protests differently from most Air Force personnel when protests occur. Air Force personnel will be more successful in bid protests the more they understand about how GAO views these protests.

In its reviews of bid protests, GAO sees itself as simply applying legislative language to the specific facts relevant to each new protest. Over the course of time, however, GAO has developed a history of decisions that it draws on as precedents in new decisions. These historical decisions provide an implicit set of rules that can be summarized in terms of three core questions:<sup>2</sup>

- Did the agency follow the evaluation criteria in the RFP?
- Were the agency determinations reasonable and properly documented?
- Did the agency violate any statute or regulation?

With appropriate understanding of how these rules apply in any particular setting, the Air Force could use them to (1) design and execute source selections to avoid protests and (2) make better informed decisions about when to offer corrective action when protests occur to avoid GAO review. Two of the ten grounds for protests sustained in the CSAR-X and KC-X source selections occurred because, despite close vetting by Air Force attorneys, senior Air Force officials misread the implicit rules GAO used to make decisions. The better Air Force decision-makers understand how GAO applies these implicit rules in practice, the easier it should be to avoid protest sustainments.

### **Simplify and Clarify Requirements and Priorities**

GAO's most common ground for sustaining a protest is a mismatch between the criteria stated in the RFP and the evaluation of these criteria later in the source selection. This accounted directly for three of the ten grounds for the protests sustained in the CSAR-X and KC-X source selections. The simpler and the clearer the criteria and priorities among criteria presented in the RFP, (1) the less ambiguous these will be when GAO reviews them and (2) the easier it will be for evaluators to execute and document their evaluation in a way that complies with GAO's expectations. Ambiguity in the CSAR-X and KC-X requests for proposal gave GAO large openings to impose its own judgment about what a "reasonable" person would think the Air Force intended in its RFP.

The AIP has given this goal close attention and is moving the Air Force in the right direction. The draft RFP for the new round of the KC-X source selection reflects this new guidance. It dramatically reduced the number of factors included in the trade space for the trade-off among requirements. It stated the relative importance of different requirements far more clearly. And, in choosing which requirements to give the most attention to in the evaluation, it considered not only which factors matter most to the Air Force but also which are most likely to discriminate among proposals in the new round of the KC-X source selection.

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<sup>2</sup> We thank James A. Hughes, Jr., Air Force Deputy General Counsel for Acquisition (SAF/GCQ), for this succinct summary.

### **Focus Formal Cost Estimates on the Instant Contract**

The Air Force has a strong interest in understanding the likely life cycle cost (LCC) of any new system and gives this close attention in its general oversight of any new program. But the only costs relevant to a source selection are those that will help the Air Force discriminate among proposals. So, for example, if the Air Force expects the cost of its own organic support of a new system to be the same, no matter which proposal it chooses, that cost is not relevant to the source selection. Where it does expect future costs to differ among proposals, uncertainties about the future can create ambiguities about how the Air Force intends to evaluate future costs or raise GAO objections that the Air Force's treatment of future costs is unreasonable. Such concerns accounted directly for two of the ten grounds for sustained protests in the CSAR-X and KC-X source selections and contributed directly to a third.

The AIP has responded by focusing formal cost estimation on the costs of the "instant contract"—the contract for the deliverables specifically identified in the RFP. Where it expects future costs to differ among proposals, it captures engineering information about the future supportability of each system offered and evaluates this information as part of its technical evaluation. This allows the Air Force to infer likely LCC implications of different proposals without raising potentially problematic issues about how it views the uncertain future environment in which systems will operate. Naval Air Systems Command (NAVAIR) has used this approach successfully in the past and it appears to be appropriate for the Air Force.

When taking this approach, the Air Force should anticipate the potential for confusion about how it defines cost in a source selection. In particular, OSD requires the Air Force to estimate the LCC of a new system as part of a Defense Acquisition Board (DAB) process that runs in close parallel with the source selection process the Air Force uses to choose the source of that system. LCC includes forecast development, production, operating and support, and disposal costs. Application of the approach prescribed in the AIP will lead the Air Force to use one cost estimate in the DAB process and another narrower estimate in the source selection. GAO has obtained access to such DAB cost estimates in recent source selections. The Air Force should expect it to again and, in anticipation, explain clearly in the RFP why the cost estimate used in the source selection differs from that used in the DAB process.

### **Tighten Discipline Throughout the Source Selection**

The nature of GAO's implicit rules means that small errors during a source selection can have large consequences. Small errors directly produced three of the ten grounds for protest in the CSAR-X and KC-X source selection. The Air Force could have avoided these errors only by maintaining close and tight control over the whole source selection to ensure that all parts of the RFP were internally consistent and that every one of hundreds of evaluation issues opened during the source selection were properly closed and disposed of. But the relatively inexperienced personnel in the two source selections attempted to complete the source selections too quickly to sustain such control.

The AIP recognizes this problem and seeks to make future source selection less schedule-driven and more event-driven. We encourage the Air Force to take additional steps to improve quality control in the design of the RFP, execution of the evaluation phase, and justification of the final decision. Just-in-time on-the-job training, based on playing the roles that relatively inexperienced participants will have in an upcoming source selection, can help them anticipate the challenges they will face and learn from mistakes in a setting where the mistakes do not impose real costs on the Air Force. Maintenance of technically skilled and experienced mentor-



coaches through the duration of the source selection can back-stop inexperienced staff to some degree, catching more errors in time to allow effective solutions. And tools designed formally to link requirements to data requested and to evaluation methods applied can clarify the Air Force's intent early in a source selection and facilitate the execution of evaluation in a way that in fact instantiates the intent stated in the RFP. Although the Air Force has such tools, the CSAR-X and KC-X source selections did not use them; the second round of the KC-X source selection is using one.

### **Tailor Quality Assurance to the Needs of a Less-Experienced Source Selection Workforce**

One way to address the problems of quality control within a source selection that are described above is to enhance external quality assurance. The AIP proposes this in the form of more effective external review teams. But for the most part, the Air Force applied this approach in the CSAR-X and KC-X source selection. Their high visibility led to intense oversight by the Air Force and OSD, oversight that in effect provided a test of the external review process proposed in the AIP. GAO sustained ten grounds for protest in these two source selections despite this intense external oversight. That is part of the reason we favor greater emphasis on enhanced quality control within the source selection; only such close attention is likely to identify the errors that can lead GAO to sustain protests.

But enhanced external quality assurance remains important. Our review of the experience of the CSAR-X and KC-X source selections suggests that such oversight is more likely to be effective if it displays the following four characteristics:

1. It is timely. It occurs early enough so that the source selection evaluation team can correct errors discovered in the RFP, the evaluation process, or the justification for the final decision.
2. It is well informed. External reviewers arrive fully briefed on the current status of the source selection and do not have to burden the source selection team while getting smart enough to provide useful oversight.
3. It is technical. Reviewers are familiar with the nuances of the GAO bid protest process and understand how they play in a practical setting.
4. It is hands-on. It seeks the closest possible understanding of the details of the source selection to help the source selection team identify the kinds of small errors discussed above.

A full-time oversight team within a source selection is more likely than an external quality assurance team to have all of these characteristics. But an external team can potentially bring a second set of eyes as well as capabilities that are too costly to commit to a source selection for its full duration.

## Acknowledgments

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Michael Golden, at GAO, was generous in sharing his rich understanding of the bid protest process, while carefully skirting any direct discussion of the CSAR-X and KC-X cases highlighted here—cases that GAO still considered to be open when we talked with him.

We spoke at length to government and contractor personnel with direct personal knowledge of the CSAR-X and KC-X source selections and bid protests—from inside and outside the source selections. When we did so, we promised them anonymity to make it easier for them to speak frankly. They were uniformly generous with their time, giving us access to relevant documents and sharing lessons learned that they had developed from their own experiences. We look forward to seeing those lessons learned become public so that all can benefit directly from them. In the meantime, they have given us valuable insights on how to improve Air Force policies in the future.

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<sup>3</sup> All offices and ranks are current as of the time of the research.

us interpret contracting data that she had worked with in the past. Our editor, Patricia Bedrosian, significantly improved clarity and internal consistency throughout this and its sibling publications. Megan McKeever was always ready to provide helpful administrative support.

We thank them all but retain full responsibility for the accuracy and objectivity of the analysis presented here.

## Abbreviations

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ACC	Air Combat Command
AETC	Air Education and Training Command
AFB	Air Force Base
AFMC	Air Force Materiel Command
AFLOA	Air Force Legal Operations Agency
AGMC	Aerospace Guidance and Meteorology Center
AIP	Acquisition Improvement Plan
ALC	air logistics center
AMC	Air Mobility Command
AoA	Analysis of Alternatives
BAA	Buy American Act
BCA	Boeing Commercial Airplanes
CDD	Capability Development Document
CEO	chief executive officer
CNA	Center for Naval Analyses
CSAR	combat search and rescue
CSAR-X	Combat Search and Rescue Recovery Vehicle
DAB	Defense Acquisition Board
DD350	Individual Contract Action Record
DoD	Department of Defense
DT&E	developmental testing and evaluation
EADS	European Aeronautic Defence and Space Company
EMD	engineering and manufacturing development

EN	evaluation notice
FAR	Federal Acquisition Regulation
FP	fixed price
FPDS-NG	Federal Procurement Data System—Next Generation
FPR	final proposal revision
FY	fiscal year
GAO	Government Accountability Office
GDP	gross domestic product
IFARA	Integrated Fleet Aerial Refueling Assessment
IG	Inspector General
JAQ	Commercial Litigation Directorate of the Air Force Legal Operations Agency
JCIDS	Joint Capabilities Integration and Development System
JROC	Joint Requirements Oversight Council
KC-X	Aerial Refueling Tanker Aircraft
KPP	key performance parameter
KSA	key system attribute
LCC	life cycle cost
L-M	Lockheed-Martin
MAJCOM	major command
MER	Manpower Estimate Report
MILCON	military construction
MIRT	multifunctional independent review team
MNS	Mission Need Statement
MPLCC	most probable life cycle cost
NASA	National Aeronautics and Space Administration
NAVAIR	Naval Air Systems Command
N-G	Northrop Grumman
O&S	operating and support
OCONUS	outside the continental United States

ORD	Operational Requirements Document
OSD	Office of the Secretary of Defense
PACTS	Protest and Congressional Tracking System
PAF	Project AIR FORCE
PAR	Proposal Analysis Report
PCAG	Performance Confidence Assessment Group
PRV	Personnel Recovery Vehicle
QA	quality assurance
RFP	request for proposal
SA-ALC	San Antonio Air Logistics Center
SAF	Secretary of the Air Force
SAF/ACE	Secretary of the Air Force, Acquisition Center of Excellence
SAF/AQ	Secretary of the Air Force, Assistant Secretary of the Air Force for Acquisition
SAF/AQC	Secretary of the Air Force, Deputy Assistant Secretary of the Air Force for Contracting
SAF/AQE	Secretary of the Air Force, Executive Action Group of the Assistant Secretary of the Air Force for Acquisition
SAF/AQX	Secretary of the Air Force, Deputy Assistant Secretary for Acquisition Integration
SAF/GCQ	Secretary of the Air Force, General Counsel for Acquisition
SDD	System Development and Demonstration
SecDef	Secretary of Defense
SM-ALC	Sacramento Air Logistics Center
SPO	system program office
SRD	System Requirements Document
SSA	source selection authority
SSAC	source selection advisory council
SSET	source selection evaluation team
SSJAT	Source Selection Joint Analysis Team
USAF	U.S. Air Force

USD(AT&L) Under Secretary of Defense (Acquisition, Technology and Logistics)

WBS work breakdown structure

WSARA Weapon Systems Acquisition Reform Act

## Introduction

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### *Policy Context*

- **For 2000-08, USAF averaged**
  - **93 protests a year**
  - **3 sustained protests a year**
  - **\$20 billion of spending per sustained protest**
- **GAO sustained protests badly damaged two high-profile programs**
  - **Combat Search and Rescue helicopter (CSAR-X)**
  - **Aerial Refueling Tanker aircraft (KC-X)**
- **How should the USAF react?**

RAND

GAO Bid Protests in Air Force Source Selections .1.

### Policy Context

When an offeror participating in a U.S. Air Force (USAF) source selection believes the Air Force has made an error that unjustly “prejudices” its chance of winning the source selection, the offeror can file a protest with the Office of the General Counsel of the Government Accountability Office (GAO).<sup>1</sup> During the period fiscal year (FY) 2000 to FY 2008, the Air Force experienced such bid protests in an average of 93 contract awards a year—claims that the Air Force had made errors in source selection that were large enough to change who received a contract award.<sup>2</sup> On average, GAO sustained three of these protests each year and recom-

<sup>1</sup> This protest does not go to the side of GAO best known for generating public policy studies for Congress. Rather, it goes to the GAO Office of General Counsel, which is administratively separated from the rest of GAO and operates under different governance arrangements.

<sup>2</sup> This number is based on data from the Protest and Congressional Tracking System (PACTS) database and counts of root B-numbers for FY 2000–2008. GAO gives a unique B-number to each protest filing. One protest can have several B-numbers. Each source selection has one root B-number—for example, B-299145; each protest filing associated with that source selection has the same root B-number and a different suffix—for example, .2 in B-299145.2. Hence, a count of root B-numbers counts the number of source selections in which protests occur. A count of B-numbers counts the number of



mended that the Air Force make significant changes in how it had conducted the source selections associated with each of these contract awards. The Air Force awarded about 14,800 new contracts each year during this period; GAO sustained one protest for every 4,900 contracts awarded.<sup>3</sup>

What should we make of this record of performance? The need to change three source selections a year does not sound like a serious problem in an organization that buys as much as the Air Force does. Over that period of time, it spent an average of \$59.3 billion a year on goods and services, suggesting a need to change one source selection for every \$20 billion dollars it spent.<sup>4</sup>

Unfortunately, a number of the protests that GAO sustained during this period of time were highly visible and caused significant disruptions in resource and operational planning in the Air Force. The most notorious GAO sustainments occurred in the source selections to recapitalize the Air Force's Combat Search and Rescue Recovery Vehicle (CSAR-X) program and Aerial Refueling Tanker Aircraft (KC-X) program fleets. Two sustained protests in the CSAR-X program in FY 2007 so disrupted Air Force planning that resulting delays ultimately helped lead to the cancellation of the program.<sup>5</sup> Eight sustained grounds for protest in the KC-X program in 2008 have already delayed that program by three years and the source selection remains uncompleted.<sup>6</sup> For a period of time, the Office of the Secretary of Defense (OSD) even removed the Air Force's authority to oversee this source selection.

What kinds of experience has the Air Force really had with source selections in recent years? If serious problems exist, what are they? What causes them and how can the Air Force correct these problems? To develop answers to these questions, the Assistant Secretary of the Air Force for Acquisitions (SAF/AQ) and the Deputy Assistant Secretary of the Air Force for Contracting (SAF/AQC) sponsored the project underlying this documented briefing, which presents the findings of the study and the policy changes that the Air Force can consider using to improve its performance with regard to bid protests in the future.

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protest filings. Light et al., 2011, explains PACTS in more detail (Thomas Light, Frank Camm, Mary E. Chenoweth, Peter Lewis, and Rena Rudavsky, *Analysis of Government Accountability Office Bid Protests in Air Force Source Selections over the Past Two Decades*, Santa Monica, Calif.: RAND Corporation, TR-883-AF, 2012).

<sup>3</sup> These numbers come from the source described in the previous footnote and from the Individual Contract Action Record (DD350) and Federal Procurement Data System—Next Generation (FPDS-NG) databases, described in Light et al., 2010.

<sup>4</sup> Expenditure numbers come from the DD350 and FPDS-NG databases. They are stated in constant 2008 dollars.

<sup>5</sup> For a description of these protests and GAO's justification for sustaining them, see U.S. Government Accountability Office, *Cost Assessment Guide: Best Practices for Estimating and Managing Program Costs*, GAO-07-1134SP, Washington, D.C., July 2007c; U.S. Government Accountability Office, *Selected Recent GAO Bid Protest Decisions*, Washington, D.C., updated August 2007d; and U.S. Government Accountability Office, Decision, Matter of Lockheed Martin Systems Integration-Owego, Sikorsky Aircraft Company, Files B-299145.5, B-299145.6, Washington, D.C., August 30, 2007e.

<sup>6</sup> For a description of these grounds for protests and GAO's justification for sustaining them, see U.S. Government Accountability Office, Decision, Matter of The Boeing Company, Files B-311344, B-311344.10, B-311344.11, B-311344.3, B-311344.4, B-311344.6, B-311344.7, B-311344.8, Washington, D.C., June 18, 2008.

## *Analytic Approach*

- **Review formal DoD, NASA, USAF, and GAO policy and lessons learned on source selections**
- **Hold extensive discussions with Air Force personnel**
  - **Participants in development of Acquisition Improvement Plan**
  - **Participants in CSAR-X, KC-X source selections**
  - **Stewards of PACTS database**
- **Hold general discussions with GAO officials responsible for reviewing bid protests**
- **Conduct statistical and econometric analysis of data from PACTS, DD350, and FPDS-NG databases for 1991-2008.**
- **Develop findings, potential changes in USAF policy**

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GAO Bid Protests in Air Force Source Selections -2-

### Analytic Approach

To inform our sponsor about Air Force experience with GAO bid protests and develop ideas for potential changes in Air Force policy and practice, this project undertook the following analytic tasks:

1. We reviewed documents on general Air Force source selection policies and processes,<sup>7</sup> comparable policies and processes elsewhere in the Department

<sup>7</sup> U.S. Air Force, *Source Selection*, Mandatory Procedure MP5315.3, Washington, D.C.: Deputy Assistant Secretary (Contracting) (Policy Division) (SAF/AQCP), March 2009b; U.S. Air Force, *Acquisition Improvement Plan*, Washington, D.C.: SAF/AQ, May 4, 2009c; Brett N. Kayes (Capt, USAF), "Air Force GAO Protest Trend Analysis," briefing, Washington, D.C.: Deputy Assistant Secretary (Contracting) (Contracting Operations Division) (SAF/AQCK), updated September 19, 2008; Alexander R. Slate, "Best Value Source Selection: The Air Force Approach," *Defense AT&L*, September–October 2004, pp. 52–55; Edward C. Martin, "Source Selection Improvements," briefing, Wright-Patterson AFB, Ohio: ASC Acquisition Center of Excellence, April 10, 2007; and Edward C. Martin and Daniel C. Fulmer, "What's New in Air Force Source Selection," ASC Acquisition Center of Excellence, briefing, World Congress, National Contract Management Association, Session #711, Cincinnati, Ohio, April 13–16, 2008.

of Defense (DoD)<sup>8</sup> and elsewhere in the federal government.<sup>9</sup> We reviewed documents on GAO perspectives and trends.<sup>10</sup> We reviewed the products of the Source Selection Joint Analysis Team (SSJAT)<sup>11</sup> and the formal Center for Naval Analyses (CNA) review of Air Force acquisition.<sup>12</sup>

2. We interviewed principals from each of the teams involved in the Air Force Acquisition Improvement Plan (AIP), focusing on issues we expected to be relevant to bid protests but also stretching to anticipate how potential changes in the management of the acquisition workforce, the requirements determination process, the organizational structure of the Air Force Materiel Command (AFMC), and so on might affect the Air Force's ability to address concerns about bid protests.<sup>13</sup> We focused our attention on the substantive

<sup>8</sup> Acquisition Advisory Panel, *Report to the Office of Federal Procurement Policy and the United States Congress*, Final Panel Working Draft, Washington, D.C., December 2006; Defense Information Services Agency (DISA), *Acquisition Deskbook: Source Selection*, Washington, D.C., March 2000; Skip Hawthorne, "Risk Based Source Selection," briefing, PEO/SYSCOM Conference, Washington, D.C.: OUSD(AT&L) DPAP, November 7, 2006; Scott Ilg, "Best Value Source Selection Trade-Offs," briefing, Defense Acquisition University, Germany, 2006; U.S. Army, *Army Source Selection Manual*, Addendum AA to AFARS, May 16, 2008; U.S. Department of Defense, *Addendum to the Defense Acquisition Structures and Capabilities Review*, Pursuant to Section 814, National Defense Authorization Act, Fiscal Year 2006, Washington, D.C., June 2007a; and U.S. Department of Defense, *Report of the Defense Acquisition Structures and Capabilities Review*, Pursuant to Section 814, National Defense Authorization Act, Fiscal Year 2006, Washington, D.C., June 2007b.

<sup>9</sup> Doug Kornreich, "Bid Protests: How to Avoid Them, and How to Win Them," briefing, Washington, D.C.: HHS, Office of General Counsel, General Law Division, 2004.

<sup>10</sup> Michael R. Golden, "Evaluating Cost or Price in Competitions: Challenges Abound," Washington, D.C.: U.S. Government Accountability Office, presented at DoD Cost Analysis Symposium 42, Williamsburg, Va., February 2009; Kate M. Manuel and Moshe Schwartz, *GAO Bid Protests: An Overview of Timeframes and Procedures*, Washington, D.C.: Congressional Research Service, February 11, 2009; Moshe Schwartz and Kate M. Manuel, *GAO Bid Protests: Trends, Analysis, and Options for Congress*, Washington, D.C.: Congressional Research Service, February 2, 2009; U.S. Government Accountability Office, *Bid Protests at GAO: A Descriptive Guide*, 8th ed., GAO 06-797SP, Washington, D.C., 2006; U.S. Government Accountability Office, "Bid Protest Regulations," n.d.; U.S. Government Accountability Office, *Report to Congress on Bid Protests Involving Defense Procurements*, B-401197, Washington, D.C., April 9, 2009; and many GAO decisions on individual bid protests.

<sup>11</sup> U.S. Department of Defense, "Executive Report," Understanding the Problem Subcommittee, Source Selection Joint Analysis Team, Washington, D.C., April 24, 2009a; U.S. Department of Defense, "Guidance Joint Framework," briefing, Source Selection Joint Analysis Team, Washington, D.C., April 24, 2009b; U.S. Department of Defense, "Recommendations for Best Practices," Source Selection Joint Analysis Team, Washington, D.C., April 24, 2009c; U.S. Department of Defense, "Source Selection Policy and Guidance Assessment—Initial Report: Executive Summary," Source Selection Joint Analysis Team, Guidance Subcommittee, Washington, D.C., April 24, 2009d; and U.S. Department of Defense, "Understanding the Problem Subcommittee Briefing," Source Selection Joint Analysis Team, Washington, D.C., April 24, 2009e.

<sup>12</sup> Gary E. Christie, Dan Davis, and Gene Porter, *Air Force Acquisition: Return to Excellence*, CNA Independent Assessment, CRM D0019891.A2/Final, Alexandria, Va., February 2009.

<sup>13</sup> These documents describe the conduct of the AIP: Michael B. Donley, "Strengthening the Acquisition Process," memorandum, Secretary of the Air Force, Washington, D.C., July 18, 2008a; Michael B. Donley, "Strengthening the Acquisition Process (Your memo, dated 2 Sep 08), memorandum, SecAF, Washington, D.C., September 9, 2008b; Sue C., Payton, "Implementation Plan for Strengthening the Acquisition Process, Memorandum," Washington, D.C.: SAF/AQ, September 15, 2008a; Sue C. Payton, "Strengthening the Acquisition Process (SECAF Memorandum, July 18, 2008)," memorandum with attachments, "Point Paper on KC-X Source Selection: Lessons Learned," "Air Force Acquisition Quick Look: Terms of Reference," Washington, D.C.: SAF/AQ, September 2, 2008b; Sue C. Payton, "Strengthening the Acquisition Process (Draft Recommendations), Memorandum," Washington, D.C.: SAF/AQ, September 15, 2008c; and Rob Pollock, "Weekly Assessment of Implementation Plan Progress to Strengthen the Acquisition Process," briefing, Washington, D.C.: SAF/ACPO, December 2, 2008. The AIP yielded many useful products, including Kathy Boockholdt, "Source Selection Lessons Learned," briefing, Washington, D.C.: SAF/ACE, December 10, 2008; U.S. Air Force, "USAF Annual Bid Protest Update,

findings and recommendations that emerged from the development of the AIP, not on the process the Air Force used to develop the AIP or these findings or recommendations. We also spoke in depth with other personnel in Headquarters Air Force who have had long-term responsibilities for source selection policy and who continue to help shape such policy.

3. We interviewed senior officials inside and outside the CSAR-X and KC-X program offices who were involved in both of these programs before and after the sustained protests they experienced. We reviewed documents from those source selections. We spoke with a number of corporate officials associated with these source selections. We have made every effort to ensure that the material reported here does not reveal any information that is source-selection-sensitive or corporate-proprietary.
4. We interviewed the principals responsible for managing and upgrading the PACTS database.<sup>14</sup> They provided a useful corporate memory about significant past experience with the data system.
5. GAO officials responsible for the bid protests associated with the CSAR-X and KC-X programs declined to discuss anything specific to these protests. They view both as still being open and active at this time. Senior GAO officials openly discussed broader issues, however, providing significant insight into how GAO probably approached these two protests.
6. Using data from PACTS, DD350, and FPDS-NG, we constructed formal statistical cross tabulations and econometric models of the factors that appear to have affected protest patterns in the Air Force over the period FY 1994–2008.<sup>15</sup> In each case, significant cleaning efforts were required to prepare data from these sources for formal analysis. Details of this analysis are documented separately.<sup>16</sup>
7. Using the qualitative and quantitative data we collected and analyzed in the efforts described above, we have developed a set of findings for the Air Force, as well as a number of changes in policies and practices that could help the Air Force deal with the new environment in which we expect sophisticated bid protests to occur in the future.

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FY09Q1,” briefing, Washington, D.C.: SAF/ACQ, January 1, 2009a; U.S. Air Force Acquisition Chief Process Office, *United States Air Force ‘Strengthening the Acquisition Process’ Final Report*, Report to the Secretary of the Air Force on the “Strengthening the Acquisition Process,” Washington, D.C., 2009; and David M. Van Buren, “Acquisition Improvement Plan Implementation,” Memorandum, SAF/AQ, Washington, D.C., May 8, 2009.

<sup>14</sup> Light et al., 2011, describes the PACTS database.

<sup>15</sup> Light et al., 2011, briefly describes these databases.

<sup>16</sup> Light et al., 2011.

### ***Primary Findings***

- **Corrective actions and sustained protests both impose costs on USAF. Track both.**
- **Overall USAF experience with bid protests has been positive.**
- **Expect trouble from sophisticated protests in selected circumstances.**
- **Proactive defenses are available:**
  - **Increase awareness of finely tuned GAO rules.**
  - **Simplify and clarify requirements and priorities.**
  - **Tighten discipline in RFP, evaluation, justification of final decision.**
  - **Address future costs in mission capability factor; expect to reconcile with DAB cost estimates.**
  - **Tailor quality assurance to needs of a less experienced source selection workforce.**
  - **Allow quality to override schedule when unexpected problems arise.**

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GAO Bid Protests in Air Force Source Selections -3-

### **Summary of Primary Findings**

Both GAO and the Air Force have traditionally tracked Air Force performance with regard to bid protests by focusing on the number of protests sustained by GAO. Data analysis suggests that the costs that the Air Force experiences when it voluntarily agrees to take a corrective action to reduce an error in a source selection are also important. As a result, the Air Force should track both of these to understand its own performance with regard to bid protests.

When we track Air Force performance over time, we find a long-term reduction in the number of protests per contract award since FY 1994 and a long-term reduction in the number of corrective actions per contract award since FY 2001. No trend can be discerned in the number of sustained protests, because so few occurred over this period. From FY 1994 to FY 2008, the Air Force had to correct errors—through proactive corrective actions or responses to sustained protests—in only 0.2 percent of the acquisitions in which it awarded contracts; that performance has improved since FY 2001. These observations paint a positive picture of the Air Force's broad experience with bid protests.

The recent bid protests experienced in its CSAR-X and KC-X programs are not representative of the Air Force's broader experience and are not likely to help the Air Force predict its general experience in the future. But they are characteristic of a specific form of troublesome protest that the Air Force is likely to see more of as time passes, if only in very small numbers. These are sophisticated protests undertaken by losers in Air Force competitions with a great deal at stake and no business choice but to search aggressively for errors in any Air Force source selection in which they lose. Such protesters have been exceptionally successful and will con-

tinue to be unless the Air Force changes its source selection policies and practices in ways that are explicitly designed to counter these sophisticated efforts.

The Air Force appears to have many options for dealing with protests of this kind. It is already trying some of these in the new KC-X source selection. Options to consider:

- Continue to anticipate that awards in major procurements are likely to be subject to protest. With that in mind, sustain GAO's standards from end to end in a source selection. Ensure that the source selection advisory council (SSAC) and source selection authority (SSA) understand what GAO expects when decisions move to them.
- Air Force attorneys understand GAO's standards better than anyone else in the Air Force. Take full advantage of their knowledge. Assign Air Force legal advisors to the source selection evaluation team (SSET), SSAC, and the SSA. Ensure that the legal team supporting the procurement includes one or more litigation attorneys who are familiar with the bid protest process.
- Simplify requirements. Focus on things likely to discriminate among sources. Clearly define discriminators and their relative importance.
- Provide training for the SSET at the beginning of the process. Emphasize avoidance of common mistakes. For example, state in the request for proposal (RFP) where the Air Force will use each piece of information requested. Follow the RFP to the letter in evaluation.
- Track each evaluation notice (EN) in real time and dispose of it with a clear justification. Follow through on open evaluation items, including extraneous material in the source selection record.
- Adequately document evaluations. Have a plan to develop an accurate agency record that will be complete when the SSA makes a decision.
- Define how cost calculations will be made and used precisely in the RFP. Link elements measured clearly to the evaluation criteria used in the source selection. If GAO detects uncertainty or questions about the validity of an approach, it can impose its own approach.
- Use an approach to quality assurance (QA) that improves on past practice in four ways:
  - QA specialists engage early enough to allow time for the source selection to correct any errors they detect.
  - They come to a source selection fully informed about its status before they arrive.
  - They come with technical expertise about specific issues relevant to the source selection.
  - They come to get their hands dirty and apply a hard wire brush to details of the source selection.<sup>17</sup>
- Treat schedules during source selections as goals, but ensure that everyone understands that quality must override schedule when there is a conflict between them.

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<sup>17</sup> That is, they should get into the details of whatever source selection process they are examining. They should get close enough so that their statements inform the execution of detailed tasks in the process. They should provide immediate advice at that level and use the knowledge they gain from such close observation to inform their assessment of the performance of the process in broader terms. In this setting, the devil is in the details, and they must get to know the devil.



## *Road Map*

- **How source selections and bid protests work**
- **Patterns for bid protests during FY1991-2008**
- **Protests sustained in CSAR-X, KC-X source selections**
- **Synthesis of findings**
- **Potential changes in policy or practice**

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GAO Bid Protests in Air Force Source Selections 4

### **Roadmap for the Document**

The document continues in Chapter Two by describing the processes that the Air Force uses to manage its source selections and that GAO uses to manage bid protests. Chapter Three describes the findings of statistical analysis of broad patterns in the Air Force's historical experience with bid protests. Chapter Four describes the sophisticated protests sustained in the CSAR-X and KC-X programs and the lessons the Air Force can learn from these to combat future sophisticated protests. Chapter Five summarizes findings based on the discussions in Chapters Three and Four, reviews of official documents, and discussions with knowledgeable personnel. Chapter Six closes the document with a summary of the changes that the Air Force might consider to improve its performance with regard to bid protests. A separate technical report describes the quantitative data sources used in this document and the formal statistical methods that underlie the findings reported here.<sup>18</sup>

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<sup>18</sup> Light et al., 2011.

## How Source Selections and Bid Protests Work

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### *Road Map*

- **How source selections and bid protests work**
  - Air Force source selection
  - GAO bid protest
- **Patterns for bid protests during FY1991-2008**
- **Protests sustained in CSAR-X, KC-X source selections**
- **Synthesis of findings**
- **Potential changes in policy or practice**

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GAO Bid Protests in Air Force Source Selections -5-

This chapter describes the two processes relevant to the analysis in this document: the process that the Air Force uses to manage a source selection and the process that GAO uses to manage a bid protest. Presenting the steps in a bid protest after the steps in a source selection process might suggest that a bid protest can occur only after the Air Force has chosen and announced a winner of the source selection. That is not correct. GAO has very specific rules about timeliness that define how soon an offeror must file a protest after it believes it has detected a government error. As a result, protests can occur well before the Air Force announces a winner.<sup>1</sup> And so the series of steps we associate with a bid protest could begin quite early in a source selection.

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<sup>1</sup> For example, an offeror can protest one of the selection criteria stated in an RFP.



## ***How Source Selections and Bid Protests Work***

- **Air Force source selection**
  - **Development and approval of requirements**
  - **Development and approval of a source selection plan**
  - **Development, approval, and announcement of a request for proposal**
  - **Evaluation of proposals**
  - **Selection, approval, and announcement of a winner**
- **GAO bid protest**

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GAO Bid Protests in Air Force Source Selections - 6 -

### **Steps of the Source Selection Process**

A source selection typically includes the following basic steps:<sup>2</sup>

- development and approval of requirements
- development and approval of a source selection plan
- development, approval, and announcement of an RFP
- evaluation of proposals
- selection, approval, and announcement of a winner.

#### **Development and Approval of Requirements**

The processes that the Air Force uses to develop the requirements relevant to a source selection are separate from the source selection per se. So this step is not technically part of source selection. We include it here because it is so important to the problems in source selection that can lead to bid protests.

Three requirements documents are particularly important to source selections for large acquisitions. The first is the Analysis of Alternatives (AoA), which is a

documented analytical evaluation of the performance, operational effectiveness, operational suitability, and estimated costs of alternative systems to meet a mission capability that has been identified through the Joint Capabilities Integration and Development

<sup>2</sup> This description draws heavily on Slate, 2004; Martin, 2007; U.S. Air Force, 2009b; and U.S. Department of Defense, 2009b and 2009c.

System (JCIDS) process. . . . The AoA is one of the key inputs to the process of defining system capabilities set forth in the capability development documents.<sup>3</sup>

The second is the Capability Development Document (CDD), which describes the user requirements that are relevant to the material solution addressed by the source selection. The user community develops these requirements.<sup>4</sup> During the technology development phase leading up to Defense Acquisition Board (DAB) Milestone B, Air Force system engineers use the CDD to inform their efforts to develop the System Requirements Document (SRD) for the program relevant to the source selection.

The SRD is the third requirements document of interest. It derives system-level functional and performance requirements from “items such as the CONOPS [concept of operations], system-level performance metrics, mission threads/use cases, and usage environment” reflected in the CDD. The SRD reflects a “system solution defined at the system and subsystem level and supported by [critical technology elements] and prototyping results. The contractor uses these system requirements to develop the system-specification and functional and performance requirements necessary to conduct initial end item design.”<sup>5</sup>

The SRD is usually included in the RFP for a source selection. When we view the description above in the context of a source selection, the “contractor” becomes an offeror. In a source selection, the SRD defines the technical performance requirements of a system that each offeror must address in its proposal. If the SRD more effectively instantiates the intent of the CDD drafted by the user community, the source selection using the SRD is probably more likely to choose the proposal that best satisfies the user’s needs.

Recent policy reviews have found that the processes that develop the CDD and SRD and those that choose a winner within a source selection are not as well aligned and coordinated as they could be.<sup>6</sup> Our interviews with Air Force personnel revealed broad appreciation of these problems and a strong desire within the acquisition community to address them. In the context of bid protest policy, better integration of the requirements determination, technology development, and source selections could potentially clarify the priorities of warfighters in ways that allow source selections to target discriminators more effectively and refine more clearly how evaluation would treat the criteria included in any trade space.<sup>7</sup>

<sup>3</sup> Marc Greenberg and James Gates, *Analysis of Alternatives*, Teaching Note, Ft. Belvoir, Va.: Defense Acquisition University. For information on the JCIDS process, see U.S. Department of Defense, 2009f.

<sup>4</sup> The CDD is one product of JCIDS. For information on how the CDD emerges from it, see U.S. Department of Defense, “Manual for the Operation of the Joint Capabilities Integration and Development System,” Washington, D.C., July 31, 2009f.

<sup>5</sup> The discussion in this paragraph is based on Judith S. Dahmann and Mike Kelley, *Systems Engineering During the Materiel Solution Analysis and Technology Development Phases*, white paper, Washington, D.C.: Office of the Director, Defense Research and Engineering, System Engineering, September 2009. Quotations come from this source.

<sup>6</sup> See, for example, Christie, Davis, and Porter, 2009; Ronald Kadish (Lt Gen, USAF, Ret.), *Defense Acquisition Performance Assessment: Report by the Assessment Panel of the Defense Acquisition Performance Assessment Project for the Deputy Secretary of Defense*, Washington, D.C., January 2006; and U.S. Air Force, 2009a.

<sup>7</sup> A “trade space” means different things at different points during a program’s life. The trade space addressed during the requirements phase is broad. It includes all attributes relevant to the decision on what requirements to set for a new system. The trade space addressed during a source selection includes only those attributes that an offeror can vary to add value to its proposal. At one extreme, a minimal trade space in a source selection would specify threshold values for all attributes, offer no credit for any performance beyond these thresholds, and choose among proposals that achieve these requirements on the basis of other grounds, such as cost or past performance. An extensive trade space would give an offeror credit for increases

### Development and Approval of a Source Selection Plan

The source selection itself begins when it assembles the people who will conduct it and starts to identify how to frame the source selection as a whole. The primary players who must be identified are

- The SSA, who is responsible for the proper and efficient conduct of the source selection process. This person establishes the source selection team, which includes the SSET, SSAC, and additional advisors. He or she monitors the source selection, approves movement past significant milestones in it, and ultimately chooses the winner.
- The contracting officer, who manages all business aspects of the acquisition. This person has day-to-day responsibility for managing the contractual details of the source selection. He or she advises SSA on every event in source selection.
- The chair of the SSET, who appoints SSET members subject to SSA approval. This person establishes the Performance Confidence Assessment Group (PCAG) to assess the past performance of offerors in all source selections in excess of \$100 million.
- The group leaders on the SSET responsible for each factor that must be evaluated. The SSET includes technical, service, and programmatic evaluators; contracting officers and buyers; the PCAG; cost or price analysts; and advisors.
- The SSAC, a group of senior advisors used on most large source selections who help the SSA monitor the source selection and help frame information moving from evaluation activities to the SSA. The SSAC includes primary stakeholders in acquisition, including the users. The SSAC chair appoints SSAC members subject to SSA approval.

To determine how to frame the source selection, the Air Force engages in a variety of activities, including the following:

- Market research to identify the technological options likely to become available to the Air Force in the source selection and the attributes of these options that are most likely to distinguish one proposal from another on issues that interest the Air Force.
- Risk assessment to identify which attributes deserve particular attention as discriminators and what forms of source selection can help the Air Force mitigate risks identified. This assessment considers potential problems that can impose technological, management, and financial risks on the government.
- Cost analysis to choose costing methods and begin the development of government cost estimates that the Air Force can use to assess the realism of cost estimates in proposals.
- Interaction with industry, through industry days, structured communications, and ultimately draft requests for proposal, to gauge their capabilities and preferences about the form of the source selection, ensure that offerors understand the Air Force approach, and

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in the levels of many attributes. When this occurs, information from the analysis performed during the requirements phase can give the government guidance on how to weight different attributes during the valuation phase of the source selection.

Given the importance of requirements determination to source selections that effectively reflect the warfighter's priorities, one Air Force reviewer asked us why we had not given more attention to these issues in this report. We replied that we had not found enough information about it to support significant analysis. He responded that, until someone gives these issues more attention, there will never be enough information to support analysis. We agree and believe that this area deserves significantly more analytic attention in the future than it has received to date.

build a work breakdown structure (WBS) that the government can use effectively to compare offers.<sup>8</sup>

- Development and approval of an acquisition plan and a source selection plan based on what the Air Force learns in the activities above. The source selection plan formalizes the Air Force decisions that flow from those activities. The plan addresses the following types of issues: (1) requirements, (2) acquisition strategy, (3) source selection team, (4) market research, draft solicitations, synopsis, and other presolicitation activities, (5) process of communication between industry and government and within government, (6) evaluation factors, subfactors, their relative importance, and the evaluation process, and (7) schedule.

These activities closely inform the environment for a source selection. In doing so, they affect the likelihood of a protest and the Air Force's ability to justify its approach to source selection if a protest occurs. In addition, the Air Force preserves draft RFPs and the source selection plan following a source selection; they are available to offerors as they pursue any protest.<sup>9</sup>

### **Development, Approval, and Announcement of an RFP**

The RFP is the most important government document in a bid protest. Its language defines what the government will do over the course of the source selection. If the Air Force discovers that its RFP will not allow it to choose the proposal it really prefers, it must either amend the RFP or settle for a choice that does not give it what it wants. Substantively amending an RFP during a source selection is fraught with difficulties. Any change that appears to favor one offeror over others can easily create an opening for other offerors to protest.

As the Air Force builds an RFP that complies with its acquisition and source selection plans, it gives special attention to Sections L and M. Section L defines what information the Air Force wants each offeror to submit in its proposal. Section M defines the factors relevant to the source selection and how the Air Force will evaluate them. In particular, Section M must identify, for example,

- whether the source selection will use a trade-off or lowest-price technically acceptable evaluation method
- how the source selection defines its mission capability technical rating and technical risk, past performance, cost to the government and cost/price risk, and any other factors to be used in the evaluation
- the relative importance of all factors and subfactors.

<sup>8</sup> A WBS breaks a program into pieces, breaks these pieces into smaller pieces, and so on, through several levels of indenture. A WBS is a standard tool used to structure the management of a program or to estimate program costs. Such a structure creates a set of accounts that can help the government ensure that it captures all costs in a comparable way and does not double count any costs.

<sup>9</sup> U.S. Air Force, 2009b, Sections 7.1–7.2; U.S. Department of Defense, 2009b, Chart 71. John J. Young, Jr., Under Secretary of Defense (Acquisition, Technology and Logistics), established the SSJAT in November 2008 to “standardize the methodology and approach in conducting source selections” to ensure that the DoD systems acquisition process “delivers the highest quality products to our Warfighters and the best value to the taxpayers.” Representatives from the Directors of Acquisition Resources and Analysis and Portfolio Systems Acquisition, the Military Departments, the OSD General Counsel, and other Defense Agencies staffed three integrated policy teams responsible for “Understanding the Problem,” identifying variations in practice across DoD, and identifying “Best Practices.” U.S. Department of Defense, 2009d, p. 1.

Looking at source selection methods used across DoD, the SSJAT concluded that, when addressing these issues, the Air Force should give special attention to the following questions:<sup>10</sup>

- Are the contents of the RFP consistent with related documents?
- Are all parts of the RFP internally consistent with one another?
- Given the approach to evaluation defined in Section M, does Section L ask for too much or too little information?
- Are requirements adequately defined in the SRD and elsewhere?
- Does the RFP use appropriate contractual incentives to deal with the risks identified earlier?

Many of the protests sustained in the CSAR-X and KC-X programs probably would not have occurred if the respective source selections had given closer attention to these questions when designing their RFPs. The Air Force preserves the RFP following a source selection; it is available to offerors as they pursue any protest.<sup>11</sup>

### **Evaluation of Proposals**

In large source selections, three phases of evaluation typically occur:

- Exchanges with offerors and evaluation to establish a competitive range. This determines whether each offeror has a reasonable chance of winning the competition.
- Exchanges with offerors and evaluation within the competitive range, leading to final proposal revisions (FPRs). This gives the Air Force its primary opportunity to negotiate with each offeror to bring its proposal as close as possible to what the Air Force wants.
- Evaluation associated with the FPRs. This provides the evaluation that ultimately decides how closely the attributes of each proposal match the Air Force goals stated in the RFP.

Differences in the purposes of these three phases lead to differences in how the Air Force executes them. And GAO's authority to assess Air Force behavior and decisions differs somewhat in each round. But each round typically involves a similar series of events:

- give offerors information on their evaluation in any previous round
- identify strengths, weaknesses, deficiencies, and uncertainties associated with each proposal
- communicate with each offeror about these and negotiate to improve each proposal where possible
- evaluate the proposals as they stand at the close of each round.

The Air Force is more likely to avoid sustained protests or the need for corrective action in each round if it

- executes evaluation exactly as it said it would in the RFP
- treats all offerors equally

<sup>10</sup> U.S. Department of Defense, 2009b, Chart 22.

<sup>11</sup> U.S. Air Force, 2009b, Section 7.3; U.S. Department of Defense, 2009b, Chart 71.

- protects information in each offer from all other offerors
- makes reasonable judgments and decisions through the course of each round
- documents these judgments and decisions clearly in real time through the course of each round.

A problem associated with each of these points led to at least one ground for sustaining a protest in the CSAR-X and KC-X source selections. The Air Force preserves offeror proposals, evaluation worksheets, interim ratings, competitive range determination documents, and ENs following a source selection; they are available to offerors as they pursue any protest.<sup>12</sup>

### **Selection, Approval, and Announcement of a Winner**

This final stage of the source selection involves an especially elaborate dance among the players to verify that the choice of a winner is justified and then to explain the basis for the choice as clearly as possible. The SSET presents the results of its FPR evaluations to the SSAC. The SSAC offers one consensus source selection recommendation for the SSA's consideration. If SSET members seriously disagree on evaluation results, the SSET presents any minority opinions to the SSAC and SSA. If any SSAC members disagree on what recommendation to present to the SSA, the SSAC presents minority views to the SSA. In large source selections, the SSET chair and contracting officer prepare a Proposal Analysis Report (PAR), which documents the results of the SSET evaluation and comparison of offers, including its assessment of cost to the government, past performance, mission capability, cost/price risk, source selection recommendation, and any minority opinions.

The SSA reviews this material and then, using independent judgment and whatever other information may be available, chooses the winner. The SSET chair, contracting officer, and other members of the source selection team collaborate to document the basis for the SSA's decision in the Source Selection Decision Document and, when the decision can be publicly announced, the SSA uses this document to justify his or her decision. This is a single, summary document supporting the selection of the best-value proposal consistent with the stated evaluation criteria, clearly explaining the decision and documenting the reasoning used by the SSA. The Air Force then typically debriefs the losers to explain to them the basis of the decision.

GAO typically gives a loser broad latitude to use the debriefing to conclude that an error has occurred. GAO gives losers ten days to file any protests following the debriefing. But a last opportunity can arise if information previously unknown to the loser appears in the agency record sent to the source selection participants at the close of the source selection. A loser has ten days beyond this date to file a protest.

Following the decision, the Air Force preserves the following documents from this stage of the source selection:<sup>13</sup>

- clearance documentation
- decision briefing
- PAR
- Source Selection Decision Document
- source selection debriefing documents

<sup>12</sup> U.S. Air Force, 2009b, Sections 7.4–7.7; U.S. Department of Defense, 2009b, Chart 71.

<sup>13</sup> U.S. Air Force, 2009b, Sections 7.8–7.13; U.S. Department of Defense, 2009b, Chart 71.

- artifacts or other documentation from the evaluation process (for example, individual evaluator worksheets, or ENs and the offerors' responses).

The intricacies of this last stage contributed to at least two grounds for sustained protests in the KC-X source selection. All of the documents preserved can become available for consideration in a protest. This illustrates how important this last stage is to any effort to avoid sustained protests.

## ***How Source Selections and Bid Protests Work***

- **Air Force source selection**
- **GAO bid protest**
  - **Initiation**
  - **Initial GAO response**
  - **Initial Air Force response**
  - **GAO merit review**
  - **GAO decision**

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GAO Bid Protests in Air Force Source Selections - 7 -

### **Steps of the Bid Protest Process**

GAO runs the bid protest process within a tight schedule. An offeror can file a protest at any time that it detects an error in the source selection (typically no more than “10 days after the protester knew or should have known the basis of protest”<sup>14</sup>). From the date of that filing, GAO has 100 days to review the purported error and to render a judgment on it.<sup>15</sup> GAO rarely fails to meet this statutorily mandated schedule.<sup>16</sup> This is true in part because it imposes heavy responsibilities on the Air Force to address issues raised in a protest and respond within tight time lines of its own.

The bid protest process usually includes the following steps:<sup>17</sup>

- initiation
- initial GAO response
- initial Air Force response
- GAO merit review
- GAO decision.

<sup>14</sup> U.S. Government Accountability Office, 2006, “When to Protest.” An important exception involves errors identified during debriefings; we discuss this below.

<sup>15</sup> An “express option” is available to pursue an even faster schedule. We discuss the 100-day option here.

<sup>16</sup> U.S. Government Accountability Office, 2009.

<sup>17</sup> This discussion draws heavily on Kayes, 2008; U.S. Government Accountability Office, 2006, n.d., and 2009.



## Initiation

To file a protest, an offeror must be an “‘interested party,’ which means an actual or prospective bidder or offeror with a direct economic interest in the procurement. . . . In challenges of the evaluation of proposals and the award of contracts, this generally means an offeror that would potentially be in line for award if the protest were sustained.”<sup>18</sup> “Although most protests challenge the acceptance or rejection of a bid or proposal and the award or proposed award of a contract, GAO considers protests of defective solicitations (e.g., allegedly restrictive specifications, omission of a required provision, and ambiguous or indefinite evaluation factors), as well as certain other procurement actions (e.g., the cancellation of a solicitation).”<sup>19</sup>

To file a protest, an offeror must explain why GAO has jurisdiction over the matter in question, explain clearly the legal basis for the protest, and provide enough information to support a review of the claim. To help broaden access to its review, GAO does not require that the offeror hire an attorney to do this or comply with precise legal forms. But the GAO process has a strong legal flavor and follows legal customs of truth finding, application of statutory authority to the facts in any specific new case, and building the position for a decision in any such case on precedent set by previous GAO decisions. So skilled attorneys can help an offeror a great deal when it seeks to file a protest.

## Initial GAO Response

When an offeror files a protest with GAO, GAO notifies the Air Force within a day. It may then assess whether the offeror has a right to file a protest. Is it an interested party? Does GAO have jurisdiction over the issue in question? Is the protest timely, relative to GAO rules? Does it “set forth a detailed statement of the legal and factual grounds of protest”? Does it “clearly state legally sufficient grounds of protest”?<sup>20</sup> GAO can “summarily dismiss” a protest on any of these grounds.

If it does not summarily dismiss the protest, GAO notifies the Air Force that it has 30 days to

provide GAO, the protester, and any intervenors a complete written report responding to the protest, including all relevant documents, or portions of documents, and an explanation of the agency’s position. . . . The report generally includes a statement of the relevant facts (and a best estimate of the contract value) signed by the contracting officer, a memorandum of law explaining the agency’s position in terms of procurement law, and a list and a copy of all relevant documents, or portions of documents, not previously furnished. . . . GAO encourages agencies to voluntarily release to the parties documents which are relevant to the protest prior to the filing of the agency report. . . . GAO requires that at least 5 days prior to the filing of the report, in cases in which the protester has requested in its protest or shortly thereafter specific documents material to the disposition of the protest, the agency prepare a list of those documents, or portions of documents, which it has previously released or intends to produce in its report, and of the documents which it intends to withhold and the reasons for the proposed withholding.<sup>21</sup>

<sup>18</sup> U.S. Government Accountability Office, 2006, “Who May Protest.”

<sup>19</sup> U.S. Government Accountability Office, 2006, “What to Protest.”

<sup>20</sup> U.S. Government Accountability Office, 2006, “Summary Dismissal.”

<sup>21</sup> U.S. Government Accountability Office, 2006, “Agency Report.”

### Initial Air Force Response

Upon receiving notice of a protest from GAO, the Air Force immediately notifies any company that has won a contract under the competition or who might reasonably expect to win a contract in the future. GAO may permit such firms to participate as “intervenor.” If it agrees that an error has occurred and could have large enough effects to change its choice of a winner, the Air Force can offer the protester corrective action. For example, the Air Force may cancel a solicitation, repeat it, reopen it, or reevaluate proposals to remove errors. The next chapter discusses how frequently such events have occurred. If the corrective action offered satisfies the protester, the protest ends without involving GAO further. GAO can provide flexible alternative dispute resolution support to the Air Force and protester to encourage moves in this direction. If the Air Force and protester reach an agreement, the protester either withdraws its protest or GAO dismisses it as “academic,” because no further GAO action can affect the outcome. If the Air Force believes that the protester has no legitimate grounds to protest, it can petition GAO for summary dismissal, which GAO may grant based on the Air Force’s argument, even if it failed to do so earlier. (An intervenor can similarly request summary dismissal.) If the Air Force thinks no error has occurred that is large enough to change its choice of a winner, it must justify this judgment and send GAO and the protester the documents described above.

As the Air Force weighs these options, it can ask GAO to predict how it might rule in a merit review to help the Air Force decide what to do. GAO may or may not agree to do this.

GAO gives the protester ten days to respond to any agency documents. That response can come in the form of an additional protest. One protest can lead to an Air Force response, which generates documents that the protester can use to file another protest. In the same way, a set of protests can give the protester access to Air Force documents that provide the basis for another set; one wave begets another. This process can generate multiple waves, with GAO starting another clock on each new set of protests.

This exchange of documents can generate large quantities of proprietary and otherwise sensitive documents traveling among all the participants in the protest. If asked, GAO can issue a protective order that defines the terms under which these parties may use these materials. Typically, the immediate, individual participants in a protest may not share these materials with their principals. For example, the attorney representing a protester may not share documents obtained from the government or an intervenor with others in the protesting company; the protective order raises a Chinese Wall between the parties privy to this protected information and everyone else beyond the wall.<sup>22</sup> The protective order defines how this information will be protected when the protest ends.<sup>23</sup>

### GAO Merit Review

When it becomes apparent that a protester will not withdraw and has a legitimate right to protest, GAO moves toward a merit review. It gathers information relevant to the protests in play. It allows the protester to discover certain classes of documents in government hands; it is much more restrictive in its willingness to allow the government to discover the protester.

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<sup>22</sup> In the context of a bid protest, “the government” typically refers to the government agency running the relevant source selection. That is how we use “the government” in this discussion.

<sup>23</sup> Such protective orders place severe constraints on access to such material by third parties (i.e., researchers) after the protest ends.

If the protest raises complex enough issues of law or fact, GAO has the option of scheduling hearings to gather additional information. The GAO attorney conducting GAO's review of the protest serves as the hearing official. The protester, agency, or intervenors can also request hearings. Such hearings are tailored to the needs of each case and range widely in their degree of formality. GAO sets the agenda for any hearing and can decide which protest issues to highlight in a hearing. No hearing is required for GAO to rule on it, for or against. Protesters have the right to cross-examine Air Force witnesses who participate in the hearing. The Air Force's rights are much more constrained.

### **GAO Decision**

GAO resolves each merit protest with a formal written decision that either sustains or denies a protest. If an offeror files 20 grounds for protests, and GAO sustains only one, GAO labels the acquisition where this protest sustainment occurred to have a "sustained protest." The GAO decision documents the basis for its sustainment decision, usually framing the decision in terms of earlier GAO decisions. Taken together, the body of sustained protests in effect documents the factors that GAO considers when reviewing each new protest. GAO offers a list of these sustained protests as a document that interested parties can use to assess the circumstances under which GAO is likely to sustain a protest in the future.<sup>24</sup>

GAO formally explains the basis for sustaining every ground for protest that it sustains in its decision. If GAO sustains any one ground for protest in an acquisition, it may or may not discuss other grounds for protest in the acquisition when it documents that sustainment. It explains some decisions to deny specific grounds for protest. But it is typically impossible to determine by simply reading a formal GAO decision how many grounds for protest GAO reviewed in the same acquisition and how many of these it might have dismissed or denied. GAO gives no reasons for such dismissals and denials.

If GAO fails to sustain a single ground for protest in an acquisition, it documents this fact in its decision and explains why it denied at least one ground for protest. But again, as above, simply reading a formal GAO decision does not reveal how many other grounds for protest GAO might have denied or dismissed in that acquisition or why. We do not even know with certainty whether the ground for protest that GAO denied is even the most important ground, however that might be defined. GAO's published decisions serve primarily as precedents that GAO can use in future protests and that government agencies can use to guide their future behavior.

If the protester, an intervenor, or the Air Force disagrees with the GAO decision, it can ask GAO to reconsider the decision and explain why it believes GAO should do so. GAO can do so or not, at its own discretion.

GAO allows any protester that wins a sustained protest to recover at least some of its costs of protesting from the agency that made the relevant error. Following a sustainment decision, GAO works with such a protester to determine what level of costs GAO will allow the protester to recover.

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<sup>24</sup> U.S. Government Accountability Office, 2006. GAO offers no more systematic explanation of how it makes protest decisions. From GAO's perspective, it uses no rules, formal or informal, to inform the substance of its decisions. It simply applies its statutory authority to the specific facts on any one case. Speaking about its decisions outside the context of any specific case would be inconsistent with such a philosophy. For more systematic statements about how GAO makes protest decisions, see Vernon J. Edwards, *Source Selection Answer Book*, 2nd ed., Vienna, Va.: Management Concepts, 2006; the website *Where in Federal Contracting Organizes GAO Decisions* into categories that make it easier to discern patterns.

When GAO sustains a protest, it offers a recommended corrective action that the Air Force can take to correct the error identified. GAO lacks authority to enforce its recommendation, but government agencies almost always follow GAO guidance. If they do not, GAO is required to report this to Congress.

If a protester fails to convince GAO to sustain a protest, it can take its protest forward as a more formal legal action before the U.S. Court of Federal Claims, which tends to be somewhat more favorable to protesters than GAO is. But filing a case before the court is considerably more costly and takes much longer. Government agencies cannot take cases in which GAO sustained a protest to this court; they must simply take corrective action or face the political consequences.<sup>25</sup>

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<sup>25</sup> A more complete analysis would examine Air Force experience with bid protests in the courts. That was not within the scope of this study. For information on this court and its role in bid protests, see U.S. Court of Federal Claims, "About the Court," n.d., and "Guidelines for Procurement Protest Cases," n.d.



## Patterns for Bid Protests During FY 1991–2008

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### *Road Map*

- How source selections and bid protests work
- **Patterns for bid protests during FY1991-2008**
- **Protests sustained in CSAR-X, KC-X source selections**
- **Synthesis of findings**
- **Potential changes in policy or practice**

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GAO Bid Protests in Air Force Source Selections -8-

We now turn to quantitative evidence on the Air Force's experience with bid protests over the last two decades. Data from the Air Force's PACTS administrative database allow us to document basic patterns in the characteristics of protests that occurred and the outcomes that flowed from these protests. Data from DD350 and FPDS-NG allow us to put this information on protests in a broader context and ask what factors beyond the source selection process might have affected the Air Force's experience with bid protests. Statistical analysis of data from these sources allows us to ask how individual factors have affected the protests that the Air Force has experienced and the outcomes they led to. This chapter addresses these topics in turn.<sup>1</sup>

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<sup>1</sup> Light et al., 2011, describes the databases that underlie the analysis reported here. It also describes in much greater detail the statistical analysis we applied to material from these databases to develop the findings reported here.

## ***Protests Result from Errors Perceived Throughout the Source Selection Process***

<b>Step in source selection</b>	<b>Reasons for protests</b>	<b>Percent</b>
Develop requirements		
Develop sourcing strategy	Faulty sourcing action	18%
Develop and issue RFP	Faulty RFP	18%
Conduct discussions with offerors	Faulty treatment of offeror	8%
Evaluate proposals	Faulty evaluation	60%
Choose winner, debrief losers		
	Other	6%

Note: Frequency counts based on root B-numbers and calculated from PACTS data for FY 2000-08. Some protests with multiple B-numbers are associated with multiple protest reasons, causing the sum of protests by protest basis to equal more than the total number of protests.

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GAO Bid Protests in Air Force Source Selections - 9 -

### **General Patterns of Air Force Experience with Bid Protests**

This slide allows us to examine where, in the source selection process described in Chapter Two, protesters claimed that the Air Force made errors during the period FY 2000–2008.<sup>2</sup> The first column lists steps in the process described in Chapter Two. The second column matches the reasons for protests listed in the PACTS database to these steps. The “other” category in this column includes reasons that we could not reliably match to any particular step in the first column.

These data suggest that protesters have believed that errors occurred throughout the source selection process.<sup>3</sup> None occurred in requirements determination because, as explained in Chapter Two, this is beyond GAO’s acquisition-oriented jurisdiction. But a significant number occurred before the Air Force even issued an RFP. These tended to involve errors in how the Air Force organized a competition or classified a protester in a competition. Protesters have believed that the lion’s share of errors occur during evaluation. Errors here occurred when the Air Force failed to evaluate a proposal the way the RFP said it would, used an unreasonable

<sup>2</sup> For definitions of these categories, see discussion at Light et al., 2011, Table 2.1.

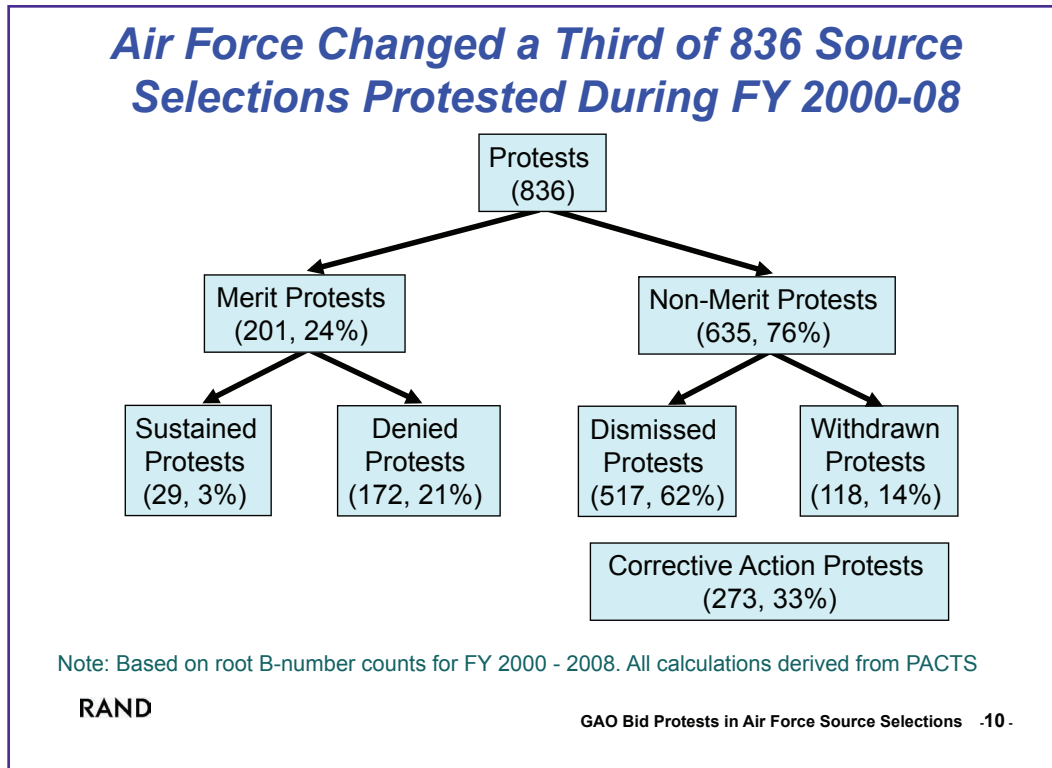
<sup>3</sup> We need to approach data of this kind with some caution. As with the data found in many administrative databases, those coming from fields in PACTS that are not used frequently to inform decisions tend to be fairly “dirty”—that is, the entries are often likely not to be correct or are impossible to process in a consistent, systematic way. “Reason for protest” appears to be one such field. Patterns of reporting appear to shift over time as the personnel recording the data change, suggesting some ambiguity in what labels someone working today might have recorded if he or she had recorded the data 15 years ago. That said, we believe that these data present a rough idea of how reasons for protests occur across steps of the source selection process.

argument to justify an evaluation, or failed to record its argument in real time during evaluation. Content analysis of recent sustainments in Air Force acquisitions indicates that these problems have dominated errors that GAO identified in its protest sustainments.<sup>4</sup>

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<sup>4</sup> For evidence from FY 2006–2008, see Kayes, 2008, Charts 9–12.





This slide allows us to analyze the GAO bid protest process in action during the period FY 2000–2008.<sup>5</sup> Over that period, the Air Force experienced protests in 836 acquisitions with contract awards. It allows us to sort protests by four policy-relevant types of outcomes. First, in a third of the protests—273—the Air Force negotiated voluntary corrective actions. All of these protests were withdrawn by the protester or dismissed by GAO. Second, 362 additional protests—43 percent—were withdrawn by the protester without corrective action or dismissed by GAO because they were inappropriate for some reason (we examine reasons for dismissals below). All other protests went to merit review. Third, of those that experienced merit review, GAO denied 172 protests—86 percent of those subject to merit review and 21 percent of the total. Fourth, GAO sustained 29—14 percent of those experiencing merit review and only 3 percent of the total.

All of these types of protests impose some costs on the Air Force. Some administrative and legal burden accompanies each of them. This burden rises when a protest enters a merit review. Because merit reviews consume calendar time, they also impose delays that can complicate Air Force resource and operational planning. The most significant costs accompany

<sup>5</sup> These numbers are constructed from data reported in PACTS. A protest is considered a merit protest if at least one associated B-number is sustained or denied. A merit protest is considered sustained if at least one associated B-number is sustained; otherwise it is denied. A protest is considered dismissed if at least one non-merit protest B-number is dismissed; otherwise it is considered withdrawn. Eleven protests in PACTS reported as closed are considered dismissed for the purposes of these tabulations. Definitions for actions and decisions shown in the slide appear to be stable over time and well understood. PACTS appears to provide fairly accurate data on these categories. Further discussion is available in Light et al., 2011, Figure 2.1.

corrective actions and sustained protests. As we will see below, these can require significant changes in source selection that induce substantial delays and associated costs.

## ***Corrective Actions During FY2000-08 Imposed Substantial Costs on USAF***

Corrective Action	Number	Percent
Cancel solicitation	50	13%
Repeat solicitation	95	25%
Reopen discussions	24	6%
Reevaluate	146	40%
Other	58	15%
Unknown	5	1%
<b>Total</b>	<b>378</b>	<b>100%</b>

Note: Tabulated by B-number (FY 2000-08) from PACTS data.

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GAO Bid Protests in Air Force Source Selections -11-

Like the perceived errors associated with the reasons for protest shown in Slide 9, the errors that result in voluntary corrective actions appear to occur at all stages in source selection.<sup>6</sup> The types of corrective actions listed here are the same as those that GAO recommends when it sustains a protest. The costs to the Air Force of these corrective actions are likely to vary significantly. The dominant form of corrective action shown in the slide, reevaluation, imposes less cost on the Air Force than the others detailed here. Reopening discussions allows offerors to adjust their proposals, potentially in ways that can significantly complicate Air Force evaluation of the changes. Repeating a solicitation adds still more administrative cost and delay. And cancellation of a solicitation can have much longer and deeper substantive effects on Air Force capabilities. Recall, in the case of the CSAR-X program, that protests ultimately helped lead to the cancellation of the program itself.

<sup>6</sup> Note that this slide reports numbers based on B-numbers. Because the last slide reported numbers based on root B-numbers, the total associated with number of corrective actions differs in the two slides. "Unknown" applies to cases in which PACTS says that a corrective action occurred but does not specify its form. We are cautious about our confidence in the accuracy of PACTS data on corrective actions. However, viewed at this level of aggregation, we believe they offer useful insights into relative numbers of different kinds of corrective actions. No historical data exist on the actual types of errors that lead to such corrective actions. Air Force Legal Operations Agency (AFLOA)/Commercial Litigation Directorate of the Air Force Legal Operations Agency (JAQ) began to collect and preserve such data in early 2010.

## ***GAO Required and Voluntary Corrective Actions Impose Costs on Air Force***

- **No solid empirical evidence is available on relative costs.**
- **Interviews with Air Force officials suggest that**
  - “Protest costs” are higher when merit reviews occur than when they do not.
  - “Corrective action costs” are about the same whether a merit review occurs or not.
- **Economic reasoning suggests that costs are higher for typical GAO-required than for typical voluntary corrective actions.**
- **But, because voluntary corrective actions have been so much more common, they are important too.**

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GAO Bid Protests in Air Force Source Selections -12-

In any particular protest, how do the costs to the Air Force compare for (1) offering a voluntary corrective action and (2) going forward to merit review and potentially a GAO-induced corrective action? Consider two different kinds of costs. The first “protest cost” is the cost of participating in the protest and includes administrative costs and the costs of distraction. The second “corrective action cost” is the cost to the Air Force of executing the corrective action and includes delay, distraction, and dollar costs.

Air Force attorneys told us that the costs of going forward to merit review significantly exceed the costs of a voluntary corrective action. Delays are longer. Although a proactive corrective action can often be taken within 30 days of a protest filing, a written decision from GAO requires close to 100 days. And to some extent, the Air Force can negotiate the scope of a corrective action with a protester, potentially reducing its cost to the Air Force. It is reasonable to expect at a minimum that protest costs will be significantly lower if the Air Force voluntarily offers and the protester accepts corrective action. But no one maintains reliable records on how much lower costs have actually been.

Most Air Force acquisition and program management specialists we spoke with saw less of a difference. They believe that corrective action costs dominate protest costs and that a corrective action is a corrective action; corrective action costs are about the same whether the Air Force volunteers a corrective action or GAO requires it. This would suggest that corrective action costs are about the same whether GAO frames the corrective action or the Air Force and protester do so before a merit review. But again, no one maintains reliable records of how high either is in practice.

In the absence of any solid empirical evidence on costs, are these qualitative observations consistent with what we can observe in empirical patterns of protests? So many assumptions are required to allow such a comparison that we must be cautious about basing policy judg-

ments on such a comparison. But roughly speaking, it appears reasonable to expect that corrective action costs tend to be higher when required by GAO than when negotiated voluntarily. The reason is that, as the expected cost of a corrective action grows in a particular protest, it becomes more attractive to the government to spend the resources required for merit review to reduce the probability that it must undertake corrective action. All else equal, this observation tells us that the Air Force will tend to offer voluntary corrective action on protests with lower costs of corrective action and send other protests directly to merit review.<sup>7</sup> Without empirical information, we cannot say anything more about how much higher the costs of corrective action might be in sustained protests.

Even if the costs for corrective action in individual protests are significantly higher if it results from a GAO decision rather than from voluntary negotiation between the Air Force and the protester, it is worth keeping in mind that, during FY 2000–2008, voluntary agreements were over nine times as common as GAO-sustained protests. As a result, even if the average sustained protest imposes larger costs on the Air Force than the average voluntary corrective action, voluntary corrective actions will continue to impose large costs on the Air Force. No matter how much higher the costs of GAO-imposed corrective actions are, it is worth tracking numbers of voluntary corrective actions as well as numbers of sustained protests.

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<sup>7</sup> Appendix A explains this argument in more detail.

### ***Protests Dismissed Without Corrective Action Suggest the Presence of Naïve Protesters***

<b>GAO Dismissal Basis</b>	<b># of Dismissed Protest B-Numbers</b>	<b>% of Dismissed Protest B-Numbers</b>
No longer relevant (“academic”)	299	45%
Lack of GAO jurisdiction	59	9%
Lack of standing	35	5%
Lack of legal basis	66	10%
Failure to use GAO process properly	160	24%
Other	47	7%
<b>Total</b>	<b>666</b>	<b>100%</b>

Note: Derived from dismissal reasons codes contained in PACTS and tabulated by B-number for FY2000-08.

**RAND**

GAO Bid Protests in Air Force Source Selections -13-

GAO dismissed over 60 percent of protests of Air Force source selections during the period FY 2000–2008.<sup>8</sup> The basis for those dismissals points to the persistent presence of protesters who did not understand the GAO protest process when they filed a protest. In about half the protests that occurred, GAO lacked jurisdiction over the issue in question, the protester lacked standing before GAO, the protester could not state a legal basis for the protest that met GAO’s standards, or the protester used GAO’s protest process incorrectly.<sup>9</sup> GAO dismissed almost all the rest, because it judged the protests to be academic—no longer of interest because they no longer required GAO’s attention. The vast majority of such protests became academic because the Air Force and protester had agreed to some form of corrective action that resolved the protester’s problem.

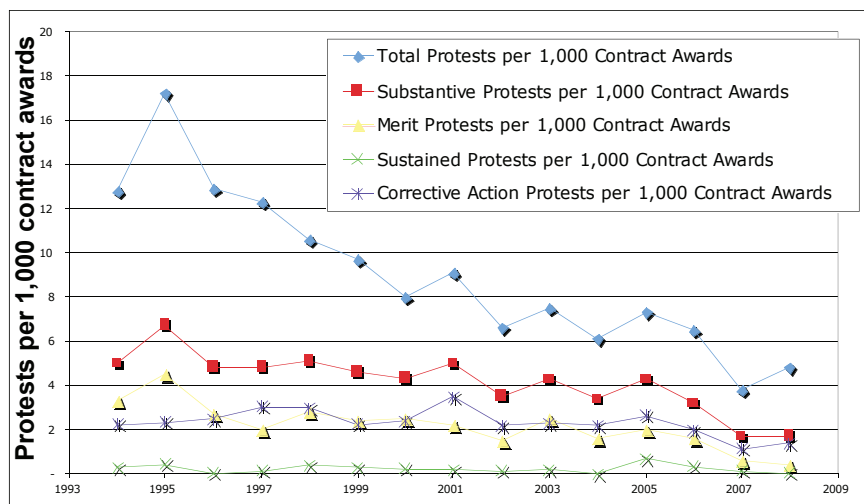
These results point to two observations. First, a large share of protests—about a third—is in effect the result of some error on the part of a protester. These protests are beyond the Air Force’s direct control. Unless the Air Force—or someone—can educate the offerors who participate in Air Force source selections on the standards that GAO applies, the Air Force can expect to face those protests for the indefinite future. These are the protesters that GAO’s bid protest rules, seeking simplicity and low administrative costs for all involved, seek most to protect.

<sup>8</sup> Again, the total number of dismissals reported here (666) differs from that reported in Slide 10 (517) because Slide 10 counts root B-numbers; Slide 12 counts B-numbers.

<sup>9</sup> These results are constructed from data in PACTS. We are cautious about our confidence in the accuracy of PACTS data on dismissals. Viewed at this level of aggregation, we believe that they offer useful insights into relative numbers of different kinds of corrective actions.

Second, although such protests do impose administrative and legal burdens on the Air Force, these burdens are mainly an irritant when viewed in comparison to the costs of sustained protests and corrective actions. They provide unavoidable workload for a small cadre of Air Force personnel that unfortunately adds little value to the Air Force mission. Sustainments and corrective actions can have much more direct effects on the Air Force mission; the Air Force can help the warfighter by focusing its efforts to improve its source selection policies and practices on these outcomes of the GAO protest process.

## Bid Protests Are Having Steadily Smaller Effects on Air Force Acquisition



Note: Based on root B-numbers and calculated from PACTS and FPDS-NG data for FY 1994–2008.

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GAO Bid Protests in Air Force Source Selections -14-

To understand protests and the outcomes they can lead to, it helps to view them in the context of the total number of contract awards that the Air Force makes. This slide does that. In effect, it normalizes the number of protests and potential protest outcomes that have occurred each year by stating them relative to thousands of contract awards.<sup>10</sup> This normalization allows us to make the following observations.

First, shown in blue, the total number of Air Force protests as a share of total number of awards fell dramatically from FY 1994 to FY 2008—about 65 percent or about 7 percent per year. Why? Suppose we define a protest that results in a corrective action or a merit review as a “substantive” protest. The red curve shows the trend for the number of substantive protests as a share of total contract awards. This share also fell fairly steadily from FY 1994 to FY 2008 but not nearly as fast as total protests. The difference between these trends is the number of protests in which the protester probably made an error filing. The number of such nonsubstantive or inappropriate protests as a share of total awards fell dramatically until about FY 2000 and then stabilized. Since FY 2001, improvements in the total number of protests have come mainly from improvements in the number of substantive protests.

<sup>10</sup> This slide is constructed from data in PACTS, DD350, and FPDS-NG. All of these are fairly “dirty” administrative databases. Many data are missing. Those that are present are entered by different people with different interpretations of what should be entered. Many display simple typographical errors that confound automated data analysis. We have used versions of DD350 and FPDS-NG that RAND has significantly cleaned and maintained over time. Viewed at this level of aggregation, we believe the qualitative patterns traced using these data are valid. We could have used the number of competitive contract awards to normalize these outcomes. We explain below that, because the numbers of total contract awards and competitive contract awards have moved together so closely for the Air Force, the choice has no effect on the qualitative character or policy implications of the patterns that we report here.



What has driven down the number of substantive protests? The number of corrective actions per contract award, shown in purple, bobbed around until FY 2000 and then began a long downward trend that helps explain part of the pattern of improvement since FY 2000. The remaining component of substantive protests, GAO merit reviews, accounts for the remainder of improvement. We see this in the steady drop in the number of merit protests per contract award, shown in yellow. The number of sustainments per contract award, shown in green, is so small that it displays no discernible trend over this period of time. In effect, this number is constant.

The relationship between a constant number of sustained protests per 1,000 contract awards and a falling number of denied protests per 1,000 contract awards leads to an observation that the share of merit protests that the Air Force loses has increased over time, even as the number of merit protests per 1,000 contract awards has fallen. Too much focus on this observation obscures three more important points: (1) The total number of sustained protests per 1,000 contract awards has not risen. (2) As noted above, the number of corrective actions has heavily dominated the number of sustained protests, and their number per 1,000 contract awards has steadily fallen. (3) The number of merit protests per 1,000 contract awards that the Air Force has to respond to has been falling.

Taken together, these observations tell a positive story about the Air Force's broad experience with GAO bid protests in recent years.

## ***Protests Induce Air Force to Adjust Only a Small Fraction of All Source Selections***

Metric	Portion of AF	Total AF
<b>Percent of USAF procurement spend</b>		100
<b>Average number of awards per year</b>		14,813
<b>Average number of protests per year</b>		92.9
<b>% inducing corrective actions</b>		33
<b>% resulting in merit protests</b>		24
<b>% sustained</b>		3
<b>% of protests requiring AF change</b>		36
<b>% of awards requiring AF change</b>		<b>0.23</b>

Note: Protest counts based on root B-number counts for FY 2000-08. Contract expenditures are reported in 2008 dollars using the GDP price deflator. Data from PACTS, DD-350, FPDS-NG.

**RAND**

GAO Bid Protests in Air Force Source Selections -15-

By focusing on numbers of sustained protests and corrective actions, we can put the Air Force's broad experience with bid protests in perspective. This slide explains a simple method that we will use on the next slide to look for differences in experience with bid protests across the Air Force during the period FY 2000–2008.<sup>11</sup> The numbers in the column are annual averages over this period.

The slide starts with the proportion of the average total Air Force spend over this period. The relevance of this proportion will become apparent on the next slide. It then lists the average number of contracts per year and the average number of protests per year. It shows that 33 percent of the 92.9 protests occurring in an average year induce corrective actions, 24 percent result in merit reviews, and 3 percent result in sustained protests. The share of protests resulting in either a corrective action or a sustained protest is 36 percent.<sup>12</sup> This share implies that the Air Force ultimately had to change 0.23 percent of the source selections for all of its contract awards during FY 2000–2008 in response to GAO bid protests. This small number contributes to the positive story told on the last slide.

<sup>11</sup> The numbers reported here derive from the same data sources used in the last few slides. The same caveats about these data sources apply here.

<sup>12</sup> Because a protest with a corrective action listed later occasionally leads to a sustained protest, these numbers are not strictly additive. Our analysis reflects this kind of overlap in outcomes. Because such an outcome is so unusual, though, it does not affect the results reported at the level of precision used here.

## Simple Comparison Reveals Only Modest Differences over Types of Contract Centers

Portion of AF Metric	Total AF	HQ	Product centers	ALC	Other technical	Projection base	Other base
Percent of AF spend	100	7	52	21	5	7	7
# awards (thousands)	14.8	1.8	1.5	3.7	1.7	4.4	1.8
# protests	92.9	11.4	8.2	15.4	3.7	33.2	20.9
% corrective actions	33	34	34	34	22	34	30
% merit protests	24	33	29	27	19	21	22
% sustained	3	2	10	6	0	1	5
% protests requiring AF change	36	36	44	40	22	35	35
% source selections requiring AF change	0.23	0.23	0.25	0.17	0.05	0.26	0.41

Note: Protest counts based on root B-number counts for FY 2000-08. Contract expenditures are reported in 2008 dollars using the GDP price deflator. Data from PACTS, DD-350, FPDS-NG.

RAND

GAO Bid Protests in Air Force Source Selections -16-

Does the Air Force experience with bid protests, viewed in this way, vary in different parts of the Air Force? We expect differences because different parts of the Air Force buy different kinds of goods and services, use different kinds of contracts and source selection methods, and maintain different contracting cultures. Knowledgeable observers generally agree that the level of training and experience of the personnel involved in source selections also varies systematically across the Air Force. To look for the effects of such differences on bid protest outcomes, we grouped the contracting activities in the Air Force into the following six categories:

The *headquarters* for each Air Force major command (MAJCOM) and Unified Command. The contracting squadrons of headquarters units acquire certain kinds of goods and services that are used by all bases within its organization. These contracts tend to be larger and more complex and to require more formal source selection activity than those at individual base locations. Examples of headquarters units included here are Langley Air Force Base (AFB), Air Combat Command (ACC); Peterson AFB, Air Force Space Command; Scott AFB, Air Mobility Command (AMC); Ramstein Air Base, U.S. Air Force, Europe; Hickam AFB, Pacific Air Forces; Randolph AFB, Air Education and Training Command (AETC); and Cheyenne Mountain, U.S. Strategic Command.

The *product centers*, which include the Aeronautical Systems Center, Wright Patterson AFB; the Electronic Systems Center, Hanscom AFB; Air Armament Center, Eglin AFB; and Space and Missile Center, Los Angeles AFB. These tend to buy major systems and the activities associated with them, using relatively highly trained and experienced work forces.

The *air logistics centers* (ALCs), which include Oklahoma ALC, Tinker AFB; Ogden ALC, Hill AFB; Warner Robins ALC, Robins AFB; and, before 2001, Sacramento ALC (SM-ALC), McClellan AFB; San Antonio ALC (SA-ALC), Kelly AFB; and the Aerospace Guidance and Metrology Center (AGMC), Newark AFB. As a result of several base realignment and closure

decisions SM-ALC, SA-ALC, and AGMC and their associated bases were closed. ALCs buy parts, commodities, and logistics services.

*Technical contracting centers* that work at units and locations conducting test and evaluation activities at Edwards, Eglin, or Kirtland AFBs or are research and development labs, such as the Air Force Research Lab, which includes Philips Lab, Kirtland AFB; Wright Lab, Wright Patterson AFB; Rome Lab, Griffiss AFB; and Armstrong Lab, Brooks City Base. These use highly trained and experienced personnel to buy test and evaluation services and related research and development services.

*Projection bases*, which are defined as individual bases or locations that operate weapon systems having a wartime mission or that can be deployed.<sup>13</sup> Except for AFMC, bases for each MAJCOM are included. Contracts written by projection bases provide base installation or base operating support. They often have smaller dollar values and require fewer formal source selections. Projection bases operate tactical and strategic aircraft, i.e., fighters and bombers; airlifters; and space assets. Guard and reserve units are included.

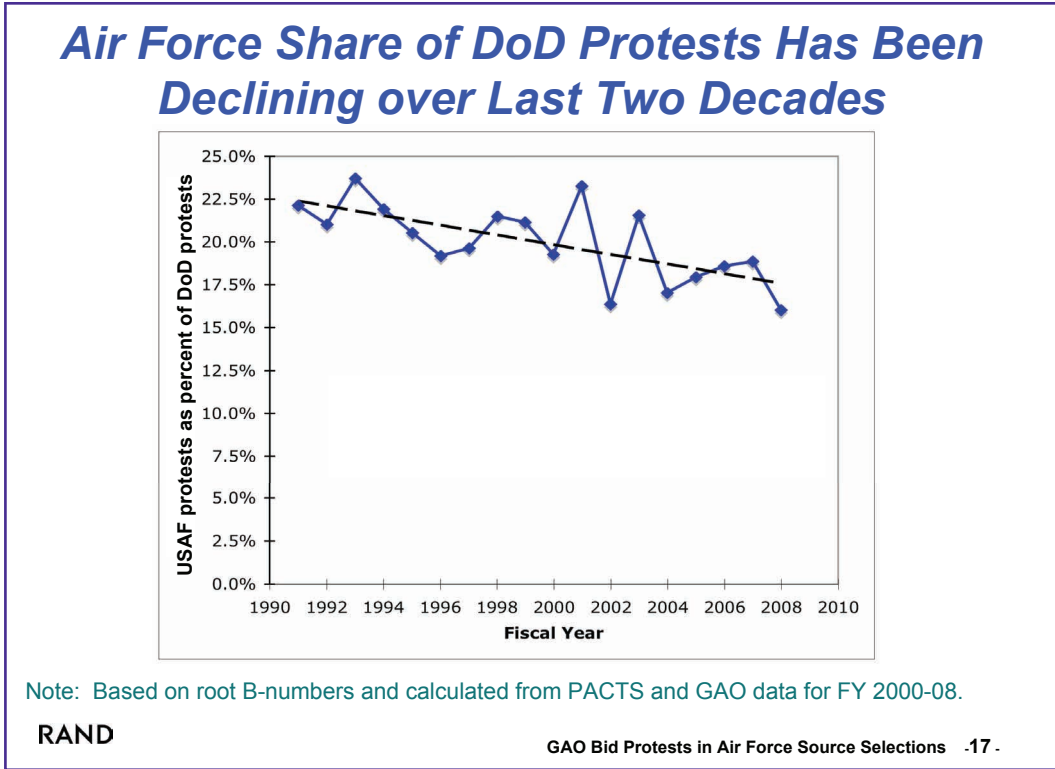
The *other base* category includes organizations, units, and locations that either do not have a wartime mission, even though they might provide essential support to the wartime mission, or typically do not deploy assets. These units include AETC, the human systems wing, and all direct reporting units that report directly to the Chief of Staff of the Air Force, such as the Air Force Academy and Andrews AFB.

Two points are worth noting. First, product centers account for about half of the Air Force procurement spend over this period. So it is not surprising that Air Force-wide outcomes are similar to those in the product centers. Second, in general, only the outcomes for technical activities and other base activities stand out. Experience in technical activities is relatively good; that in other base activities is relatively bad. We do not understand the reasons for this variation. It probably warrants further investigation. Product centers have markedly higher sustained protest rates than the rest of the Air Force. But because sustained protest rates remain small relative to all corrective actions, this distinction does not lead to large differences between product centers and the rest of the Air Force.<sup>14</sup>

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<sup>13</sup> Put another way, the primary mission of these bases is to project force.

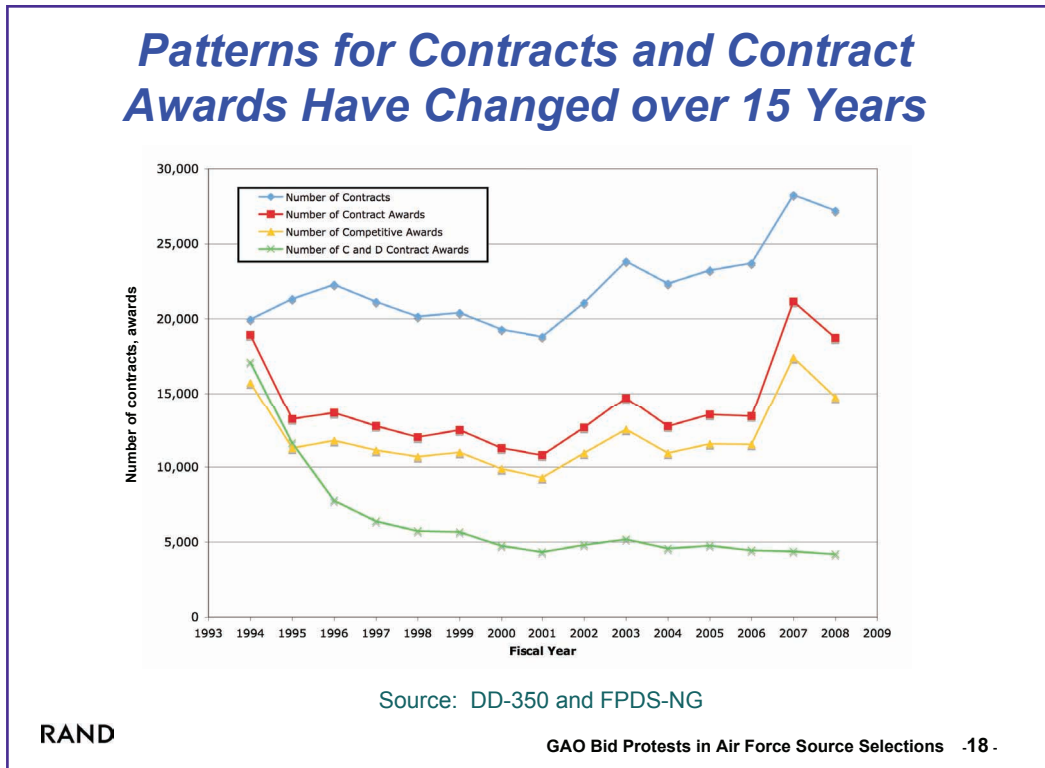
<sup>14</sup> For more detail, see Light et al., 2011, Table 2.6.



We do not have the degree of detail on non–Air Force agencies that PACTS provides on the Air Force. But by combining PACTS and GAO data, we can provide a high-level comparison between the bid protest experience of the Air Force and the experience of DoD as a whole.<sup>15</sup> This slide shows the total number of Air Force protests as a share of the total number of DoD protests. This share varies significantly from year to year but displays a long-term drop over time.<sup>16</sup> This drop occurs because, as the number of protests has fallen for both the Air Force and DoD, the number of protests has fallen faster in the Air Force (about 70 percent) than in DoD as a whole (about 65 percent) over the period shown. Many factors could account for this difference; we lack the detail required to look into the DoD trend and have focused our attention in our analysis on understanding the Air Force experience.

<sup>15</sup> For the numerical data underlying this figure, see Light et al., 2011, Table 2.7.

<sup>16</sup> The straight line shown is a simple regression line for the points in the graph.



## Broader Patterns That Might Affect Bid Protest Experience

This slide provides some context for those concerned that the general environment in which the Air Force awards contracts might explain some of the patterns described above.<sup>17</sup> Perhaps the most important trends to be aware of are those for total number of contract awards, shown in red, and total number of competitive awards, shown in yellow. These two numbers track one another closely through FY 1994–2008. The number of awards fell through the 1990s as the Air Force drew down its force structure and procurement of new systems and then rose as the Air Force relied increasingly on external providers of services rather than on more traditional organic sources of services. Because the trends for total and competitive contract awards move together so closely, using the number of competitive awards to normalize number of protests and protest outcomes on earlier slides would not yield results that differ qualitatively from those based on total number of awards. The number of C- and D-type contract awards, which tend to be larger and more complex than other contract award types, fell dramatically through the 1990s and then stabilized following FY 2000.<sup>18</sup> They are shown in green. Despite all this

<sup>17</sup> This graph displays numbers contracted from data in DD350 and FPDS-NG. For more detail, see the discussion in Light et al., 2011, Figure 2.2.

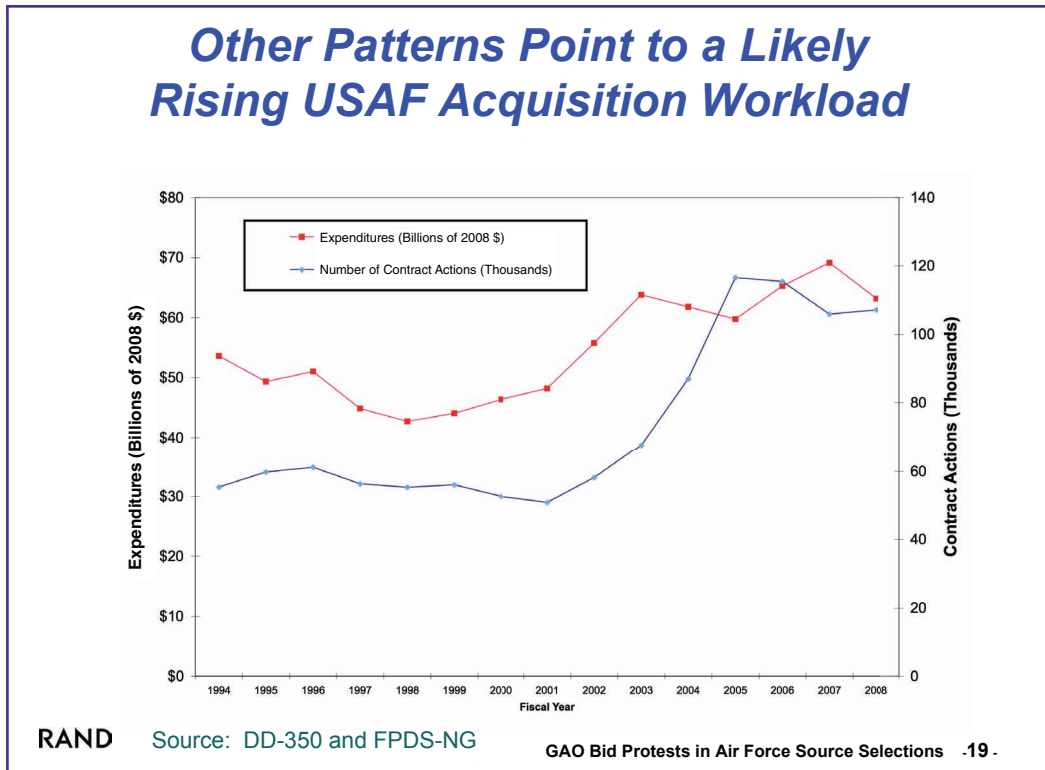
<sup>18</sup> The Federal Acquisition Regulation (FAR) “is the primary regulation for use by all federal executive agencies in their acquisition of supplies and services with appropriated funds.” (Quoted in the “Foreword” of U.S. General Services Administration, Department of Defense, and National Aeronautics and Space Administration, *Federal Acquisition Regulation*, Washington, D.C., March 2005.) It defines many types of contracts. C- and D-type contracts are indefinite delivery contracts (C-type contracts state a definite quantity; D-type contracts do not state a definite quantity) that tend to be larger and more complex than other contract types used by the Air Force.

turbulence, the total number of contracts, shown in blue, changed much less.<sup>19</sup> This number was relatively stable through the 1990s before beginning a steady rise through the 2000s.

Taken together, these trends tell us that both the level and the pattern of Air Force contracting behavior changed dramatically over this period of time. It would be desirable if more detailed statistical analysis of Air Force experience with bid protests could control for these patterns of change. The econometric models discussed below attempt to do that.

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<sup>19</sup> The number of contracts shown in any year is the number of distinct contracts in which transactions occurred in that year. The number of contract awards shown in a year is the number of new contracts initiated in that year. So the number of contracts reflects the number of new awards as well as the number of contracts initiated in the past and still active.



The changes documented on the last slide in all likelihood brought changes in workload for the acquisition workforce. This slide displays two numbers that provide some insight into such changes.<sup>20</sup> The level of spending on procurement, shown in constant 2000 dollars in red, is keyed to the left vertical axis. It shows relative stability through the 1990s, despite the changes afoot then. Expenditure rose rapidly through the early 2000s before stabilizing again at a much higher level. At the same time, the number of transactions, shown in blue and keyed to the right vertical axis, also changed but less dramatically.<sup>21</sup> A slow descent through the mid-1990s led to a recovery by about 2000 and a continuing rise through the period.

If we posit a positive relationship between each of these and workload, we would expect increasing demands on the workforce over the last decade. That said, improved management of acquisition information systems and dramatic changes in contracting associated with simplified acquisition and other acquisition reforms might well have offset the potential effects of these trends on workload. Changes in the level and composition of the acquisition workforce would also obviously shape the effects of such trends. Unfortunately, without information on the contractor workforce that supported the organic Air Force acquisition workforce through this period, it is difficult to control for changes in total workforce relevant to any changes in acquisition workload.<sup>22</sup>

<sup>20</sup> This graph displays numbers contracted from data in DD350 and FPDS-NG. Note that the number of actions is different from the number of contracts or number of awards shown on the previous slide. For more detail, see the discussion in Light et al., 2011, Figure 2.4.

<sup>21</sup> A “transaction” is the unit of observation in DD350 and FPDS-NG and effectively signals a significant contracting action associated with a change in the level of Air Force funds obligated.

<sup>22</sup> For information on trends in the organic workforce over some of this period, see Kayes 2008, Charts 29–30.



### ***“All Else Equal,” Several Factors Affect Total Number of Protests***

- **Year to year, total number of protests has fallen 8.7 to 9.7% a year**
- **Within any year, total number of protests has risen as number of awards rose but not proportionally**
- **Total number of protests has fallen more than proportionally with share of competitive awards**
- **Total number of protests has varied across different types of contracting centers**
  - **About the same in headquarters, product centers, and air logistics centers (with 80%)**
  - **About 45% lower in technical activities (5%)**
  - **About 75% higher in other locations (14%)**

Note: Based on root B-numbers. Results robust across functional forms for 1994-2008,  $n = 90$ . All results significant at  $\alpha = .05$  or better. Data from PACTS, DD-350, FPDS-NG.

RAND

GAO Bid Protests in Air Force Source Selections -20-

## **Isolating Factors That Affect Bid Protest Experience**

Methods are available to test statistically what factors have affected the number of protests the Air Force has experienced in various circumstances. These methods in effect use historical data on Air Force experience to vary one factor while holding all others constant and test to see whether this change affects the number of protests experienced while “all else is equal.”

### **Factors Affecting the Total Number of Protests**

We used a family of regression-based models to do this with data on Air Force experience from the period FY 1994–2008.<sup>23</sup> These models sought to explain the number of protests observed in one year at one type of contracting center in terms of<sup>24</sup>

- the number of contract awards in this year and type of contracting center
- the number of competitive contract awards in this year and type of contracting center
- the share of these awards that was competitive
- the share of these awards with C- and D-type contracts
- the average Air Force expenditure per contract in this year and type of contracting center

<sup>23</sup> Alternative members of the family of regressions treat the total number of protests as being distributed normally, negative binomially, or Poisson and hold different sets of factors constant while testing for the effects of each one. For details on the methods used, see Light et al., 2011.

<sup>24</sup> Some have argued that factors outside the Air Force acquisition system, such as the general state of the economy, might affect the trends examined here. Our analysis considers only factors that can be directly linked to Air Force acquisitions.

- the type of contracting center
- the year.

Different models used different combinations of these factors. We expected to observe the following effects. All else equal:

- The number of protests would rise proportionally with number of contract awards or number of competitive contract awards, suggesting that the probability of experiencing the protest of a contract award is independent of the number of awards.
- The number of protests would rise with the share of competitive contract awards, holding total number of contract awards constant, because there are more offerors and so presumably more opportunities for perceived errors in competitive than in noncompetitive awards.
- The number of protests would rise with the share of C- and D-type contracts, because protests would be more likely in larger awards with more complex contracts.
- The number of protests would rise with the average Air Force expenditure per contract, because protests would be more likely where the Air Force spends more per contract, increasing the stakes and perhaps the complexity in its contracts.<sup>25</sup>
- The number of protests would be higher in types of contracting centers with larger and more complex contracts—for example, higher in headquarters and product centers than in projection and other bases.
- The number of protests would fall over time, reflecting the strong relationship identified above when observing trends over time.

We had hoped to include information about personnel in the acquisition workforce. As noted above, without data on contractor personnel who supported the Air Force acquisition workforce, we could not construct meaningful measures of the numbers, types, or skills of personnel in the total Air Force acquisition workforce in different years and types of contract centers.

The slide summarizes the statistically significant results that we observed robustly across alternative models.<sup>26</sup> All else equal:

- From year to year, the total number of protests has fallen at a remarkable 8 to 9 percent per year, even faster than implied by the numbers on Slide 14.
- Within any year, the total number of protests has risen as the number of contract awards rose but less than proportionally. It is hard to understand what causes the coefficient to differ significantly from one, the value consistent with total proportionality, but the results are robust across functional forms.<sup>27</sup>

<sup>25</sup> This bullet and the one above use two different independent variables to detect a similar effect.

<sup>26</sup> The tests used found at least a 95 percent probability that an effect reported as “significant” was different from zero. For most of the significant effects reported here, the probability was 99 percent. These results are quite high for models with only 87 to 90 observations each and less-than-perfect data.

<sup>27</sup> Here are two possibilities. First, suppose that the Air Force buys two kinds of things. For the first, the number of contracts it writes is constant from year to year. For the second, the number of contracts it writes goes up and down. And suppose that the Air Force experiences a higher rate of protests for the first kind than for the second. If that were true, we would observe the pattern that the statistical analysis identifies. That said, one might reasonably expect that the rate of protests

- Within any year, the total number of protests has also risen as the number of competitive contract awards rose, but less than proportionally. The relationship here is closer to proportional than for total contract awards, but the value of the coefficient remains significantly below one. This implies some mechanism similar to that described above.
- Holding the total number of contract awards constant, the number of protests fell more than proportionately when the share of competitive contract awards rose, suggesting that competition has made protests less likely rather than more likely, as we had expected. This result is less robust and less significant than the other results reported here.
- Headquarters, product centers, and ALCs, defined as they were above, have similar experience with protests. These account for the lion's share of Air Force procurement. Technical centers, with about 5 percent of the total spend, have substantially better experience, with 45 percent fewer protests than normal for the Air Force. They are likely to have qualitatively different types of contracts and may sustain a different kind of culture within the Air Force. As noted above, there are probably useful lessons to be learned in technical contracting centers for the rest of the Air Force. We did not attempt to identify them during this study. Projection and other bases, with 24 percent of the spend, have substantially worse experience, with 75 percent more protests than normal for the Air Force. The operational contracts that predominate here are likely simpler, but the skill level of the acquisition workforce is also likely lower.
- Further efforts to identify the effects of larger or more complex acquisitions with expenditure per contract and share of C- and D-type contracts found no evidence to suggest that these factors affected the number of protests experienced.

### Factors Affecting the Number of Substantive Protests

Efforts to identify the factors that affect the number of substantive protests—protests that led to corrective actions or merit reviews—yielded qualitatively very similar findings. These efforts applied the same models. We simply changed the relevant dependent variable for each regression tested. Here are the statistically significant results that we observed robustly across alternative models, with all else being equal:

- From year to year, the total number of substantive protests has fallen 6 to 8 percent per year. This is presumably somewhat slower than for the total number of protests because the number of protests leading to dismissals and withdrawals without corrective action fell so much over the 1990s. But the fall in substantive protests has still been dramatic.

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would be lower for products that are regularly purchased in fixed quantities (since one would expect an established acquisition process to develop for such products) than for products for which acquisitions are highly variable from year to year. In any case, we cannot identify any attributes of things that the Air Force buys that would induce this to occur.

Second, suppose that, because GAO has fixed resources for investigating protests, it can investigate only a fixed number of protests each year. If the number of contract awards goes up in a year, the number of protests will also rise, but the number of merit reviews will not. As a result, the likelihood of a successful protest will fall, discouraging protests in the first place and so leading to a less-than-proportional rise in protests as the number of contract awards rises. We have no empirical evidence of such inflexibility at GAO and rapid learning among potential protesters. We have heard no mention of such inflexibility or learning in interviews. But a closer look might detect them both. We thank Paul Heaton for bringing this second possibility to our attention.

- Within any year, the total number of substantive protests has risen as the number of contract awards rose, but less than proportionally. The number of substantive protests is even further from proportionality than the total number of protests. But the distinction observed between total number of contract awards and number of competitive contract awards does not occur for substantive protests.
- Holding the total number of contract awards constant, the share of competitive contract awards has no effect on the number of substantive protests. This is consistent with the result reported immediately above.
- Headquarters, product centers, and ALCs, defined as they were above, have similar experience with the number of substantive protests. Technical centers again have substantially better experience, with 60 percent fewer protests than normal for the Air Force. Projection and other bases again have substantially worse experience, with 70 percent more protests than normal for the Air Force.
- Further efforts to identify the effects of larger or more complex acquisitions with expenditure per contract and share of C- and D-type contracts found no evidence to suggest that these factors affect the number of substantive protests experienced.

## ***“All Else Equal,” Several Factors Affect the Share of Corrective Actions in Total Protests***

- **Corrective actions have become more likely over time (sustained protests have not)**
- **Poorly crafted RFPs and faulty treatment of offerors have been more likely to result in corrective actions than other errors in source selection**
- **Corrective actions have occurred more often in acquisitions with more B-numbers**
- **Likelihood of corrective action has not differed much across types of contracting centers or products acquired**

Note: Results based on logistic regression of PACTS data on root B-numbers for 1991-2008, n = 2482. All significant results have  $\alpha = .05$  or better.

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GAO Bid Protests in Air Force Source Selections -21-

### **Factors Affecting the Likelihood of Corrective Actions in Response to Protests**

Another way to test whether various factors have affected Air Force experience with bid protests is to ask what factors affect the likelihood of some protest outcomes when a protest occurs. To do this, we used logistics regression, applied as an analysis of covariance to a dependent variable with a logistic distribution.<sup>28</sup> Because sustained protests and corrective actions appear to impose the largest costs on the Air Force when it experiences a protest, we applied this analysis in models that used as a dependent variable, alternatively

1. occurrence of a sustained protest
2. occurrence of a corrective action
3. occurrence of either a sustained protest or a corrective action.

In this analysis of covariance, we tested whether the following factors affected the likelihood that one of these outcomes occurred: (1) date, (2) type of commodity bought in the acquisition, (3) stated basis for the protest, (4) type of contract center, and (5) number of

<sup>28</sup> The results are based on 2,482 total protests and 1,059 substantial protests that occurred during FY 1991–2008. For detailed quantitative findings and a description of the details of how we did this, see Light et al., 2011.

B-numbers in the acquisition.<sup>29</sup> Using this method to “hold all else equal,” we developed rather limited results, including the following.<sup>30</sup>

When a protest occurred, a corrective action became steadily more likely as time passed. This effect was strongest in the 1990s. When starting with a substantive protest, the strong effect of time on corrective actions disappears. This suggests that, when a protest occurred, the likelihood of a substantive protest increased over time. This interpretation is consistent with the observation above that much of the improvement in the Air Force’s experience with bid protests, especially during the 1990s, was the product of more knowledgeable protesters who filed fewer protests that would be dismissed or withdrawn without corrective action.

Given either a protest or a substantive protest, the likelihood of a sustained protest did not change over time. This may be because sustained protest patterns have been too sporadic (and unimportant relative to corrective actions) to define comparable trends for them.

The basis for protest affected the likelihood of a corrective action, but identifying the exact effect is challenging. Given a protest, claims of a faulty RFP or faulty treatment of an offeror appear somewhat more likely than other claims to have led to a corrective action. Given a substantive protest, only the claim of a faulty RFP stands out as exceptional in its effect on the likelihood of a corrective action.

The effect of the basis of protest on the likelihood of a sustained protest is even murkier. Given a protest, a sustained protest was somewhat more likely when the basis of protest involved a faulty sourcing decision. In a faulty sourcing decision, the Air Force typically inappropriately excludes an offeror from a source selection or does not recognize the special status—for example, as a small business—that an offeror claims in a source selection. Given a substantive protest, any such effect disappears. This suggests that a faulty sourcing decision may have increased the likelihood of a substantive protest; stated differently, protesters have been least likely to file a protest in error when they have filed a claim of a faulty sourcing decision.

The likelihood of observing a corrective action rose as the number of B-numbers associated with the acquisition protested rose. We do not know why this occurred. Consider three possibilities:

- Suppose the number of B-numbers is completely exogenous to the outcome of a protest. That is, GAO chooses a number of dockets in a way that is unrelated to the likelihood that any of them will precipitate corrective action or lead to a sustained protest. If this occurred, GAO may have created more dockets to administer potentially more complex protests. If more complex protests posed higher risk to the Air Force, the correlation detected in our analysis may simply reflect an Air Force tendency to be more conservative in more complex protests.
- An exogenous number of protest grounds reflected in the multiple B-numbers in a single procurement could create the results detected in another way. Each filing of additional protest grounds may have given protesters an additional opportunity to get a sustainment.

<sup>29</sup> The analysis considered the following categories for each factor: (1) Date: two-year periods from 1991 to 2008. (2) Type of commodity: weapon, supply, construction, research and development, other service (based on commodity type identified in PACTS). (3) Basis of protest: faulty sourcing decision, faulty RFP, faulty evaluation, faulty treatment of offeror, other (based on basis of protest identified in PACTS). (4): Type of contracting center: headquarters, product center, air logistics center, technical activity, projection base, other base (defined as above).

<sup>30</sup> As noted above, we believe good data on the values of procurements and the reasons for voluntary corrective actions would have helped us generate better and more helpful results. Such data are not easily accessible.

If the GAO review process is somewhat stochastic, adding more protest grounds by additional filings might be seen as adding opportunities for GAO to rule in the protesters' favor on at least one of them. Knowing this, the Air Force could have preempted GAO merit review by volunteering corrective action more often as the number of protest filings rose.

- Suppose, on the other hand, that the number of B-numbers reflects, at least to some degree, GAO's interest in a protest, an interest that presumably rises as the likelihood of a merit review rises. In this case, the Air Force might have taken evidence of more B-numbers as evidence of higher GAO interest and, potentially, higher likelihood of significant costs or even a bad outcome in a merit review. In response, the Air Force might have responded to B-numbers by becoming more willing to offer corrective action.

These alternatives are not mutually exclusive. The highly significant correlation detected suggests that these deserve further attention.

Given either a protest or a substantive protest, the type of commodity bought and type of contracting center had no discernible effect on the likelihood of a sustained protest or a corrective action. Types of contracting centers are relatively well defined in our database; types of products acquired are not. So we have more confidence in the results for contracting centers than in those for products acquired.

The negative results for type of commodity and the murky results for basis of protest may reflect the quality of data in PACTS. Our review of the quality of PACTS data on both of these factors detected serious inconsistencies and irregularities that forced us to scrub the data thoroughly before application. For example, ways of defining bases of protest appear to have changed over time. And it is unclear how the person providing data to PACTS decided which of a list of bases of protest to use to label any one protest. Similar concerns apply to the data on type of commodity. These concerns point to likely data errors that reduce the likelihood that coefficients based on such data would be significant. We report these findings with caution and suggest that the effects of basis of protest and type of protest would benefit from additional attention.

Taken together, the results reported in this chapter sustain the positive picture developed in the first chapter of the Air Force's broad experience with GAO bid protests. The next chapter turns to a detailed analysis of two Air Force acquisitions with much less satisfactory outcomes.



## Protests Sustained in the CSAR-X and KC-X Source Selections

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### *Road Map*

- How source selections and bid protests work
- Patterns for bid protests during FY1991-2008
- **Protests sustained in CSAR-X, KC-X source selections**
- **Synthesis of findings**
- **Potential changes in policy or practice**

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GAO Bid Protests in Air Force Source Selections -22-

The CSAR-X and KC-X source selections both experienced sustained protests. These protests led to considerable negative publicity and seriously set back high-priority Air Force acquisition programs. Yet despite their perceived importance, we found no formal, publicly available comprehensive documentation published in a single place of what happened in these source selections.<sup>1</sup> The Air Force asked RAND to document both. In this chapter, we focus on the sustained protests and lessons that can be learned from them.

This chapter does not offer complete case histories of these two episodes. The source selections and protests for these two programs took place against a background of a wide variety of extremely complex and interrelated political, economic, military, bureaucratic, and other factors. A full accounting of what happened on each of these programs would require a

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<sup>1</sup> The Air Force and the contractors, of course, retain extensive internal documentation on these cases, but this material is source-selection-sensitive and proprietary and not available to the public. GAO published summaries of its specific decisions with all source selection and proprietary data excised. However, these summaries do not provide full and comprehensive accounts that place the programs in a wider program acquisition history and context. There is, of course, a vast amount of documentation available in numerous articles in the aerospace trade press, but most of this material focuses on specific news events as the story of the protests unfolded. None of them provide a comprehensive overview of the entire history of the protests within the context of the larger acquisition program histories.



book-length scholarly treatment. We focus on what we believe will be of greatest immediate importance to the Air Force—a thorough overview of the specific sustained protests on these programs, some background context, and our analysis of the key lessons the Air Force should take away from these specific experiences.

## ***Sustained CSAR-X Protests Added Delays to Long-Delayed Helicopter Replacement***

- **2001: AoA compares capabilities of existing candidates for new CSAR helicopter. USAF decides to buy 132 medium-lift aircraft.**
- **2005: CSAR-X acquisition begins.**
- **Nov 2006: Boeing wins. Lockheed-Martin (L-M) and Sikorsky protest.**
- **Feb 2007: GAO sustains one protest (#1) on USAF evaluation of cost.**
- **Mar 2007: USAF requests clarification; GAO denies all remaining merit protests.**
- **May 2007: USAF issues revised RFP. L-M protests. Sikorsky joins protest.**
- **Aug 2007: GAO sustains protest (#2) on USAF failure to take GAO's suggested corrective action.**
- **Jun 2009: USAF cancels CSAR-X program.**

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GAO Bid Protests in Air Force Source Selections -23-

## **Combat Search and Rescue Helicopter Program**

CSAR-X experienced two sustained protests, the second the direct consequence of the Air Force's failure to take appropriate corrective action to fully address the first. Each was technical in character but readily predictable if viewed from the right perspective.

These protests initially led to further delay in an already much delayed acquisition. In itself, this additional delay was small. But the first protest left the program office exhausted, depleted, and poorly prepared to respond to the second protest. Persistent delay ultimately left the program wounded and vulnerable to ongoing events elsewhere in DoD. When these events overtook the program, the Secretary of Defense asked the Air Force to redirect its priorities elsewhere, leaving the program effectively in limbo.

The CSAR-X program began as the Personnel Recovery Vehicle (PRV) program in the late 1990s. Between 1981 and 1997, the Air Force procured 112 Sikorsky HH-60G helicopters to fulfill the personnel recovery and combat search and rescue (CSAR) missions. By the end of the 1990s, the Air Force began serious consideration of a replacement program for the HH-60 because of a variety of factors, including mission performance shortcomings of the HH-60, declining numbers because of accidents and other losses, and the rapidly approaching end of the useful mission design life for the oldest HH-60s. In January 1999, ACC developed a Mission Need Statement (MNS) for a new PRV.<sup>2</sup> Initially there was widespread interest within the Air Force in procuring the Bell-Boeing CV-22 Osprey tilt-rotor aircraft to fulfill this mission, but ACC planned to conduct an AoA once the MNS was approved to determine the most

<sup>2</sup> "New Helicopters Possibly in Store for Enhanced Combat Search and Rescue," *Inside the Air Force*, February 12, 1999.

cost-effective solution.<sup>3</sup> The program remained in flux for many months as a variety of different options were considered, including combining the PRV requirement with a requirement for replacing the Presidential Helicopter (VXX Program), as well as all other U.S. Air Force helicopters. Because of the lack of budgetary resources and discussions over reorganization of CSAR assets the program moved forward slowly.

The Air Force completed its formal AoA in mid-2001, concluding that a larger number (at that time put at 132 aircraft, later changed to 141) of more capable medium-lift helicopters would be needed to meet the future PRV and CSAR missions. By this time, the CV-22 was increasingly considered too expensive for the larger number of platforms required.<sup>4</sup> Given budgetary restrictions, planners began focusing more on existing, previously developed platforms. Extensive market research was completed in August 2004. The AoA and market research suggested that existing platforms could serve as good baselines for the system, but significant modifications would be necessary.

Possible candidates examined in the AoA and market research included the Westland-Augusta EH-101, the Sikorsky S-92, the European Aeronautic Defence and Space Company (EADS) Eurocopter MH-90, and the Sikorsky H-60X upgrade proposal. Thus, it was thought likely that the PRV/CSAR missions could be fulfilled by modifications of existing platforms such as these, two of which had been developed by foreign contractors.<sup>5</sup>

Requirements documentation was thoroughly vetted and passed through the new JCIDS process. The MNS was validated and transitioned into a formal Operational Requirements Document (ORD), and validated by the Joint Requirements Oversight Council (JROC) in February 2004. In line with the new JCIDS process promulgated by the Joint Staff, the ORD was converted to a CDD through a rigorous procedure carried out from the summer of 2004 through June 2005.

The Air Force planned to begin the formal acquisition before the end of 2005. Initially, many observers believed that Sikorsky had the inside track on the competition with its commercially derived HH-92, because it was the incumbent contractor (having provided the existing PRV/CSAR HH-60 aircraft), and because the US 101 was a foreign-derivative helicopter. However, in January 2005, the Lockheed Martin–led EH 101 team surprised many in the defense press by winning the VXX Presidential Helicopter competition, leading many observers to speculate that the much larger PRV/CSAR contract would now be intensely competitive.<sup>6</sup>

This was indeed correct, in that a variety of factors during 2005 continued to delay the beginning of the acquisition program and led to an intensification of the competition. Congress temporarily cut funding for the PRV/CSAR program and urged DoD to speed up acquisition of a new helicopter. This could be accomplished by reducing PRV/CSAR program costs through a variety of measures, including greater focus on the acquisition of an off-the-shelf or

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<sup>3</sup> “CV-22 Likely to Take Over All Current Air Force Rotorcraft Missions,” *Inside the Air Force*, November 27, 1998.

<sup>4</sup> Increased individual platform capability could not be fully traded off without constraint against reduced procurement numbers. This was because the AoA analysis demonstrated that a specific number of aircraft were needed for full geographical coverage and tactical and operational reasons. See Bethany Scott, “Air Force Eyes Replacement for Aging Pave Hawk Helos,” *National Defense Magazine*, September 2001.

<sup>5</sup> In October 2001, Lockheed Martin announced its intention to enter into a joint agreement with Westland-Augusta to develop and market a version of the EH-101 (called the US 101) for the U.S. market.

<sup>6</sup> John Liang, “Wall Street Analysts Surprised by Lockheed Team’s Presidential Helicopter Win,” *DefenseAlert-Daily News*, January 31, 2005.

low-risk commercially derived aircraft requiring minimal development.<sup>7</sup> Congress attempted to impose special conditions on DoD for the competition, including certified independent cost estimates of development and production, as well as the requirement to fully document projected operating and support (O&S) costs. These conditions were included in the House Armed Services Committee program authorizations, which appeared in May, well before the Air Force issued its final RFP, thus alerting the Air Force to the extreme sensitivity of Congress to cost issues and the importance of accurate cost estimates, for both procurement and O&S.<sup>8</sup>

With no other major rotary-wing programs on the horizon, contractor competition for PRV/CSAR greatly intensified. The total potential program value was now estimated by industry observers to exceed \$10 billion to \$12 billion. Not surprisingly, the publicly perceived leading candidate teams, headed by Lockheed-Martin with its US 101 team and Sikorsky with its HH-97, redoubled their efforts. The competition rose to an even higher level of intensity in the summer of 2005 when Boeing entered the fray at the eleventh hour with a new and unanticipated competitive design.

In August, the Air Force formally changed the program name from PRV to CSAR-X, reportedly to emphasize the narrower scope of the program as merely an off-the-shelf helicopter replacement effort. Congressional actions and the new focus on mature technology and off-the-shelf solutions, which was ultimately explicitly mandated by the Senate version of the defense appropriations bill passed in October, effectively guaranteed the elimination of the Bell/Boeing CV-22 at that time as too costly and high risk.

In the spirit of supporting acquisition of a lightly modified existing platform, the Air Force conducted a non-developmental aircraft flight evaluation of the leading contenders during the summer. It was at this time, with the renewed emphasis on off-the-shelf solutions, that Boeing surprised the existing competitors by proposing a modification of veteran MH-47G Chinook, an existing platform already fully militarized with many of the subsystem capabilities required for the CSAR and already in use with the U.S. Special Operations Command. Consequently, as the only aircraft already in the U.S. military inventory and already militarized, many observers felt that Boeing with its HH-47 proposal had been able to pull off a last minute coup and pull ahead of the other two long-time leading contenders in response to the changed circumstances driven at least in part by Congress.<sup>9</sup>

The Air Force issued the final RFP on October 5, 2005, with submissions due by November 21. One year later, on November 9, 2006, the Air Force awarded the CSAR-X contract to Boeing for its HH-47 proposal. This was a Best Value Source Selection.<sup>10</sup> In assessing the four basic categories of evaluation factors (mission capability, proposal risk, past performance,

<sup>7</sup> Martin Matishak, "Pentagon Appeals Host of CSAR-X Changes Proposed by Lawmakers," *Inside the Air Force*, October 28, 2005.

<sup>8</sup> Martin Matishak, "Lawmakers Want Detailed Cost, Schedule Plans: CSAR-X Request Cut by \$42 Million, Stipulations Faced on FY06 Funding," *Inside the Air Force*, December 23, 2006.

<sup>9</sup> "CSAR-X Request Cut by \$42 Million, Stipulations Placed on FY06 Funds," *Inside the Air Force*, December 23, 2005.

<sup>10</sup> The FAR defines "Best Value" acquisition as one where "the expected outcome of an acquisition, in the Government's estimation, provides the greatest overall benefit in response to the requirement" (U.S. General Services Administration, Department of Defense, and National Aeronautics and Space Administration, 2005). (Includes Amendments from Federal Acquisition Circular [FAC] 2005-42 Effective June 16, 2010, FAC 2005-22 December 24, 2007.) 2.1-2. A Best Value Source Selection can be more specifically defined as "a process used in Competitively Negotiated contracts to select the *most advantageous offer* to the government by evaluating proposals based on specifically identified *non-pricing criteria as well as cost or price*." Loretta Shanks, "Best Value Source Selection," briefing, June 30, 2009.

and cost/price), the Air Force identified the most important discriminators as residing among the mission capability/proposal risk subfactors, and past performance. The Boeing proposal scored significantly higher than the other two competitors under the Block 0 performance subcategory,<sup>11</sup> although it was ranked as having the same risk as the Sikorsky submission.<sup>12</sup> The Air Force also ranked Boeing's submission higher than the Lockheed proposal under past performance but equal to the Sikorsky offering. On the matter of cost/price, GAO reported that the Air Force SSA determined that the cost/price category was not a significant discriminating factor, because the total estimated most probable life cycle costs (MPLCC, which included estimated O&S costs) for all three offerors were so similar.<sup>13</sup>

At the time, the defense press widely speculated that Boeing won at least in part because its existing MH-47G Chinook baseline for the HH-47 proposal would require the least amount of modification and development cost and risk to meet the CSAR-X requirements, especially for the initial Block 0 variant. In other words, it was widely thought that the Boeing submission best responded to the congressional budget and cost restrictions and other mandated requirements for an off-the-shelf solution.<sup>14</sup>

The Air Force debriefed Lockheed and Sikorsky on the source selection process and outcome on November 15. Only two days later, Sikorsky submitted a formal bid protest, followed by numerous supplementary grounds for protest. On November 20, Lockheed joined Sikorsky with an initial bid protest, also followed by multiple supplemental grounds for protest. GAO held the CSAR-X bid protest hearings in late January and followed with post-hearing comments and rebuttals. Depending on how they are tabulated, more than 100 grounds for protest were filed by the losing contractors during a period of several weeks following the initial protest. Of all these grounds for protest, GAO sustained only one, but that was sufficient to halt the program dead in its tracks. GAO sustained the protest on February 26, 2007.<sup>15</sup>

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<sup>11</sup> The CSAR-X program had adopted a two-phase evolutionary acquisition strategy for procurement of two basic blocks or versions of the aircraft to speed delivery of the initial aircraft to the user. The basic Block 0 version would have needed threshold capabilities, whereas the more advanced Block 10 version, which would be procured later in the program, would have considerably improved avionics and other equipment and capabilities.

<sup>12</sup> The Air Force assigned each mission capability subfactor rating its own risk factor rating.

<sup>13</sup> U.S. Government Accountability Office, 2007d.

<sup>14</sup> Graham Warwick, "Why Boeing's HH-47 Chinook Won the CSAR-X Competition," *Flight*, Flightglobal.com, October 11, 2006. However, under the official evaluation of the management/schedule subcategory, the Boeing proposal received the same overall risk evaluation as the other two contractors.

<sup>15</sup> According to several senior Air Force officials we interviewed, the two losers—Sikorsky and Lockheed Martin—had a great deal to gain by simply disrupting and delaying the procurement. By default, Sikorsky would become the winner if the Air Force could not buy the HH-47. It would be able to sell more UH-60 (Black Hawk) variants, at least in the interim. At the same time, these Air Force observers alleged that any additional time played in Lockheed Martin's favor. It would provide Lockheed Martin with an opportunity to submit a revised proposal to update its technical offering. None of this had anything to do with the life cycle cost (LCC) estimate. Thus, although the protest decision suggests that the problem was with the LCCs, some Air Force observers claimed that the real objective for the two protesting vendors was to delay the procurement if they could not win. These collateral motives of the two protesters are not discernible from the GAO decision. These assertions do not seem implausible to us, but we found no decisive evidence to conclusively support this interpretation.

## **Sustain # 1: USAF Failed to Follow RFP Criteria When Evaluating Costs**

- **RFP required detailed data on operating and support (O&S) costs, but noted USAF would calculate costs of Unit Mission Personnel, Training Munitions, and Indirect Support**
  - **Unit Mission Personnel and Indirect Support accounted for most of O&S cost totals**
  - **USAF used same totals for all three offerors based on Manpower Estimate Report (MER)**
- **L-M and Sikorsky protest: This violates RFP criteria.**
- **GAO: Request for detailed O&S cost data implied that USAF would calculate unique O&S costs for each proposal.**
- **USAF: (1) USAF has always used MER data to evaluate O&S costs. (2) USAF presented approach to offerors in briefings during source selection. (3) Issue is immaterial.**
- **GAO: (1) USAF evaluation did not follow RFP. (2) USAF should reopen discussions and reevaluate FPRs.**

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GAO Bid Protests in Air Force Source Selections -24-

GAO sustained one ground for protest, saying that the Air Force failed to follow the stated RFP evaluation criteria for calculating O&S costs in support of its estimate of MPLCC. Although this is clearly a key issue, it is important to note that a minute detail in the RFP led GAO to sustain the protest. In essence, one sentence in an attachment to Section L of the RFP permitted GAO to redefine how the Air Force should have calculated support costs. GAO argued that the RFP request for extensive maintenance documentation from each contractor implied that each competing aircraft platform proposal would be evaluated separately with respect to its own unique O&S costs in support of calculating MPLCC, which was one of four main evaluation factors. GAO concluded that the Air Force failed to follow this criterion. GAO's reasoning and the Air Force responses follow.

GAO noted that Section M of the RFP defined estimated O&S costs as part of the calculation of MPLCC for each of the competing systems.<sup>16</sup> However, Section M did not define how O&S costs were to be calculated. In addition, Section L of the RFP included an Attachment 13, which was an O&S Data Form. The "primary purpose" of this data form was "to capture all relevant CSAR-X O&S costs."<sup>17</sup> Attachment 13 noted, however, that the Air Force would itself calculate unit mission personnel, training munitions, and indirect support costs. However, neither Attachment 13 nor any other part of the RFP stated how the government planned to do this.

<sup>16</sup> U.S. Air Force, *Request for Proposal for the Combat Search and Rescue Recovery Vehicle (CSAR-X) System Development and Demonstration (SDD), CSAR-X Low Rate Initial Production (LRIP) and Initial Production Options*, Solicitation FA8629-06-R-2350, Wright-Patterson AFB, Ohio: Aeronautical Systems Center, 2005, §M.13.2.

<sup>17</sup> U.S. Air Force, 2005, § L Att. 13.



GAO concluded that, from these statements in Sections M and L of the RFP, it was reasonable for the offerors to assume that the unique costs for each offeror's aircraft proposal would be calculated separately and reflect the unique attributes of each offeror's design.

The bulk of the O&S cost totals for each aircraft was driven by the estimated unit mission personnel and indirect support costs. The Air Force ended up calculating the cost of unit mission personnel, or the primary base-level personnel and other support personnel required for each squadron, by using actual data from MERs from March 2006, which obviously reflected current maintenance concepts and manpower requirements for the existing HH-60 helicopter. As a result, the Air Force essentially calculated the same O&S costs for all three contractor proposals.<sup>18</sup>

In short, the methodology employed by the Air Force to evaluate the O&S costs as a component of the MPLCC did not take into account the unique cost-related capabilities of each offeror's design. Therefore, GAO concluded that the Air Force failed to follow the evaluation criteria in the FRP and thus sustained the protest.

During the process, the Air Force employed numerous arguments in an attempt to counter GAO's position. For example, the Air Force argued that the detailed O&S cost data and reliability and maintenance metrics requested by the RFP were not tied directly to calculation of the MPLCC but rather were associated with documenting whether the contractors' proposals met the performance and reliability thresholds and objectives laid out in the SRD. The Air Force also noted that the MER is the official baseline planning document for determining staffing levels and has been routinely used the same way in many other source selections. The Air Force further argued that at least one contractor was explicitly informed during an interim briefing exactly how the Air Force planned to use the MER to calculate O&S costs. Finally, the Air Force pointed out that, even if all the contractor arguments were accepted and the Air Force recalculated unique O&S costs for each offeror based entirely on contractor data (which the Air Force considered less than fully reliable), the result would not have dramatically changed the bottom-line overall cost/price evaluation for each contractor and, thus, would have had no material effect on the outcome of the competition.

In short, at the end of the day, the protest turned on specific technical language in an obscure part of the proposal that, in the view of GAO, implied an evaluation approach to one small part of the MPLCC estimate that the Air Force believed had no material effect on the outcome of the competition.

As a result of the sustainment of the protest, GAO recommended that "the Air Force amend the solicitation to clarify its intent with respect to the evaluation of O&S costs, reopen discussions with offerors consistent with our conclusions above, and then request revised proposals."<sup>19</sup>

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<sup>18</sup> The protesters argued that their aircraft were much newer designs and smaller than the Boeing MH-47 and thus would likely have lower operating, support, and maintenance costs. These advantages, they argued, were left out entirely by the Air Force methodology, thus unfairly affecting the source selection outcome.

<sup>19</sup> U.S. Government Accountability Office, 2007d.

## ***Sustain #2: USAF Improperly Prohibited Full Revision of Proposals***

- **USAF amended RFP to clarify:**
  - **USAF would base evaluation of Unit Mission Personnel and Indirect Support cost on MER data**
  - **USAF would use proposal-specific data to assess supportability elsewhere in evaluation**
- **Based on amended RFP, USAF moved to re-evaluate previously submitted proposals without revision**
- **L-M, then Sikorsky protested: If they had understood this approach, they would have offered different proposals**
- **GAO: Removal of proposal-specific O&S costs from cost evaluation was a material change**
  - **GAO precedent required that offerors should be allowed to revise their proposals.**
  - **GAO's suggested corrective action for first sustained protest still stood.**

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GAO Bid Protests in Air Force Source Selections 25.

For a variety of reasons, the CSAR-X system program office (SPO) and the Air Force acquisition leadership came under intense political and bureaucratic pressure following the GAO decision to sustain the protest. There were pressures within the Air Force from the user communities and elsewhere to minimize the delays to the program and get it moving quickly again. In addition, the long-anticipated KC-X competition began heating up in January 2007 when the Air Force issued its RFP for a new-generation aerial refueling tanker. The Air Force hoped to quickly and decisively resolve the CSAR-X protests before the battle lines were fully drawn up between Boeing and Northrop Grumman/EADS over the tanker competition, a competition that was expected to be highly contentious.

Both the CSAR-X and the KC-X competitions were becoming politicized as the country entered into the midst of the presidential primary season. Key senators involved in the presidential primaries had a direct interest in each of the three competitors for CSAR-X.<sup>20</sup> Senator Hillary Rodham Clinton held high visibility hearings on the program in early March, vigorously questioning Secretary of the Air Force Michael Wynne and Air Force Chief of Staff General Michael Moseley about the Air Force approach to the CSAR-X source selection. The Under Secretary of Defense for Acquisition, Technology and Logistics (USD[AT&L]) held a major press conference emphasizing the need to rapidly resolve the protests and get the program back on track. As one respected political journal rightly summed up at the time, the GAO ruling sustaining the protests came “after months of heated controversy and increased congressional

<sup>20</sup> Senator Hillary Clinton (D-NY), who was a leading candidate for the Democratic presidential nominee, and powerful Senator Charles Schumer (D-NY) both took a direct interest in the competition, since the Lockheed US 101 would be assembled in New York state. Two other powerful senators, Joe Lieberman (D/I-CT) and Chris Dodd (D-CT), were strong supporters of the Sikorsky S-92, which was built in Connecticut. Leading Republican Senator Arlen Specter supported the Boeing design, which would be built in his home state of Pennsylvania.



scrutiny over the Air Force's decision to choose Boeing's CH-47 Chinook as the new combat search-and-rescue helicopter."<sup>21</sup> The sustained protest made the political background environment only more challenging. Although CSAR-X SPO personnel told us that they were never subjected to any kind of inappropriate political pressure of any type from anybody either inside or outside the Air Force, they nonetheless had to conduct their work against the backdrop of a highly charged political arena.

Not surprisingly, the Air Force adopted a position of trying to resolve the protests as expeditiously as possible and avoid any precedents that could come back to haunt the Air Force on other programs such as KC-X. One of the earliest actions the SPO took was to seek reconsideration from GAO regarding the multiple additional issues raised by the two protesters and on which GAO had not directly ruled. The Air Force requested reconsideration in early March. By the end of the month, GAO had replied that it found no additional basis for sustained protests based on reviewing the other issues raised by both Lockheed and Sikorsky.<sup>22</sup>

With this finding in hand from GAO, the Air Force decided to revise the RFP and limit changes to the single issue sustained by GAO in the first protest. The goal was twofold: to clarify the original Air Force evaluation approach to O&S costs within the MPLCC estimate evaluation and provide a non-quantitative means for the offerors to incorporate claims for potential maintenance manpower efficiencies into the fourth evaluation factor on cost/price.

The Air Force released RFP Amendment 4 implementing these objectives on May 29, 2007, and called for the submission of new proposals by June 19. Amendment 4 made only minimal changes to the RFP in response to the strategy laid out in the paragraph above. It stated that O&S costs would still be part of the MPLCC evaluation for each aircraft. However, Amendment 4 explicitly stated that unit mission personnel and indirect support costs would be calculated by the Air Force and would be based on the March 2006 MER for all offerors. In other words, O&S costs would be determined by the current manning requirements of the HH-60 and would be essentially identical for all three of the competing offerors' design proposals. The Air Force reasoned that GAO had never directly rejected this approach but rather had only ruled that it had not been consistent with the implied evaluation criteria found in other parts of the original RFP. The Air Force therefore made its original assumptions and approach explicit.

However, the original GAO sustainment had been critical of the failure of the Air Force to take into account the potential support efficiencies of the newer and smaller designs offered by the protesting competitors. Therefore, Amendment 4 permitted the offerors to document the unique potential efficiencies in maintenance tasks and reliability of their proposed designs. However, this documentation would be evaluated separately from the MPLCC evaluation and presented separately to the SSA.

Most important, the amended RFP did not permit any other changes to the original proposals, regarding either other cost/price factors or any other areas of the offerors submissions.

A little more than a week after the Air Force released the revised FRP with Amendment 4, Lockheed-Martin filed a new protest, followed shortly thereafter by additional grounds for protest as well as new grounds for protest from Sikorsky. Once again the SPO was inundated with grounds for protest and documentation requirements.

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<sup>21</sup> Roxana Tiron, "GAO Rules in Favor of CSAR-X Protesters," *The Hill*, August 30, 2007.

<sup>22</sup> U.S. Government Accountability Office, 2007e.

On August 30, 2007, GAO announced that it was once again sustaining one of the offerors' grounds for protest.<sup>23</sup> GAO ruled that the Air Force had materially modified the criteria for evaluating O&S costs with Amendment 4 but had unreasonably prohibited all other changes to the offerors' submissions. GAO reasoned that the explicit removal by the Air Force of unique cost efficiencies from the MPLCC evaluation criteria (by explicitly stating its original approach) was a material change to the RFP. Given this material change, the offerors could reasonably expect to be able to revise other aspects of their proposals to compensate for this change. For example, according to GAO, the offerors might have wanted to make changes in such areas as technical approach, schedule, and pricing to compensate for their inability to include potential cost efficiencies in the O&S cost/price evaluation subfactor under Amendment 4 rules. By materially altering the RFP criteria, GAO concluded, the Air Force was required to permit modification of any and all aspects of the offerors' proposals. Since the Air Force explicitly prohibited this, GAO sustained the protest.

It is interesting to note that GAO did not sustain the offerors' protest against the O&S cost evaluation ground rules and assumptions themselves. The offerors once again argued that the Air Force evaluation criteria minimized the potential O&S efficiencies of the offerors' newer and smaller aircraft proposals by requiring the use of the MER based on the older HH-60 data. The Air Force argued that it had to focus on maximum support staffing that might be required during a crisis or wartime situation to determine cost risk. The offerors focused on the lower total maintenance man-hours normally required using standard procedures. GAO rejected this protest, in spite of its criticism of the Air Force approach in the initial appeal and sustainment. GAO concluded that the Air Force emphasis on maximum wartime manpower cost risk was not an unreasonable approach and thus rejected the offerors' protest in this area.

In the wake of the second sustained protest, the Air Force conducted numerous reviews of the program and the RFP, issuing three additional RFP amendments, and prepared to issue a new RFP in the second half of 2009. However, on April 6, 2009, Secretary of Defense Robert Gates held a press conference and directed the Air Force to terminate the CSAR-X program and reevaluate the requirement within a joint force context. Secretary Gates observed that the CSAR-X program had a "troubled acquisition history" and noted that DoD needed to review the requirement to determine whether the mission required a "specialized" aircraft or whether it should be "a joint capability" (that is, implemented by all the services together).<sup>24</sup> According to one Air Force-oriented journal, such a study by DoD "not only threatens the Air Force's long-standing role as the CSAR specialists, but also complicates the already challenging task of maintaining the dedicated Air Force rescue forces. . . . Air Force leaders had been expected to announce the winner of the second CSAR-X competition in the summer of 2009. Now they must wait to see what the study ordered by Gates determines. . . ." In short, the Air Force's inability to successfully counter the two CSAR-X protests had contributed directly to the cancellation of the program and led to the possibility that the Air Force would lose not only a new platform but also an entire mission area.<sup>25</sup>

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<sup>23</sup> U.S. Government Accountability Office, 2007c.

<sup>24</sup> Mark V. Schanz, "Gates Hits Reset Button on CSAR-X," *Air Force Magazine*, April 7, 2009.

<sup>25</sup> Otto Kreisher, "Is CSAR Really Nothing 'Special?'" *Air Force Magazine*, November 2009.

## ***CSAR-X Protesters Filed 100+ Grounds for Protest Following Source Selection Decision***

- **GAO denied all but one, usually without explanation.**
- **“Shotgun” approach nearly overwhelmed relatively small, inexperienced SPO staff**
- **Grounds for protest came in coordinated waves, each based on responses to the last**
- **SPO had little insight into which of these to take seriously**
- **Same grounds for protest appeared in second round, despite earlier GAO denial**

RAND

GAO Bid Protests in Air Force Source Selections -26-

The CSAR-X experience demonstrates the potentially serious negative consequences for the Air Force of sustained protests on Major Defense Acquisition Programs. These can range from public embarrassment and serious delays in delivering needed capabilities to the warfighter, to outright cancellation of programs and even the loss of control over mission areas. Therefore, it is extremely important for the Air Force to fully understand the environment surrounding protests and the lessons learned for the future. What follows are some specific observations relevant to the CSAR-X case.

First, the SPO was deluged with well over 100 specific grounds for protest. The vast majority of grounds for protest in this source selection were given no visibility outside the source selection and have never been fully documented. The immediate participants cannot even agree on how many there were. Protesters were never required to enumerate them in a formal way.

There is agreement on the following: The grounds for protest came in waves. The Air Force had to respond to each wave, often by providing GAO and the protesters with massive documentation to justify its responses. More documentation always led to more grounds for protest.

These protest waves appear to have been preplanned. So many grounds were clearly inappropriate that it is strongly tempting to infer that the protesters used a shotgun strategy with two goals in mind: (1) Try lots of things and hope that one would stick, and (2) overwhelm the program office, making it more likely that the Air Force would falter and at least one would bring success from the protesters' perspective.

The government team was relatively small and inexperienced and had to respond extremely rapidly to a very large number of highly complex issues and arguments. By January 2007, the

protesters almost overwhelmed the CSAR-X SPO just by sheer volume. The offerors' third-party litigation teams had done source selection protests numerous times, and SPO staff was doing it for the first time.<sup>26</sup>

Of the grounds for protest received, there was little strong agreement within the program office on which were most likely to gain traction with GAO and hence which deserved the most attention. Everyone was surprised by the specific ground for protest upheld in the first round, especially relative to others that appeared more likely to be selected by GAO.

The protesters used a similar approach in the second protest, actually offering many of the same grounds for protest that GAO had denied in the first round. In our view, such behavior appears to come very close to fitting GAO's definition of "frivolous" protests that might be worth actively discouraging.

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<sup>26</sup> As with much of the material in this chapter, the material in this paragraph is based on interviews with individuals close enough to the source selection to base these observations on their own personal knowledge.

### ***Other Observations on CSAR-X***

- **Initial sustainment resulted from a simple inconsistency in RFP language**
  - **Any ambiguity opens the door for GAO to ask what a “reasonable” approach would be.**
  - **But when explained in amended RFP, GAO accepted an approach it had questioned earlier.**
  - **Close technical scrub of RFP could have caught this; vetting by high-level, experienced experts probably not.**
- **Second GAO sustain occurred despite thorough, high-level USAF vetting of amended RFP**

RAND

GAO Bid Protests in Air Force Source Selections -27-

A second major observation is that the protest that GAO chose to uphold in the first round arose from ambiguity about how the Air Force would estimate costs, which in turn gave GAO an opening to interpret what a reasonable approach to cost estimation should be. Only an extremely rigorous and thorough line-by-line review of the entire RFP and associated documentation could have detected this ambiguity. But it is precisely just such an in-depth and thorough review that the protesters appear to have used to identify candidate protests. We might posit that they sought the most vulnerable spot in the Air Force defense and targeted that for effect.<sup>27</sup>

By itself, the first protest did not clarify how much corrective action the Air Force would have to take to move forward. GAO ultimately responded to an Air Force request for clarification through reconsideration by ruling that GAO had found no other valid grounds for protest in the Air Force execution of its source selection. In effect, it approved all other elements of the Air Force approach.

Once GAO confirmed that no other issue raised by the protesters had merit, the Air Force believed it was free to determine the appropriate way forward by addressing only the sustained issue.<sup>28</sup> The Air Force considered a full range of options for approaching the new competition following the original sustained protests and eventually elected to use a higher-risk strategy for the follow-on competition. The reasons for this decision are a bit complex.

<sup>27</sup> In an interaction with two players, such as the Air Force and the protesters, such a strategy allows the protesters to maximize the minimum payout they earn from the game. In our setting, such a strategy leads them to look for the places where the Air Force is weakest and target those places for special attention. The protesters have to prevail on only a single point to have GAO sustain a protest.

<sup>28</sup> This discussion draws on interviews with several Air Force officials with direct knowledge of the events described here. They also provided some primary documents that support the account given here.

During the course of the protest, a significant amount of technical information regarding the competing CSAR-X offers had been released, through legitimate redacted releases, the debriefing of the unsuccessful offerors, and anonymous leaks in the trade press. The technical information in the public domain tended to be from the successful offer. There was significant concern within the Air Force that the unsuccessful offerors could be given an inappropriate advantage as a result of these disclosures if they had an opportunity to use this new information to revise their offers. Both unsuccessful offerors made it extremely clear, by both management and counsel communication, that they were fully prepared to delay the source selection with further litigation, should the program office choose to attempt to level the playing field (i.e., by providing the successful offeror with information regarding the unsuccessful offers equivalent to that they had received on the successful offer). Additionally, after the reconsideration decision, pressure built within the Air Force to quickly address the GAO decision and move this critical program forward.

The Air Force wanted to move forward quickly while mitigating the potentially negative effects of the leaks on the competition. Among the many options considered, a simple way forward presented itself: (1) Clarify that the Air Force would estimate the costs of military manpower included in the MPLCC factor based on its own cost information, contained in the MER. (2) Add a separate factor that would reflect each offeror's information on the manpower required to support its proposed aircraft, and have the source selection weigh this information subjectively and separately from the information on MPLCC. (3) Ask offerors to adjust their proposals to reflect these changes without changing the characteristics of the aircraft they offered. This solution addressed GAO's immediate concerns, limited the losers' ability to benefit from using leaked information to improve their offers, and allowed a quick response that would speed the source selection forward.

It was clearly attractive, but Air Force attorneys cautioned the leadership that it was also risky. GAO could overrule the Air Force effort to prevent the offerors from responding more fully. The Air Force's review of relevant precedent told the attorneys that this risk was acceptable. GAO had ruled earlier that "details of implementing recommendations of our Office are within the sound discretion and judgment of the contracting agency. Partnership for Response and Recovery, B-298443.4, Dec. 18, 2006, 2006 CPD para. 3 at 3." But GAO typically favored implementation that did not constrain offerors' ability to respond to amendments of the RFP. In one earlier case, GAO offered only two circumstances in which it would not require an agency to allow this: "The agency offers evidence [1] that the amendment could not reasonably have any effect on other aspects of proposals, or [2] that allowing such revisions would have a detrimental impact on the competitive process. Cooperativa Muratori Riuniti, B-294980.5, July 27, 2005, 2005 CPD para. 144 at 7." The Air Force built a case for constraining responses based on both grounds for exemption.

On the first point, the Air Force argued that the protesters had already optimized their aircraft to save maintenance manpower. The new source selection factor would now give them a clear way to reflect that optimization in their individual proposals. Why should they change the designs they proposed? On the second point, leaks had given the unsuccessful offerors extensive technical knowledge about the winner. Allowing complete proposal revisions would have a detrimental effect on the competitive process and jeopardize the integrity of the source selection process. The Air Force believed the limited reopening corrective action was firmly based in prior GAO precedent and on careful examination of the context of the original decision and a close reading of GAO case law.



On April 20, 2007, the Assistant Secretary of the Air Force for Acquisition was briefed on this potential corrective action. She had previously been briefed on a wide range of potential actions and in light of the reconsideration decision had asked for more details on this action. This briefing included an analysis of the various risks involved in choosing this path forward. Of particular note, all risks were designated as “low” except for limiting re-proposals. That risk was briefed as “low-moderate,” but the verbal briefing went further. It was specifically stated that the protesters would focus almost all their effort and time on that particular issue and thus the risk might be higher. The briefer specifically stated that the re-proposal issue would be “the protester’s Little Bighorn and Alamo rolled into one.”

The decision to limit revisions of proposals was a corporate decision believed at the time by all involved to be in the best interests of the Air Force and the course of action most likely to preserve the integrity of the source selection process. According to our interviewees, senior Air Force leaders had a clear understanding of the risks associated with the chosen approach. They understood at the time that restrictions on the offeror’s ability to respond to the amended RFP would be almost the sole focus of any further protests and they would fight very hard.

GAO disagreed with the Air Force assessment in two qualitatively different ways. First, the protesters both claimed that they would have changed the designs they had offered if they had been allowed to reflect the lower priority the Air Force now appeared to give aircraft maintenance requirements. In effect, they argued that they had optimized against one set of criteria in the original RFP and would have optimized differently if they had known the criteria offered in the amended RFP. The Air Force did not refute these claims to GAO’s satisfaction.

Second, GAO cited precedent that materiality by itself required that the Air Force not constrain how the offerors responded to the amended RFP:

It is fundamental that, where an agency materially changes the solicitation’s evaluation scheme, offerors must be given a reasonable opportunity to respond to the revised scheme; otherwise, the statutory requirement to notify offerors of the criteria upon which their offers will be evaluated is meaningless. Dept. of Commerce—Request for Modification of Recommendation, B-283137.7, Feb.14, 2000, 2000 CPD para. 27 at 3. In these circumstances, we conclude that the Air Force, having materially altered the methodology for evaluating O&S costs, was therefore required to permit offerors to revise both the cost/price and non-cost/price aspects of their proposals in response to the new evaluation scheme.

This precedent from 2000 basically argued that, in the presence of a material effect, it is irrelevant whether an offeror’s full response to the amended RFP would compromise the integrity of the source selection. Only materiality matters.

Thus, the highest-risk approach was selected for a variety of complex but justifiable reasons but proved to be a mistake given GAO’s ultimate response.

Next, we turn to the largest and best known of the recent major high-profile protests recently filed against the Air Force: the KC-X program.

## ***Sustained KC-X Protests Added Delays to Long-Delayed Tanker Recapitalization***

- **2003-04: USAF attempts to lease new tankers from Boeing and fails.**
- **2004-06: AoA clarifies tanker options, delays competition.**
- **2006: USAF formally initiates KC-X program.**
- **Sep 2006: USAF issues draft RFP.**
- **Feb 2008: Northrop Grumman (N-G)/EADS wins. Boeing protests.**
- **Jun 2008: GAO sustains multiple grounds for protest (#1-8), denies the remainder.**
- **Sep 2008: SecDef terminates competition, defers to next administration.**
- **Late 2009: USAF issues amended draft final RFP.**

RAND

GAO Bid Protests in Air Force Source Selections -28-

### **Aerial Refueling Tanker Aircraft Program**

The KC-X program emerged from a long, convoluted, and difficult series of events stretching over a decade or more. At least as far back as the conclusion of the first Gulf War in early 1991, government airpower experts and aircraft manufacturers began seriously examining possible options for replacing the Air Force's aging fleet of KC-135 aerial refueling tankers, because of rising support costs and declining reliability.<sup>29</sup> As early as July 1992, Boeing publicly discussed the use of the Boeing 767-200ER as the baseline for a new KC-135 replacement.<sup>30</sup> While recognizing the need for replacing or upgrading the tanker aircraft, the Air Force initially focused on other higher-priority procurements during a period of very constrained budgets. In 1996, this began to change, however, when GAO published a report critical of AMC's decision to defer replacement of the KC-135 until the 2013 time frame, because of the growing costs of maintaining and operating the aging aircraft.<sup>31</sup>

Beginning in March 2000, Boeing established a special business unit and began lobbying Congress and actively marketing the 767 tanker to the U.S. and foreign governments. This marketing activity became particularly urgent to Boeing in a commercial sense in view of the severe downturn in commercial aircraft sales after 2000 and the looming prospect of having

<sup>29</sup> The Boeing KC-135, based on the Boeing 707 airliner design, first entered Air Force service in 1957.

<sup>30</sup> Congressional Research Service, *The Air Force KC-767 Tanker Lease Proposal: Key Issues for Congress*, Washington, D.C.: The Library of Congress, RL32056, updated September 2, 2003.

<sup>31</sup> U.S. General Accounting Office, *U.S. Combat Air Power: Aging Refueling Aircraft Are Costly to Maintain and Operate*, GAO/NSIAD-96-160, Washington, D.C., August 1996. Also see Amy Butler, "Air Force Mulling Replacement for Aging, Maintenance-Needy KC-135," *Inside the Air Force*, May 4, 2001.



to shut down the 767 commercial airliner production line. Congressional pressure increased on the Air Force. For example, in September 2001, Representative Norman Dicks (D-WA), a member of the Defense Subcommittee of the House Appropriations Committee, held a press conference where he announced that he planned to “insert an amendment into a defense appropriations bill to jump-start the Air Force’s purchase of hundreds of Boeing 767 tankers.”<sup>32</sup> Dicks represents Washington’s 6th Congressional District, which includes Boeing’s main commercial aircraft assembly plant at Everett where the 767 was assembled.

In 1999, AMC formally began examining options for replacing the KC-135 in its *Air Mobility Strategic Plan 2000*.<sup>33</sup> By October 2000, AMC had begun to draft a MNS for a future aerial tanker. In February 2001, several tanker requirements studies were undertaken. The same month, Boeing made an unsolicited offer to sell thirty 767 tankers to the Air Force as a stop-gap measure pending completion of a formal AoA.<sup>34</sup>

Following the September 11 terrorist attacks, OSD established a special leasing panel to review leasing options to rapidly procure needed capabilities in support of the war on terrorism and other new priorities. By the end of the year, the Secretary of the Air Force revealed that the service was discussing a deal with Boeing to lease one hundred 767 tankers. The justification for leasing was to save money and time to bring the needed capability into the force structure as quickly as possible and with the least up-front cost. Things now moved quickly. By January 2002, special emergency congressional legislation in response to the September 11 attacks authorized the one hundred 767 tanker lease program with a contract award planned for June 2002.<sup>35</sup>

As detailed negotiations progressed between the Air Force and Boeing over the lease of the one hundred 767 tankers, skepticism and outright opposition to the deal grew in Congress and elsewhere, largely driven by growing concerns that the lease would cost more than an outright purchase and that the Air Force had not fully evaluated its requirements or conducted a thorough analysis of alternatives. Some critics believed that the proposed leasing deal violated acquisition regulations, did not contain adequate cost transparency, and undermined congressional oversight. Finally, other critics were opposed to the lease proposal because it lacked competitive bids and was essentially a sole-source contract.

Throughout 2002 and 2003, a complex and convoluted history of congressional hearings; various studies conducted by GAO, federally funded research and development centers, and other organizations; ongoing negotiations between the Air Force and Boeing; and continued Air Force development of the ORD combined to delay the award of the leasing contract. One

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<sup>32</sup> Katherine Pflieger, “Lawmakers Consider Air Force as Boeing Commercial-Plane Customer,” *Associated Press Newswires*, September 30, 2001, quoted in Congressional Research Service, 2003.

<sup>33</sup> Amy Butler, “Air Mobility Command to Begin Search for KC-135 Tanker Replacement,” *Inside the Air Force*, December 17, 1999; U.S. Air Force, *Air Mobility Strategic Plan 2000*, Scott Air Force Base, Ill.: Headquarters, Air Mobility Command.

<sup>34</sup> Boeing won a contract to build four 767 tankers for the Italian Air Force in April 2000. A similar contract for four tankers was later signed with Japan.

<sup>35</sup> U.S. Department of Defense, Inspector General, *Acquisition of the Boeing KC-767A Tanker Aircraft*, D-2004-064, Washington, D.C., March 29, 2004.

of the most important of these studies was a GAO study, which concluded that a lease agreement would cost more than outright procurement.<sup>36</sup>

In view of these study findings and other concerns, Congress and outside observers continued to sour on the proposed leasing agreement. In November 2003, Congress amended the original 100 aircraft leasing deal in the new National Defense Authorization Act for Fiscal Year 2004, calling for the outright purchase of 80 of the 100 KC-767As using a multiyear procurement approach.<sup>37</sup> At the beginning of February 2004, the Deputy Secretary of Defense requested a Defense Science Board study of the KC-135 to reassess the requirement. Three weeks later, the acting USD(AT&L) directed the Air Force to conduct an aerial refueling AoA. DoD then placed the lease contract negotiations on hold, and the Deputy Secretary of Defense requested that the DoD Inspector General (IG) review the program. The DoD IG 169-page report, released in March 2004, found that the Air Force had “used an inappropriate procurement strategy and demonstrated neither best business practices nor prudent acquisition procedures” in its negotiations of the KC-767A program.<sup>38</sup>

The outcome of the DoD IG review, combined with a burgeoning new acquisition scandal within the Air Force, led to the demise of the KC-767A tanker lease program. The IG review was in part a response to growing allegations of a major Air Force procurement scandal. The allegations became fact in April 2004, when a former senior Air Force acquisition official pleaded guilty to criminal conspiracy. The official, Darleen Druyun, had been Principal Deputy Assistant Secretary of the Air Force for Acquisition and Management and had been the lead negotiator on the 767 tanker lease deal. In November 2002, she had announced she was leaving the Air Force for a job as deputy general manager of Boeing’s missile defense systems. Increasing allegations about alleged improprieties led the Air Force to place the 767 lease deal on hold in December 2003.<sup>39</sup> Druyun later admitted in the plea agreement to, among other things, having agreed to a higher price than was appropriate in the Boeing 767 lease deal to cement her relationship with her future employer.<sup>40</sup> CBS news called it “the biggest Pentagon scandal in 20 years.”<sup>41</sup>

The net effect of the congressional controversy and increased scrutiny over the lease program, the multiple delays, the findings of the IG investigation, and the revelations of the Air Force acquisition scandal were profound. Because of the much-increased critical scrutiny by Congress and GAO under which the program now had to operate, an open, fair, and transparent competition for outright procurement, rather than a sole-source award for a lease, now became an imperative. To control costs, the aerial tanker would, of course, have to be based on an existing commercial airliner and to ensure competition, that meant including the only other remaining credible competitor in the world, foreign-based EADS.

<sup>36</sup> U.S. General Accounting Office, *Military Aircraft: Observations on the Proposed Lease of Aerial Refueling Aircraft by the Air Force*, GAO-03-923T, Washington, D.C., September 4, 2003.

<sup>37</sup> U.S. General Accounting Office, *DoD Needs to Determine Its Aerial Refueling Aircraft Requirements*, GAO-04-349, Washington, D.C., June 2004.

<sup>38</sup> U.S. Department of Defense, Inspector General, 2004, “Executive Summary.”

<sup>39</sup> John A. Tirpak, “Tanker Twilight Zone,” *Air Force Magazine*, February 2004.

<sup>40</sup> George Cahlink, “Ex-Pentagon Procurement Executive Gets Jail Time,” *Government Executive*, October 1, 2004.

<sup>41</sup> Rebecca Leung, “Cashing In for Profit? Who Cost Taxpayers Billions in Biggest Pentagon Scandal in Years?” CBS News, January 5, 2005.

Maintaining the ongoing interest of offerors who would be using preexisting aircraft designs with well-known capabilities created deep tensions that persist to this day. We comment further on this below.

The competition for a new tanker was further delayed by an AoA that ended up shaping the subsequent competition in a number of ways. For now, perhaps the most important point is that the delay itself heightened the Air Force's desire to complete the source selection as rapidly as possible, creating schedule concerns that the Air Force has since concluded contributed to the sustained protests to come. To complicate matters further, the tanker program had now slipped to a point where it overlapped with another very-high-profile competition, which has already been discussed, the CSAR-X program.

The KC-X AoA was ultimately carried out by the RAND Corporation and completed in March 2006.<sup>42</sup> The RAND AoA concluded that a fleet of new medium to large aerial tankers based on modified commercial-derived passenger aircraft would be the most cost-effective solution to the KC-X requirement. The earlier DoD IG program review (March 29, 2004) as well as congressional hearings and GAO testimony had made it clear that the KC-X program had to be a free and open competition.

In April 2006, the USD(AT&L) signed a memorandum authorizing the Air Force to resume the formal KC-X acquisition process. The KC-X program office issued the final RFP to contractors on January 30, 2007, for the procurement of 179 tankers.<sup>43</sup> Boeing responded to the RFP with the KC-767, a design based on several different variants of its commercial 767 passenger airliner, rather than a copy of its existing KC-767 tanker for foreign customers.<sup>44</sup> EADS, teamed with U.S. contractor Northrop Grumman, offered its KC-30 (later changed to KC-45) based on a modification of the Airbus A330 airliner.<sup>45</sup>

The Air Force announced on February 29, 2008, that the Northrop Grumman/EADS team had won the competition. This decision was viewed by the press as a "stunning upset,"<sup>46</sup> since Boeing "was widely expected to win the contract."<sup>47</sup> Less than two weeks later, Boeing filed a bid protest with GAO. In a decision viewed by many observers as almost as surprising as the original selection of the Northrop Grumman/EADS team, GAO announced on June 18, 2008, that it had sustained Boeing's protest.

On July 9, 2008, the Secretary of Defense announced the cancellation of the KC-X contract award to Northrop Grumman/EADS because of the GAO decision. Secretary Gates then stated that a new competition would take place, with a new contract award expected in December. In a telling blow to the Air Force, Secretary Gates also announced that the authority to conduct the new source selection would be taken over directly by the Department of

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<sup>42</sup> Michael Kennedy, "Analysis of Alternatives for Recapitalizing the U.S. Air Force KC-135 Aerial Refueling Tanker Fleet," Santa Monica, Calif.: RAND Corporation, unpublished research, 2006.

<sup>43</sup> This was planned to be the first of three equal buys stretching out over many years (U.S. Department of Defense, Inspector General, *Air Force KC-X Aerial Refueling Tanker Aircraft Program*, D-2007-103, Washington, D.C., May 30, 2007).

<sup>44</sup> Critics of the Boeing proposal labeled the aircraft the "Frankentanker." See Rami Grunbaum, "Opponents Call Boeing's Plane 'Frankentanker,'" *The Seattle Times*, January 27, 2008.

<sup>45</sup> For simplicity, we will refer to this proposed system throughout as the KC-45.

<sup>46</sup> Leslie Wayne, "U.S.-Europe Team Beats Out Boeing on Big Contract," *New York Times*, March 1, 2008.

<sup>47</sup> Jeff Bailey and David M. Herszenhorn, "Boeing Says It Will Protest Tanker Deal," *New York Times*, March 11, 2008.

Defense and placed under the Under Secretary of Defense for Acquisition.<sup>48</sup> However, at the end of the summer, the Secretary of Defense decided to delay the new competition until after the presidential elections in November to permit the new president's team to decide how to proceed. The new competition for the KC-X ultimately did not begin until September 2009, with a contract award expected in the summer of 2010. Thus, the sustained protest had delayed the program at least an additional year and a half and had led to the third attempt in seven years to begin acquisition by the Air Force of a new aerial refueling tanker.

The 2008 KC-X source selection protest resulted in eight sustained grounds for protest and two additional decisions on procedure that went against the Air Force. This large number of negative decisions is unusual in a single GAO protest decision, leading some to speculate that, once GAO decided to sustain one ground for protest, it added on others to make its decision unassailable.<sup>49</sup> If this occurred, it is very unusual, at least among the GAO decisions we examined in detail.

An overview of the eight principle sustained grounds for protest is presented below.

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<sup>48</sup> Marcus Weisgerber, "Gates Reopens Tanker Competition, Shifts Authority from Air Force," *Inside the Pentagon*, August 10, 2009.

<sup>49</sup> Several knowledgeable people we interviewed offered this interpretation.

## **Overview Points to Misunderstanding of GAO, Lack of Discipline, Poor Costing Methods**

Sustainment	Basis for GAO Decision	Apparent Source of Failure
1. Evaluation of requirements achieved	Evaluation inconsistent with RFP	Poorly framed requirements in RFP
2. Evaluation of refueling capacity	Evaluation inconsistent with RFP	Inconsistent language in RFP
3. Evaluation of compatibility	Inadequate documentation	Failure to close out EN clearly
4. Unequal treatment on operational utility	Unequal treatment	Misunderstanding of GAO rules
5. Organic depot support requirement	Unreasonable evaluation	Incomplete preparation of SSAC, SSA
6. Estimation of MILCON costs	Unreasonable cost estimation	Mismatch between RFP and evaluation; inadequate costing methods
7. Addition of non-recurrent costs	Failure to comply with administrative rules	Misunderstanding of GAO rules
8. Estimation of nonrecurring costs	Unreasonable cost estimation	Inadequate costing methods

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GAO Bid Protests in Air Force Source Selections -29-

This slide provides a very brief summary of each of the eight sustained grounds for protest, including a short description of the basis of the GAO decision, and a summary of our assessment of the apparent source of failure on the side of the Air Force. Before we review each sustained ground for protest in greater detail, we provide several general comments and overview observations on all eight of the sustainments. This is particularly important, because we found that a root cause of many of the problems that led GAO to sustain specific grounds for protest was the Air Force's failure to fully comprehend GAO's mode of operation and analysis.

Our first point is that all the GAO decisions closely argue the basis for each sustained ground for protest, offering careful arguments for each sustainment that are deeply informed by GAO's own precedents. Various officials in the Air Force told us that they considered GAO's stated grounds for sustainment, at least on some of the sustained grounds for protest, to be highly technical, nitpicking, lacking common sense or a sense of fair play, or not properly attuned to the priorities of the warfighter. We believe that such critiques miss a basic point. The GAO decision applies a carefully documented body of GAO precedent to a new situation with precisely the intent of focusing on GAO's procedural priorities and avoiding substantive arguments about what matters to the warfighter. As long as GAO sets the effective rules, relevant Air Force decisionmakers must clearly understand what the rules are.

Once a source selection has such an understanding clearly in hand, to avoid sustainments such as those experienced here, the Air Force must demonstrate a high degree of discipline in the way it crafts an RFP, evaluates proposals against the RFP, and treats offerors. Most protests tend to arise from small details that, if they had been properly executed, would not have led to sustainments.

Two of the sustainments (numbers 7 and 8) arose from GAO's willingness to raise substantive questions about the Air Force's costing methods. In both cases, GAO raised what

appear to be reasonable concerns from a cost analyst's point of view, but concerns that are hard to reconcile with GAO's tendency to distance itself from substantive issues. And, in fact, GAO could have raised comparable issues about the costing in the CSAR-X case and explicitly chose not to once the Air Force documented its costing approach clearly enough so that GAO had no room to speculate about what a "reasonable" approach would be.<sup>50</sup> In the KC-X case, GAO imposed its views on a reasonable approach, suggesting that future Air Force analysts should more carefully review what GAO regards as reasonable and unreasonable.

As closely argued as the GAO decision is, it tends not to resolve concerns we heard in the Air Force and elsewhere about materiality. It is hard to imagine circumstances in which, for example, issues raised in sustainments 4 or 6 could actually have altered the winner of the competition. That said, a fair reading of arguments for the other grounds for protest suggests that any of these might have changed the outcome. Issues raised in sustainments 3 and 5 could have had immediate effects.

Below we review each of the eight KC-X protests in greater detail.

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<sup>50</sup> Note the GAO decision on the second CSAR-X protest episode where GAO overruled the offerors protest against the methodology employed by the Air Force using the MER to determine aspects of the supports costs as a component of the overall MPLCC.



### ***Sustain #1: USAF Did Not Evaluate Number of Requirements Achieved as Indicated in RFP***

- **RFP: Offerors should satisfy as many trade-space technical requirements as possible. Evaluators failed to credit one proposal for satisfying more of these than the other.**
- **USAF: Source selection based its evaluation on the relative importance of these requirements indicated in the RFP.**
- **GAO: Documentation from the source selection did not support this USAF contention. As a result, GAO ruled that USAF evaluation was inconsistent with criteria stated in RFP.**
- **Takeaway: Problems existed in RFP design and evaluation**
  - **RFP did not restrict trade space to key discriminators**
  - **RFP used imprecise language to state how source selection would evaluate items in trade space**
  - **Documentation did not clearly link specific evaluation decisions to specific language in RFP.**

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The first GAO sustainment was rather straightforward and difficult to dispute. In short, GAO found that the Air Force failed to follow the clearly stated evaluation criteria as laid out in the RFP. This specifically applied to the key system requirements subfactor, the most important subfactor of the mission capability evaluation factor, where Boeing alleged it was not awarded credit for having met more of the requirements in the five assessment areas than had Northrop Grumman/EADS. A brief review of the RFP evaluation criteria is necessary to understand GAO arguments.

The RFP states that an award would be made on a “best value” basis and proposals would be judged with respect to five main evaluation factors. These were mission capability, proposal risk, past performance, cost/price, and Integrated Fleet Aerial Refueling Assessment (IFARA). The first three factors were stated to be of equal importance, and individually of more importance than the last two factors, which were equal in weight. The mission capability factor had five subfactors: key system requirements, system integration and software, product support, program management, and technology maturity and demonstration. These subfactors are stated to be of decreasing importance, with the key system requirements the most important. In addition, the proposal risk would be evaluated only as a separate component of each of the first four mission capability subfactors.<sup>51</sup>

The RFP also included a detailed SRD. The RFP notes that the key system requirements subfactor, the most important subfactor under the mission capability factor, would be assessed in relation to the detailed technical requirements laid out in the SRD. These included the absolute requirement of satisfying key performance parameter (KPP) “threshold” capabilities. A proposal would be found completely unacceptable if it did not meet all KPP threshold require-

<sup>51</sup> In other words, the final evaluated rating for key system requirements would include a second rating for proposal risk and on down the line for the first four mission capability subfactors.

ments, of which there were nine. The RFP also provided “objective” capabilities for some KPPs, which were portrayed as desirable goals but not absolutely necessary and tradable against other objectives and capabilities.

Finally, the RFP explained that the SRD requirements would be evaluated under the key system requirements subfactor in five key areas: aerial refueling, airlift, operational utility, survivability, and other system requirements.<sup>52</sup> The SRD also listed on the order of 800 other requirements and attributes, including key system attributes (KSA) that would be evaluated under these same five areas. Unlike KPP thresholds, these were desirable but not required and could all be traded off against each other or against other factors as part of the offerors’ “design space.”

It is necessary to grasp the basics of this complex evaluation structure to understand the GAO’s arguments justifying its first ground for protest sustainment. The statement of objectives of the KC-X SDD stated that the offerors must meet all the KPP thresholds and should try to meet *as many of the KSA and other requirements as possible* (emphasis added).

This last relatively small technical detail got the Air Force in trouble on the first sustained protest. GAO found that the Air Force failed to award appropriate credit to Boeing for satisfying a larger number of SRD requirements than Northrop Grumman/EADS in the five main areas of evaluation laid out for the key system requirements subfactor. GAO recognized that the Air Force had the authority to select key discriminators among the various requirements, as long as the Air Force adhered to the basic framework of the evaluation criteria as stated or implied in the RFP. In addition, GAO even conceded that the Air Force could reasonably have determined that larger differences between factors ranked lower in importance in the RFP could qualitatively be determined during the evaluation to be crucial key discriminators, if a reasonable rationale was provided. But what sealed the case for GAO, besides the violation of the basic criteria presented in the RFP, was the failure of the Air Force to provide any clear rationale and documentation for its final weighting and ranking of performance requirements discriminators.

GAO provided several examples supporting its position. In the aerial refueling area, GAO argued that Boeing satisfied more requirements than the Northrop Grumman/EADS proposal, but the Air Force characterized those met by Boeing as being less-beneficial overall. Indeed, the Air Force heavily emphasized just one Northrop Grumman/EADS KPP as a major discriminator: exceeding the objective for fuel offload vs. unrefueled range. Indeed, GAO singled out this specific issue as a separate major ground for protest sustainment; this separate sustained protest is discussed in more detail below as sustainment number 2. However, regarding the first sustained ground for protest, GAO’s central point was that, in the aerial refueling area, most of Boeing discriminators were assessed as falling under KPPs, whereas most of Northrop Grumman/EADS discriminators fell under the category of non-KPP and non-KSA requirements. Nonetheless, Boeing did not receive any credit for this.

GAO provided one more example. In the operational utility area under the key system requirements subfactor, the Air Force identified two key discriminators for each proposal.

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<sup>52</sup> See U.S. Air Force, *Request for Proposal for the KC-X Tanker Replacement Program*, Solicitation FA8625-07-R-6470, Wright-Patterson AFB, Ohio: Aeronautical Systems Center, January 29, 2007, “Section M, Evaluation Factors for Award,” §§ 2.1 and 2.2. Also see U.S. Government Accountability Office, 2008.



Yet Boeing received no special credit for satisfying more SRD requirements than Northrop Grumman/EADS (17 vs. 2).<sup>53</sup>

Clearly, the Air Force had concluded that the requirements satisfied by Northrop Grumman/EADS, and the degree to which the Northrop Grumman/EADS proposal exceeded the Boeing design capabilities in certain requirements areas, outweighed the fact that overall the Boeing design satisfied a larger number of total requirements. This is not surprising, since many of the requirements dealt with relatively minor issues. The Air Force argued that the SSET and SSAC weighed all requirements, selected discriminators based on the best overall value to the Air Force, and ultimately made a subjective overall judgment on which proposal included the most important bundle of factors and provided the best value to the Air Force.

As noted above, GAO concluded that in doing this the Air Force made two key mistakes. First, it failed to follow the clearly stated evaluation criterion that each offeror should try to satisfy as many requirements as possible beyond the KPPs, including KSAs and non-KSAs. Boeing was awarded no credit for surpassing Northrop Grumman/EADS in overall number of requirements met. GAO pointed out that credit must be given for following the rankings and priorities in the RFP. Second, although GAO accepted that the Air Force had the authority to more heavily weight larger differences between lower-priority factors, it had to reasonably support the reasons for doing this and thoroughly document them, something GAO claimed that the Air Force did not do. Therefore GAO sustained Boeing's protest in this area.

We make one basic observation regarding this sustainment: Clearly, problems existed in the design and evaluation of the KC-X RFP, particularly in the area of requirements and the methodology for evaluating the proposal against them. There are three components to the problem. First, the RFP did not clearly identify key discriminators nor carefully restrict trade space to key discriminators. Second, the RFP used imprecise language on the weighting and evaluation methodology for items in the trade space. And third, the documentation provided by the Air Force did not clearly link specific evaluation language to the RFP.

We recognize the challenges of fully laying out all the requirements, the key discriminators, and their priorities this early in the life of a complex system that may stay in the inventory for many decades. In many respects, the evaluation process can be legitimately viewed as an iterative learning process for both the offerors and the government side. Flexibility for the government to permit learning and changing of emphasis in requirements and their priorities would be ideal. Unfortunately, GAO and its well-established precedents make clarity a must, as well as rigorous adherence to stated and implied evaluation criteria. The Air Force must take into account this basic reality when it designs and executes its RFPs.

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<sup>53</sup> The two Northrop Grumman/EADS discriminators were (1) more fuel from a 7,000-ft runway, and (2) a longer ferry range.

## ***Sustain #2: Contrary to RFP Language, USAF Gave Credit for Exceeding KPP Threshold***

- **RFP: “No consideration will be provided for exceeding KPP objectives.” Evaluators then credited one proposal for achieving better performance on air refueling KPP than the other.**
- **USAF: RFP as a whole and common sense demand that higher air refueling performance be rewarded.**
- **GAO: That is not what the criteria in the RFP say.**
- **Takeaway: The source selection failed to detect a key inconsistency in RFP language. Language in one place conditioned language in another to produce a clear direction in the RFP not to reward higher air refueling performance.**

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The second ground for protest sustained by GAO probably received the most publicity and was considered by many observers to be the most substantive and clear-cut of all the eight sustained grounds for protest. At the same time, it was probably the most frustrating sustained ground for protest for the Air Force. Many Air Force officials viewed this specific sustainment as most clearly violating “common sense” and undermining the obvious best interests of the Air Force and the warfighter. Even more frustrating for the Air Force, GAO sustained on the grounds of an apparent contradiction among a few short sentences buried deep within widely differing parts of a very lengthy RFP.

However, the basic principle from the GAO perspective was extremely straightforward. From the GAO perspective, the Air Force awarded significant credit to the Northrop Grumman/EADS proposal in clear violation of a statement regarding evaluation criteria in the RFP. There is no doubt that the Air Force action violated the apparent meaning of the RFP criteria language, although the Air Force defended itself vigorously with both a strong common sense argument as well as an interesting interpretation of the wording in the RFP. But GAO’s basic argument was simple and straightforward and clearly linked to the first sustained ground for protest.

This is what happened. As noted in the discussion of the first sustainment, the Air Force ended up selecting key discriminators among the SRD requirements grouped in five areas, with a particular emphasis on aerial refueling, operational utility, and airlift capability. Proposals had to meet all KPP threshold values, but the RFP explicitly stated that no credit would be awarded for exceeding a KPP objective. The RFP laid out nine KPPs. The second KPP was fuel offload and range, which was defined using a chart equivalent to the KC-135 capabilities. The fuel offload vs. unrefueled range KPP threshold required equaling the fuel offload capabilities of the KC-135 at various unrefueled ranges as indicated on the chart. *The KPP objective was*

*merely to exceed the threshold.* Both the Boeing and the Northrop Grumman/EADS proposals met and exceeded the threshold, and thus both also met the objective. However, the KC-45 offload capability significantly exceeded that of the Boeing KC-767. As a result, fuel offload at unrefueled range ultimately became one of the most important discriminators for the Air Force. Common sense suggests that this should not be surprising, given the basic mission of an aerial refueling tanker.

The language in the RFP failed to reflect this common-sense interpretation. The RFP stated that, if there was no objective stated for an attribute, the Air Force could determine the value of exceeding the threshold capability after the fact during the evaluation. But that was irrelevant here, since an objective was stated, and that was merely exceeding the threshold value.

The Air Force and Northrop Grumman/EADS argued unsuccessfully that the basic mission of an aerial tanker, the sense of the RFP as a whole, well-known Air Force policy, and common sense all supported the Air Force position.<sup>54</sup> The Air Force maintained, not without some justification, that it was totally unreasonable to assume that it would treat as equivalent “one drop more” of fuel versus thousands of pounds of additional fuel offload capability at specific unrefueled ranges. In addition, the Air Force argued that Boeing should have become aware of the Air Force interpretation of this KPP during interim source selection briefings to the offerors.<sup>55</sup>

GAO’s basic arguments, however, were eminently logical and difficult to counter. GAO maintained that fairness in competitions requires consistent and reasonable adherence to selection criteria in the RFP. In addition, GAO noted that for some other non-KPP factors, the RFP had clearly indicated that credit would be awarded for exceeding the objective capability, but that this was not the case here. GAO rightly pointed out that Boeing could reasonably argue that the apparent explicit denial of credit for exceeding the objective in this case was a conscious Air Force effort to bound the trade space. That is, it could be viewed as an attempt by the Air Force to ensure that it would not have to pay for a more expensive design that provided unwanted capability.

In addition, it cannot be denied that Boeing’s argument of materiality was also reasonable. Had the RFP explicitly offered credit for exceeding the fuel offload KPP objective, Boeing might have been motivated to submit a proposal based on one of its larger airliners such as the Boeing 777.<sup>56</sup> Finally, GAO argued that the documentation available for the interim source

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<sup>54</sup> In addition, the Air Force argued that the Boeing protest had been untimely.

<sup>55</sup> Several credible senior Air Force officials we interviewed claimed that Boeing was never misled by the fuel offload requirement. According to Air Force officials, the protest was the first time Boeing expressed the view that the threshold and objective offload requirements were essentially the same. In the protest, Boeing made the argument, successfully, that any amount of fuel beyond threshold met the objective requirement. In the protest, according to senior Air Force officials, the Air Force asked GAO for discovery of Boeing internal documents that would have shown how Boeing interpreted this requirement at the time it prepared its proposal. GAO denied the Air Force’s request. So the Air Force was left with no evidence to refute the protest argument.

<sup>56</sup> Some observers in and outside the Air Force rejected this notion out of hand, arguing that a variety of technical, cost, and commercial business reasons made it unlikely that Boeing would have offered a 777-based aerial refueling tanker proposal under most realistic circumstances. Whereas Boeing always publicly claimed it would offer a KC-777 if the Air Force desired a larger tanker, many observers noted that, in addition to manufacturing resource management and scheduling issues related to the much higher commercial sales of the 777 airliner, and higher development and manufacturing costs for a KC-777 tanker, Boeing much preferred to offer a KC-767 tanker, a version of which had already been developed. See, for example, Gates, 2009.

selection briefings indicates that the Air Force had informed Boeing only that it had met the fuel offload KPP objective, with no explicit clarifications of the Air Force interpretation.

The Air Force advanced another interesting argument in its defense: that it is impossible to exceed a KPP objective that is defined as exceeding the threshold. Exceeding this KPP objective implies an endless number of possibilities stretching out in principle to infinity, so it is impossible to exceed this objective (one cannot exceed infinity). Thus, both proposals exceeded the threshold and thus met the objective, but the KC-45 was not given any additional credit for exceeding the objective any more than the KC-767, because it is impossible to exceed the objective. Rather, independent of the KPP, the Northrop Grumman/EADS proposal was awarded credit, argued the Air Force, for having significantly greater fuel offload capability than the Boeing design, *not* for exceeding the KPP objective, something that in this case was logically impossible. This argument was perhaps too clever by half and was rejected out of hand by GAO.

At the end of the day, GAO stuck to its finding that the Air Force had violated the selection criteria in the RFP, and that fairness in competitions demands consistent and reasonable adherence to selection criteria in the RFP.

Our major lesson from this sustained protest is that the Air Force, with all its extensive scrubbing and review of the RFP, failed to detect a very small but key inconsistency in the RFP language buried in a couple of sentences in totally different parts of the RFP. Clearly the Air Force is going to have to achieve even higher standards of rigor and thoroughness in reviewing and vetting RFPs in future high-profile source selections.

### ***Sustain #3: USAF Failed to Document Basis for Evaluation of Compatibility with All Aircraft***

- **RFP: Any tanker must be able to “refuel all current Air Force fixed-wing tanker-compatible receiver aircraft in accordance with current Air Force procedures.” Documentation for at least one aircraft was incomplete in winning proposal; USAF witnesses at GAO hearing could not explain basis for decision for certification.**
- **USAF: Problem arose in both proposals; USAF addressed it in contractual agreements to resolve shortfall in final tanker design.**
- **GAO: Documentation never satisfactorily explains how USAF resolved EN or even shows that USAF understood the nature of the problem.**
- **Takeaway:**
  - **USAF failed to maintain adequate control of documentation generated by EN.**
  - **Poor USAF testimony in hearing led GAO to collect additional information that raised further doubts about USAF understanding of shortfall.**

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In the third sustained ground for protest, GAO concluded that the Air Force assessment that the Northrop Grumman/EADS proposal could refuel all Air Force aircraft under current procedures was not supported by the source selection documentation. This was a key shortcoming, in that the number one KPP threshold requirement evaluated under the aerial refueling area of the key system requirement subfactor necessitated this capability. In principle, if a proposal failed to satisfy this KPP threshold requirement, it was automatically disqualified from the competition.

This protest involved very technical operational issues and was apparently not handled optimally by the Air Force during the protest review and hearing process. GAO initially sustained the Boeing objection that the Air Force evaluation was not reasonable when concluding that the Northrop Grumman/EADS proposal had adequate “overrun” and “break away” capabilities using current procedures for all current Air Force fixed-wing receiver aircraft. GAO noted that current Air Force procedures require “overrun” and “break away” capabilities under certain specialized conditions.<sup>57</sup>

During the proposal evaluation period, the Air Force notified Northrop Grumman/EADS twice that the KC-45 top speed was inadequate for the necessary capabilities. The KC-45 contractors initially recommended that the Air Force change its procedures then later proposed solutions. However, GAO identified several unresolved issues. These included the KC-45 dive speed exceeding the maximum operating air speed; schedule and cost implications of the proposed contractor solution; and airspeed limitations that could prevent break away procedures for one specific Air Force receiver aircraft.

<sup>57</sup> “Overrun” and “break away” capabilities refer to maneuver, acceleration, and speed performance considerations during emergency procedures while refueling receiver aircraft.

According to GAO, neither the available documentation nor hearing testimony proved that the Air Force understood the qualifications to Northrop Grumman/EADS's responses or provided a reasonable basis for assuming that the KC-45 could eventually fully comply with existing procedures.

Some Air Force personnel involved in this aspect of the protest were dismissive of GAO claims. They claimed that the Air Force expressed similar concerns regarding the Boeing design proposal during the source selection. They noted that Northrop Grumman/EADS as well as Boeing proposed solutions to this issue (which in the case of the KC-45 largely required adjustments to software), and both committed contractually to implementing their proposed solutions during the full-scale SDD phase of the program. The Air Force further claimed that Northrop Grumman/EADS supplied relevant flight test data and documentation based on actual A330 flight test data to support its position, whereas Boeing could not supply such data, since the specific proposed Boeing design had never flown. The Air Force also alleged that GAO had incorrectly based its findings on Air Force interim assessments. In short, the Air Force insisted that Northrop Grumman/EADS had provided full and reasonable documentation of solutions to the technical problem and had satisfied possible concerns about the schedule and cost implications of implementing the solutions.

GAO, however, rejected these arguments, basically on the grounds that adequate and convincing documentation in support of the Air Force arguments was not made available. In addition, GAO claimed that the Air Force expert testimony presented at the protest hearing was unsatisfactory, indicating a lack of awareness of the relationship between maximum operating speed and design dive speed. Finally, GAO argued that it could not find any documentation supporting the sufficiency of Northrop Grumman/EADS proposed air speed capability to perform the break away maneuver for one specific Air Force receiver aircraft.<sup>58</sup>

In summary, GAO concluded that the Air Force assessment that the Northrop Grumman/EADS proposal could refuel all Air Force receiver aircraft under current procedures was not supported by the documentation. Since this was a major KPP threshold, GAO noted that technically this point alone disqualified the Northrop Grumman/EADS proposal from further consideration.

The Air Force admitted that it may not have completed the paperwork to document the full close-out of the ENs to Northrop Grumman/EADS regarding this issue but absolutely insisted that the issue had been resolved to its satisfaction and that this ground for protest sustainment had no merit. Nonetheless, it appears that the GAO decision was fully legitimate in a narrow technical sense. Apparently the Air Force had not properly documented the close-out of the relevant ENs. Clearly the Air Force needs to maintain much more careful and rigorous control of the documentation generated by the EN process, particularly regarding the resolution of specific issues and concerns raised to the offerors.

Another lesson learned from this sustained protest is that the Air Force expert witnesses must be able to respond convincingly and authoritatively to aggressive and hostile questioning by the protester's attorneys. The failure of the Air Force expert testimony on this issue to convince GAO that the Air Force understood the technical issues and had adequately addressed the problems raised additional doubts about the Air Force understanding of the shortfall.

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<sup>58</sup> GAO documents all these points in depth in its decision (U.S. Government Accountability Office, 2008).



It should be noted that it is apparently no easy matter to ensure the effectiveness of witnesses testifying at GAO hearings.<sup>59</sup> According to Air Force officials, all witnesses were carefully prepared. An Air Force attorney was assigned to work with each Air Force KC-X hearing witness well in advance of the hearing. The Air Force attorney prepared the witnesses with likely questions and made sure the witnesses were familiar with the relevant documents in the administrative record. Before the hearing, the Air Force arranged for outside counsel from the intervener to conduct a mock cross examination of each witness under realistic conditions.

Despite such thorough preparations, the KC-X hearings demonstrated that some individuals simply do not do well as witnesses. They got nervous, they could not communicate well in that setting, or they failed to give clear and complete answers. Thus, a major lesson learned from KC-X is that the ability to present information orally at a protest hearing should be an important consideration in choosing SSET leads in future major procurements.

Yet, it is also useful to point out that, in the view of some Air Force officials, GAO primarily uses this testimony to explain the evaluation process and the administrative record. It generally does not allow agencies to fill in gaps in the administrative record through the hearing. Some senior Air Force officials believe that the outcome of the aircraft compatibility issue was unlikely to be different regardless of who testified.

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<sup>59</sup> This discussion draws on the experience of Air Force officials directly involved in the source selection.

### ***Sustain #4: USAF Treated Offerors Differently in Evaluation of Operational Utility***

- **During discussions, USAF decided not to notify one offeror when it downgraded its rating on an operation utility KPP, even though it continued discussions with the other offeror about the same KPP.**
- **USAF: Acquisition rules do not require USAF to tell an offeror if it downgrades a rating of a strength. And the downgrade was ultimately not material.**
- **GAO: GAO precedent states clearly that the government must treat all offerors equally**
- **Takeaway: USAF seriously misread GAO oversight policy**

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GAO sustained a fourth ground for protest, saying that the Air force conducted misleading and unequal discussions with Boeing regarding fulfillment of KPP number seven, which addressed the requirements for net ready capability.

GAO describes the course of events as follows.<sup>60</sup> During the source selection evaluation, the Air Force identified concerns regarding KPP number seven and alerted Boeing through an EN. Boeing responded with a proposed solution. The Air Force then notified Boeing that its proposed solution met the KPP objective.

Some time later, when, according to the program office, the Air Force was reviewing all its documentation, one technical expert noticed that both the Boeing and the Northrop Grumman/EADS proposals offered equivalent capability in this area but that the two proposals were ranked differently against the KPP number seven metric. Specifically, Northrop Grumman/EADS proposed approach to meeting the KPP number seven objective was ranked as “partially met,” whereas Boeing’s approach with similar capability was ranked as fully meeting the objective. Since both proposals met and exceeded the threshold for KPP number seven, and a small change to the ranking would have virtually no effect on the outcome of the competition, the program office decided for the sake of consistency of the evaluation documentation that Boeing’s ranking should be changed to “partially met.” This change was made, but Boeing was not notified regarding this change.

Later, as part of its protest, Boeing complained that it had not been treated fairly because the change in the ranking for KPP number seven had not been communicated to it. Boeing further argued that Northrop Grumman/EADS had been informed of their correct rating of

<sup>60</sup> U.S. Government Accountability Office, 2008.



“partially met.” Most important, Boeing argued that, had they been properly informed of the change in rating, they would have proposed a solution and fully met the KPP.

In the view of KC-X program officials and program counsel, the decision not to reopen discussions with the protester over this downgrade was clearly within the contracting officer’s discretion, per FAR 15.306.<sup>61</sup> In addition, they believed that there would have been no prejudice from this decision, even if it were erroneous.

Many knowledgeable observers in the Air Force and industry believed that this protest issue bordered on the frivolous. The Air Force argued that it was not obligated to inform Boeing of the changed rating, because this element was part of the trade space and, even after the change in rating, Boeing’s proposal was still ranked with a strength in this area, rather than having been changed to a deficiency. Second, the Air Force maintained that this error in ranking and subsequent change had taken place after all discussions with the offerors had been closed, so that it was not appropriate to hold discussions with Boeing over the change. Finally, and perhaps most important, the Air Force claimed that the change had absolutely no material effect on the outcome of the competition.

GAO countered the Air Force arguments with three basic points. First, GAO reiterated the basic point that whatever the reason or context, the Air Force had misled Boeing and treated it unequally in this case. Second, GAO claimed the Air Force did reopen discussions with the offerors on other topics *after* FPR, so why not on this topic? Finally, GAO insisted that this error could have reasonably prejudiced Boeing’s proposal, since it involved the only KPP objective assessed in the operational utility area under the key system requirements subfactor.

GAO made it clear that GAO precedent clearly states that the government must scrupulously treat all offerors equally. In the case of this protest, the Air Force unquestionably misread GAO’s oversight policy and determination to apply strict interpretations of precedent.

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<sup>61</sup> According to one Air Force official, Boeing certainly should have been notified and given an opportunity to revise its proposal. However, this official argues that the relevant FAR section seemed clear to the evaluators at the time and that, in their view, did not require such actions. The relevant FAR language states: “The contracting officer must . . . discuss with each offeror . . . deficiencies, [and] significant weaknesses. The contracting officer also is encouraged to discuss other aspects of the offeror’s proposal that could, in the opinion of the contracting officer, be altered or explained to enhance materially the proposal’s potential for award. However, the contracting officer is not required to discuss every area where the proposal could be improved. The scope and extent of discussions are a matter of contracting officer judgment” [FAR 15.306(d)(3)].

### ***Sustain #5: USAF Failed to Ensure N-G Acceptance of Organic Depot Support Schedule Requirement***

- **RFP: Offeror will “plan and support the agency to achieve initial organic depot-level maintenance within 2 years after delivery of the first full-rate production aircraft.”**
- **USAF: Despite N-G’s rebuff of repeated USAF queries about this, the source selection advisory council (SSAC) and source selection authority (SSA) rules N-G’s failure to include this in its proposal to be an “administrative oversight.”**
- **GAO: USAF unreasonably overlooked failure to comply with a material RFP requirement.**
- **Takeaway: Source selection did not fully prepare the SSAC and SSA to evaluate the RFP.**

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GAO determined with respect to sustainment number five that the Air Force improperly assessed Northrop Grumman/EADS failure to commit to establishing organic logistics, maintenance, and repair support for the KC-X within a two-year time frame as required by the RFP under the product support subfactor.

According to GAO’s interpretation, the statement of objectives for the KC-X SDD specifically required that the offerors commit to planning and supporting the establishment of organic Air Force support capability for the KC-X within two years of the delivery of the first full-rate production aircraft.

The original Northrop Grumman/EADS proposal did not clearly commit to this two-year time frame. The Air Force raised this issue twice with the contractor through ENs. The Air Force did not receive a fully satisfactory response, and eventually the SSET assigned a “weakness” rating to Northrop Grumman/EADS in this area. In its final proposal, Northrop Grumman/EADS noted this issue and stated that it would be resolved “at contract award.”<sup>62</sup> On reviewing this issue, the SSAC challenged the SSET assessment and concluded that Northrop Grumman/EADS failure to explicitly commit was the result of an “administrative documentation oversight.”<sup>63</sup> Apparently the SSA agreed with this assessment.

After reviewing this issue, GAO concluded that the organic repair requirement was a material requirement, which had been consciously rejected by Northrop Grumman/EADS. In GAO’s interpretation, this behavior technically disqualified the entire Northrop Grumman/EADS proposal.

<sup>62</sup> U.S. Government Accountability Office, 2008, p. 52.

<sup>63</sup> U.S. Government Accountability Office, 2008, p. 52.

The Air Force argued that Northrop Grumman/EADS had clearly committed to providing the required organic capabilities and that the cost and schedule documentation provided by the offeror was consistent with a two-year time frame.

GAO forcefully countered that its review of the offeror's schedule and cost documentation raised serious questions about the Air Force assessment regarding Northrop Grumman/EADS commitment to the two-year time frame. Furthermore, GAO claimed that both the Air Force and the offeror admitted during GAO's review process that this shortcoming was intentional.

Our conclusion from this episode is that once again the Air Force failed to adequately document why Northrop Grumman's logistics, maintenance, and repair support for the KC-X was acceptable within the two-year time frame required by the RFP. Neither the SSAC nor SSA recognized the deficiency.

### ***Sustain #6: USAF Used “Unreasonable” Method to Calculate Military Construction Costs***

- **RFP: Calculation of most probable life cycle cost will include estimates of military construction (MILCON) costs implied by each proposal**
- **GAO: (1) Evaluation did not account for the offerors’ specific proposals. (2) USAF did not reasonably support basis for the hypothetical plan it used to calculate MILCON costs.**
- **Takeaway:**
  - **Evaluation must be consistent with RFP language**
  - **USAF must explain costing methods in enough detail to justify the key assumptions it chooses to make when applying these methods. GAO will not defer to the USAF on the sufficiency of these assumptions.**

RAND

GAO Bid Protests in Air Force Source Selections 35

The sixth sustained ground for protest was one of the most complex issues raised in the protest, but the underlying principle once again was very simple and straightforward. Here, GAO identified two basic issues. GAO concluded that the Air Force evaluation of the Northrop Grumman/EADS proposal’s estimate of MILCON costs was unreasonable and that that evaluation was inconsistent with the evaluation criteria in the RFP.

The first criticism here was similar in some respects to the criticism of the cost methodology directed at the Air Force regarding the CSAR-X MPLCC estimate evaluations. As the protesters had claimed in the case of the CSAR-X sustained protests, Boeing argued that the RFP had requested detailed data derived from the unique attributes of the specific aircraft designs that the offerors used in their proposals. The Air Force had then disregarded the specifics of each offeror’s proposal when calculating the MILCON costs for each proposal design as part of the MPLCC estimate. Consequently, the Air Force assessment of MILCON costs for both offerors was not consistent with the evaluation criteria as laid out in the RFP.

The RFP had required, and the offerors had provided, very detailed proposal-specific data for beddown of their proposed aircraft at a specific location, Fairchild Air Force Base. But according to GAO, the Air Force surveyed four bases for available facilities and other physical support attributes, then extrapolated the results from one of the bases surveyed to a total of six representative bases that could be used for beddown of the KC-X. The Air Force rationale and methodology for selecting these specific bases was unclear from the GAO perspective. More important, the Air Force conducted this exercise before receiving the contractor proposals. While using the basic proposal aircraft dimensions, the Air Force analysis ignored the specific technical details provided by the offerors in their proposals and never updated the analysis carried out before receiving the final contractor proposals.

Specific examples provided by GAO included issues such as necessary seat storage space and battery maintenance and repair facilities.<sup>64</sup> GAO noted that the RFP clearly implied that the data provided by the offerors would be used to assist in calculating MILCON costs and that no other logical purpose appeared to exist for requesting the data from the offerors. Consequently, GAO agreed with the protester that the Air Force assessment of MILCON costs for both offerors was not consistent with the evaluation criteria as laid out in the RFP. This finding of course was very similar in spirit to the first sustained protest in the CSAR-X program. As in the case of the CSAR-X, GAO found that dissimilar aircraft of much different sizes were assigned identical MILCON costs as part of their MPLCC. From the GAO perspective, this appeared totally contrary to the evaluation criteria.<sup>65</sup>

This specific KC-X protest sustainment, however, had a second key element, which went well beyond the issue of inconsistency with the RFP evaluation criteria. GAO also found that the notional methodology used by the Air Force for assessing MILCON costs was not reasonable in and of itself because no documentation existed justifying the assumptions behind the approach adopted. As noted above, the Air Force took the results of one of the airbases out of the four it had surveyed before receiving the contractor proposals and extrapolated these results to six other unspecified bases. Two of these bases were air reserve command bases and two were main operating bases located outside the continental United States (OCONUS). The Air Force added an arbitrary percentage of increased costs to the MILCON cost estimates for the OCONUS bases to compensate for assumed higher costs of overseas MILCON.

GAO commented that there was little if any documentation of the rationale or justification for this methodology or the rationale behind the approach. GAO assumed that the bases were picked because they accommodated a similar number of aircraft as was currently in the plan for the KC-X beddowns. However, the actual beddown sites for the KC-X have not been determined, and no real rationale was documented by the Air Force to GAO's satisfaction for the selection of the specific bases used or for other aspects and assumptions used in the approach to estimating MILCON costs.

The Air Force defended its approach by claiming that the detailed support data that had been requested from the offerors were required for the evaluation of the product support factor, not for calculating MPLCC. Furthermore, the Air Force maintained that calculating detailed MILCON cost estimates for each aircraft based on the unique attributes of the offerors' proposals would not have substantially changed the final MPLCC comparison. Finally, regarding an error detected in the original MPLCC estimates that changed the lowest MPLCC bidder, the Air Force noted that the two offerors were still essentially equal in overall MPLCC and that this error had no material effect on the outcome of the competition.

In response, GAO once again highlighted two basic principles: The Air Force must (1) follow the evaluation criteria laid out in the RFP and (2) clearly document the assump-

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<sup>64</sup> The aircraft were expected to be convertible from an aerial tanker configuration to both a cargo and passenger configuration. When configured as a tanker or cargo aircraft, the seats would be removed and would have to be stored at the home base. In the case of batteries, it was not known what type of batteries would be used on the KC-45 and thus what sort of battery supply, storage, and support facilities might be required. In the case of the 767 tanker, it was assumed that the batteries would be similar to those used on an existing Air Force aircraft, which then could share facilities already in place to support battery storage, maintenance, and repair.

<sup>65</sup> GAO also noted that an Air Force mistake was detected that actually changed the lowest MPLCC candidate in the competition. However, it was noted that the overall MPLCC for both aircraft was still so close that cost considerations played a very minor role in determining the winner.

tions and approach it uses to calculate MILCON costs. GAO raised this first point in the first CSAR-X protest as well as the first and second sustained grounds for protest in the KC-X source selection. The second point is perhaps more surprising. By arguing that the Air Force must carefully and thoroughly document the methodology and key assumptions it uses in its evaluations of proposal costs, the GAO decision demonstrated that it will not defer to the Air Force on the sufficiency of these assumptions without extensive documentation.

### ***Sustain #7: USAF Inappropriately Added Costs for Nonrecurring Engineering Costs***

- **If a cost estimate is deemed “unrealistically low,” USAF procurement policy allows evaluators to increase the cost estimate before comparing offers.**
- **USAF: Boeing claimed the price it would pay for commercial aircraft covered development costs and so provided no cost data to justify price. This made Boeing’s cost estimate risky.**
- **GAO: Presence of risk is not sufficient to justify adding cost. To add cost, USAF must justify its judgment that the cost estimate is low. To do this, USAF would be allowed to demand relevant cost data.**
- **Takeaway: USAF did not understand GAO precedent relevant to adjustment of unrealistic cost estimates**

RAND

GAO Bid Protests in Air Force Source Selections .36.

In GAO’s seventh sustained ground for protest, it played an activist role we did not see in any of the sustainments discussed above—or in any other decision we examined over the course of this study. It sustained a ground for protest that even the protester had not raised in its protest. Rather, GAO originated a ground for protest of its own, arguing that the Air Force cannot adjust an MPLCC estimate for cost risk—even if the Air Force has legitimate grounds for being uncertain about an offeror’s MPLCC estimate—without first conducting its own MPLCC cost estimation based on an offeror’s unique methods, materials, and approach and justifying an alternative estimate higher than the offeror’s estimate. Because the Air Force adjusted Boeing’s estimate of its MPLCC upward without generating such an estimate of its own, GAO ruled that the adjustment was unreasonable. In this ruling, GAO in effect sustained a ground for protest not contained in Boeing’s protest. How did this happen?

Boeing’s KC-X proposed solution was a derivative of its baseline B.767-300 commercial airliner built by Boeing Commercial Airplanes (BCA), a division of the Boeing Company. Boeing’s KC-X proposal stated that it planned to purchase its baseline 767 aircraft from BCA as commercial items using a fixed-price (FP) contract. Furthermore, Boeing maintained that this FP contract would include nonrecurring engineering costs and that the Boeing military aircraft division would not have access to these proprietary data. Boeing noted that Part 12 of the FAR<sup>66</sup> discourages the government from requesting cost data for commercial items and forbids the imposition of a requirement for government-certified cost data.

The Air Force was uneasy with Boeing’s initial refusal to provide more detailed nonrecurring engineering cost data, because the Boeing KC-X design proposal was a significant modification and entailed a certain degree of risk. The Air Force repeatedly requested more detailed

<sup>66</sup> FAR Part 12 covers the acquisition of commercial items. Noncommercial procurement regulations are covered largely under FAR Part 15, “Contracting by Negotiation.”



cost data from Boeing to substantiate the nonrecurring cost estimates provided by Boeing in its proposal. Boeing repeatedly refused to provide this documentation. Ultimately, the Air Force concluded that Boeing's nonrecurring engineering cost estimate clearly entailed at least moderate risk and, therefore, lacking fuller cost documentation from Boeing, should be adjusted upward to compensate for risk.

Boeing protested this action by the Air Force. It is interesting to note that GAO rejected the grounds on which Boeing protested the Air Force action. It rejected Boeing's argument against providing additional cost documentation based on the plan for an FP contract with BCA. GAO rightly pointed out that FAR Part 12 only prohibits the government from requiring government certified cost data but allows the government to request and require additional cost data when necessary. Furthermore, GAO pointed out that Boeing had not yet even negotiated an FP agreement with BCA.

In addition, GAO agreed with the Air Force decision to assign moderate risk to the Boeing cost estimate for nonrecurring engineering costs on the grounds that Boeing refused to provide sufficient cost documentation. However, at the same time GAO rejected the Air Force justification and rationale for its upward adjustment of Boeing's cost estimate.

GAO argued that, in accordance with GAO precedent and the RFP evaluation metrics that referenced FAR Part 15.404, the Air Force should have conducted an analysis of cost realism to justify adjusting Boeing's cost estimate upward.<sup>67</sup> The Air Force can add dollarized risk to an MPLCC estimate per the RFP only if such an adjustment results in a more probable cost supported by a cost realism analysis that finds the offeror's cost estimate to be unrealistic. GAO found no supporting documentation or evidence that the Air Force had analyzed the cost realism of the Boeing nonrecurring cost estimate and found it unrealistic. In what appears to be a very narrow reading of FAR Part 15 and GAO precedent, GAO found that the Air Force had to formally demonstrate and fully document that the Boeing cost estimate was not realistic before it could justify adjusting that estimate upward, even though GAO agreed with the Air Force risk assessment.

Given how unusual the activist stance behind this sustainment was, it is hard to draw a clear lesson from it. Perhaps the best lesson to draw is that future protesters can raise the kind of objection that GAO generated itself in this sustainment. To avoid such an objection, the Air Force must comply with very strictly drawn procedural rules when it dollarizes risk. These rules derive from broad policy stated in FAR Parts 15.305 and 15.404, implemented through a very pointed GAO interpretation. More broadly, for better or worse, this sustainment indicates that the Air Force did not fully understand or appreciate GAO precedent relevant to the adjustment of unrealistic cost estimates, or the full technical implications of that precedent for the interpretation of the FAR.

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<sup>67</sup> FAR Part 15.305 (1) states that "when contracting on a cost-reimbursement basis, evaluations shall include a cost realism analysis to determine what the Government should realistically expect to pay for the proposed effort, the offeror's understanding of the work, and the offeror's ability to perform the contract. . . . The contracting officer shall document the cost or price evaluation." FAR Part 15.404-1(d)(2) confirms that "cost realism analyses shall be performed on cost-reimbursement contracts to determine the probable cost of performance for each offeror. (i) The probable cost may differ from the proposed cost and should reflect the Government's best estimate of the cost of any contract that is most likely to result from the offeror's proposal. The probable cost shall be used for purposes of evaluation to determine the best value. (ii) The probable cost is determined by adjusting each offeror's proposed cost, and fee when appropriate, to reflect any additions or reductions in cost elements to realistic levels based on the results of the cost realism analysis." That is, a cost realism analysis will be conducted before adjusting an offeror's cost estimate.



### ***Sustain #8: USAF Used “Unreasonable” Estimate of Nonrecurring Engineering Costs***

- **Lacking cost data discussed under “Sustain #7,” USAF devised a method to evaluate risk associated with Boeing’s nonrecurring engineering costs.**
- **GAO: USAF never justified why its chosen method would yield a “reliable predictor of anticipated growth of the protester’s non-recurring engineering costs.”**
- **Takeaway repeats lesson from “Sustain #6”: USAF must explain costing methods in enough detail to justify the key assumptions it chooses to make when applying these methods. GAO will not defer to the USAF on the sufficiency of these assumptions.**

RAND

GAO Bid Protests in Air Force Source Selections -37-

GAO’s eighth sustained ground for protest on the KC-X program is closely related to the seventh. Here again, GAO explicitly criticized the cost methodology employed by the Air Force. It found that the Air Force methodology for estimating the most likely nonrecurring engineering costs for the Boeing proposal was flawed, and thus the resulting estimate was not reasonable. So, the seventh sustainment ruled that the Air Force did not use an approach to cost estimation that could (1) generate a better MPLCC estimate than Boeing offered in its proposal and (2) support clear documentation of the Air Force’s judgment that its estimate was better. The eighth sustainment ruled that, even if the Air Force had used such an approach, the specific cost model it employed to dollarize cost risk would have been inappropriate to use in it. These fine distinctions offer some insight into why many in the Air Force find GAO rulings to be overly technical. They also illustrate how GAO hearing officials think and how the Air Force acquisition personnel must learn to think to improve Air Force experience with GAO bid protests in the future.

As explained above, Boeing declined to provide the Air Force with detailed cost data to document the estimated cost of its nonrecurring engineering work for its proposed 767 tanker. The Air Force used a probabilistic Monte Carlo simulation to calculate a percentage increase adjustment in Boeing’s estimate to reflect likely cost growth. As a check on the credibility of the results of this approach, the Air Force reviewed the Boeing P-8A Poseidon Multi-Mission Maritime Aircraft contract with the Navy and found that the cost growth on that contract to be similar to the upward adjustment suggested by the Monte Carlo simulation.

However, GAO concluded that this methodology was flawed. The data the Air Force used for the Monte Carlo simulation came from reports written by GAO and the RAND Corpora-

tion.<sup>68</sup> These data represented historical averages of overall program cost growth. They did not reflect merely the nonrecurring engineering cost portion of past programs but rather applied to entire program cost histories, including development and production. In the bid protest, GAO therefore determined that the data used in the Monte Carlo simulation were irrelevant for estimating cost growth for any single element or phase of a program, such as nonrecurring engineering costs. GAO argued that the cost realism evaluation required by FAR Part 15.404-1 must be reasonably and rigorously conducted no matter what methodology is chosen. Since the Air Force used data derived from entire program histories to evaluate the cost realism of the offeror's cost estimate for one phase of the program, GAO concluded that the Air Force approach was unreasonable.

Thus, the lesson for the Air Force from the eighth sustained ground for protest is virtually the same as from the sixth. The Air Force must thoroughly justify and document the cost-estimating methodology that it uses to assess offerors' cost estimates. Without such documentation, GAO will not defer to the assumptions made by the Air Force.

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<sup>68</sup> Keep in mind that GAO analytic reports are written on the other side of a Chinese wall from the GAO Office of General Counsel that reviews bid protests. In the context of a specific bid protest, these two parts of GAO do not communicate directly and are essentially separate organizations.

## ***For KC-X, GAO Denied Far More Grounds for Protest Than It Sustained***

- **GAO did not document vast majority of grounds for protest denied**
- **Denied grounds documented addressed USAF evaluation of**
  - **Risk associated with system integration and software**
  - **Management risk associated with production lines and production approach**
  - **Past performance risk**
  - **The “IFARA factor” measuring fleet-wide refueling capability**
  - **A variety of cost issues**
- **In each of these cases, GAO found that the USAF had complied with federal rules and “deferred to USAF judgment”**

RAND

GAO Bid Protests in Air Force Source Selections -38-

Now that we have reviewed all eight of the KC-X grounds for protest sustained by GAO, some additional observations are possible. Perhaps one of the most important contextual observations is to keep in mind that, although GAO sustained eight grounds for protest, including some that might appear to various observers to be highly technical and contrary in spirit to the best interests of the warfighter, GAO in fact denied far more grounds for protest than it sustained. Although the exact count is in dispute, it appears that Boeing filed well over 100 discrete grounds for protest on the KC-X case. Something like 90 percent of these were denied, but GAO documented virtually none of the denied grounds for protest for the public. Indeed, even the subject matter of many of them was not made public in any formal sense.

However, GAO did provide some documentation on several grounds for protest that it denied.<sup>69</sup> These included such issues as the following:

- *Risk associated with system integration and software.* Here, Boeing alleged that the Northrop Grumman/EADS proposals should have received a higher risk rating than Boeing’s. The Air Force argued that both offerors proposed substantial software reuse and, because of this and a variety of other issues, the Air Force ranked both proposals as moderately risky. GAO agreed with the Air Force and denied the Boeing protest.
- *Management risk associated with production lines and production approach.* Boeing objected to the Air Force assessment of the production approach risk of the Northrop-Boeing/EADS proposal, but GAO upheld the Air Force position.
- *Past performance risk.* Boeing protested three aspects of the Air Force assessment of both offerors’ past performance. The Boeing protests covered the relevance of the contracts

<sup>69</sup> U.S. Government Accountability Office, 2008.

selected, the alleged unequal treatment of the offerors, and the alleged lack of documentation of the past performance judgments. GAO noted that although the two offerors received the same overall rating in past performance, the SSA awarded Northrop Grumman/EADS a higher rating than Boeing in the program management area. GAO concluded that, based on the available documentation, the Air Force assessment and the SSA decision were reasonable.

- *The IFARA factor measuring fleet-wide refueling capability.*<sup>70</sup> Boeing protested the Air Force evaluation determining that the KC-45 was superior to the Boeing proposal in the IFARA analysis, because the Air Force allegedly based this solely on the fleet effectiveness factor and failed to evaluate other factors and insights. GAO reviewed this analysis and concluded that the SSAC and SSA did review other factors and thus found that the Air Force evaluation was reasonable.
- *Various cost issues.* Boeing protested a variety of other cost evaluations made by the Air Force, including upward adjustments of Boeing's estimated costs for budgetary aircraft costs and O&S repair costs and the assessment of Northrop Grumman/EADS KC-45 fuel costs. GAO found nothing in the record to sustain these protests.

In short, in these cases and apparently many others, GAO found that the Air Force had carefully followed government regulations and GAO precedents and deferred to the Air Force on substantive judgments.

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<sup>70</sup> IFARA was an evaluation of fleet refueling effectiveness under a variety of scenarios using an existing model to develop a final fleet effectiveness value score.

## ***Other Observations on KC-X***

- **Protesters filed 100+ grounds for protest following source selection decision.**
  - **GAO denied all but eight, usually without explanation.**
  - **“Shot gun” approach seriously tested SPO capacity to respond to protests**
  - **SPO had little insight into which of these to take seriously**
- **Sustainments occurred despite intense quality control, quality assurance efforts.**
  - **A closer, more technical scrub would be required to resolve inconsistencies, lack of discipline**
  - **Formal legal review failed to anticipate GAO concerns**
- **GAO relied heavily on its own judgment of reasonableness of cost estimation. That judgment appears to be well informed.**
- **Difficult to reconcile GAO’s materiality determinations with formal GAO definition of materiality.**

RAND

GAO Bid Protests in Air Force Source Selections -39-

This slide concludes with some broad points regarding the overall Air Force experience on the KC-X protests and draws some comparisons with the CSAR-X protest experience. As noted above, Boeing filed more than 100 grounds for protest following the source selection. GAO denied all but eight, with virtually no public explanation of the reasons for the more than 90 percent of grounds for protest that were denied.

It is clear that, in both the CSAR-X and KC-X experiences, the protesters used a shot gun approach in an attempt to overwhelm the SPO’s’ capability to respond to the protests and in the hope of finding at least one point that might gain traction with GAO. In both cases, the protests nearly overwhelmed the program offices with workload.<sup>71</sup>

Boeing filed at least eight waves of potential protest grounds. By the end, Boeing’s protest filled 1,000 pages. Strong evidence exists that it probably learned a great deal about how to do this from the CSAR-X case. The KC-X program office was heavily challenged by the deluge of protest grounds but apparently was not hit as hard as the CSAR-X program office, perhaps because the KC-X program office had also learned from the CSAR-X experience.

Perhaps an even more important point is that, in both the CSAR-X and KC-X cases, GAO found errors and sustained a small number of grounds for protests, despite intensive and rigorous quality control and QA efforts by the program offices and the Air Force acquisition professional staff, both before the protests and during the protests. This is a significant point, because one of the key process improvements the Air Force has identified for avoiding future protests is the implementation of greater oversight and outside review of the RFP development and proposal evaluation processes. However, it is difficult to imagine a more rigorous and sub-

<sup>71</sup> As with much of the material in this chapter, the material in this paragraph and those that follow is based on interviews with individuals close enough to the source selection to base these observations on their own personal knowledge.

stantial review process than the one that actually took place in the cases of both the CSAR-X and KC-X. The entire process was vetted multiple times up and down the chain of command and through the use of numerous outside experts and assessment panels. High-quality, formal legal reviews failed to ferret out the issues that gained traction with GAO and led to sustained protests. And no review could have caught problems in costing technique unless that review had challenged the adequacy of this technique at a basic level.

Perhaps the most effective course the Air Force could adopt would be to form extremely aggressive “red teams,” possibly including high-powered outside attorneys, to scour the RFPs and evaluation documentation with hostile intent to simulate the activities of a protesting contractor. We discuss this in more detail below.

In cases where the Air Force did not fully document its cost analysis approach and methodology, GAO relied on its own judgment of reasonableness. In several cases, GAO’s judgment appears well informed.

As in the CSAR-X case, officials in the KC-X program office had great difficulty distinguishing serious grounds for protest from ones they could easily brush away. They believe that they could not have predicted with much confidence which would ultimately “stick.” They used the level of interest GAO showed in specific issues to try to predict, but GAO sustained some grounds for protests without even asking about them in hearings.

On several of the specific grounds for protest, real questions can be raised regarding the materiality of the issues reviewed and sustained by GAO. Several of the sustained grounds for protest do not seem to meet GAO’s standard of materiality. This issue and the one summarized in the prior paragraph greatly complicate the Air Force’s goal of writing better RFPs and conducting more disciplined source selection evaluations, because GAO’s particular areas of interest and focus sometimes remain unclear.



## Synthesis of Findings

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### *Road Map*

- How source selections and bid protests work
- Patterns for bid protests during FY2000-08
- Protests sustained in CSAR-X, KC-X source selections
- **Synthesis of findings**
- **Potential changes in policy or practice**

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GAO Bid Protests in Air Force Source Selections 40

This chapter synthesizes findings from the material we have just discussed and from broader discussions with knowledgeable people inside and outside the Air Force and GAO. It begins with an overview of broad patterns in Air Force experiences with GAO bid protests. These patterns suggest that the Air Force should focus any efforts to adjust its policies regarding source selection and protests on acquisitions that are likely to attract offerors who could become “sophisticated protesters.” It describes what this means and then reviews a series of adjustments that the Air Force could make to reduce the likelihood that sophisticated protests succeed and to mitigate the costs to the Air Force when they do. These suggestions are generally consistent with the Air Force’s current direction as defined in the AIP, but they (1) refine some directions, and (2) offer some potential extensions.<sup>1</sup>

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<sup>1</sup> U.S. Air Force, 2009a.



## ***Overall USAF Experience with Bid Protests Has Been Positive***

- **During 1991-2008, the number of protests against USAF source selections fell fairly steadily**
- **Since 2001, the percentage of protests that led the USAF to change its source selection decisions has dropped fairly steadily**
- **During 2000-08, protests led USAF to change only 0.2% of all source selection decisions**
- **Even in recent, highly visible problem cases, GAO has dismissed or denied over 90% of individual grounds for protest that arose within those source selections**

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GAO Bid Protests in Air Force Source Selections 41

### **Overall USAF Experience with Bid Protests Has Been Positive**

Looked at broadly, the Air Force experience with GAO bid protests over the last two decades has been positive. Relative to the total number of contract awards, the total number of protests each year has fallen since 1991. The number going to merit reviews has trended downward. The number of corrective actions rose somewhat during the 1990s but has been trending down since 2001. Throughout the period, the number of merit protests sustained by GAO has remained very low, with no apparent trend. The net result of all these trends is that, during 2000–2008, the Air Force had to change only about 0.2 percent of all source selections associated with contract awards in response to protests.

Somewhat more subtly, the Air Force has also displayed a high level of success with the large number of protests that have characterized recent sophisticated efforts to overturn Air Force source selections. No one maintains an official record of how many discrete grounds for protest occur within any one acquisition. Reasonable estimates suggest that the first effort to overturn the CSAR-X source selection decision involved about 130 issues. GAO rejected the protest grounds for all of these but one. The effort to overturn the KC-X source selection decision also involved about 130 issues; GAO rejected the protest grounds for all of these but eight. GAO only had to sustain one issue in a protest to force a change in the Air Force approach. But it is worth keeping in mind how many faulty claims protesters made to achieve a sustainment on a single issue.

This experience suggests that, looked at broadly, Air Force source selection policies and practices work. Improvements are always possible, but any sense of crisis associated with recent events should be kept in perspective. The broad record suggests that far-reaching changes in

Air Force source selection policies and practices are not required and, in fact, might even lead to more harm than good. The Air Force should target change where the problem is largest.

## ***USAF Should Be Cautious About Generalizing from CSAR-X, KC-X Cases***

- **Both used preexisting designs. It was hard to define requirements clearly while preserving competition.**
  - **Must define requirements generally enough to induce all desired sources to participate**
- **Both involved high-value acquisitions with long-term implications for global industrial base**
  - **Winners may be last global providers standing**
  - **Fiduciary responsibility may require a CEO to protest any loss, even with a small probability of reversing it**
  - **Prominence of foreign offerors raised the political visibility of both source selections**

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GAO Bid Protests in Air Force Source Selections 42

### **USAF Should Be Cautious About Generalizing from CSAR-X, KC-X Cases**

Despite this broad record of positive experience, the Air Force has drawn sharp criticism for the protests that GAO sustained in the CSAR-X and KC-X programs. Something different is clearly occurring here. In response, the Air Force undertook aggressive efforts to adjust its acquisition policies and its source selection policies in particular. But before focusing too much on changes in policies and practices designed to address issues that arose in these two acquisitions, the Air Force should recognize how unusual they are, relative to other large Air Force acquisitions.

At a minimum, with the exception of two other acquisitions tainted by the personal scandals associated with Darleen Druyun, they were the only Air Force system acquisitions since 2001 in which GAO sustained protests. Some even argue that the Druyun-related scandals in themselves invited GAO to view the Air Force system acquisitions that followed with closer scrutiny and to hold the Air Force to a higher standard than it had in the past. We found no evidence of this. But these two acquisitions do differ from other Air Force acquisitions in several other important ways.

First, both involve system designs likely to be derived from preexisting designs. The CSAR-X design was expected to draw heavily on the design of preexisting military and commercial helicopters. The KC-X design was expected to draw heavily on a preexisting commercial aircraft design. This presents a challenge to defining acquisition requirements if the Air Force wants to maintain competition and avoid choosing the winner in the statement of its requirements. The more precisely the Air Force stated its requirements in such a setting, the easier it would be for potential offerors to compare available designs against the requirements

and determine which would likely win. Unless an RFP left enough room for at least two offerors to make serious proposals, it would not be rational for anyone but the apparent front runner to enter the competition.

The Weapon Systems Acquisition Reform Act (WSARA) is likely to induce a situation like this to arise more often in major system developments.<sup>2</sup> WSARA requires that a number of actions, such as competitive prototyping and a preliminary design review, occur before the Air Force selects a source to complete development of a new system through engineering and manufacturing development (EMD). Such actions are designed to mature systems offered for EMD. Such maturation in all likelihood will increase public understanding of the systems being offered, complicating the development of requirements that can sustain competition during a source selection in the same way that public knowledge of capabilities in the CSAR-X and KC-X source selection complicated those.

One might argue that, if the Air Force understands its requirements clearly and those requirements point to one design, no competition is necessary. But political pressures in both of these source selections made effective competition a goal in its own right. The Air Force was under heavy pressure to ensure that competition occurred. In addition, even if the Air Force knows which proposal it expects to prefer, competition can help impose discipline on the offeror behind this proposal to give the Air Force the proposed system on reasonable, cost-effective terms. Throughout the CSAR-X and KC-X source selections, senior Air Force officials made it clear that they did not have a preferred outcome. But even if they had, competition would have been desirable for the reasons stated above. Knowing this, the Air Force had to frame its requirements with exceptional subtlety to induce enough offerors to participate in each of these source selections. This subtlety became problematic in the KC-X acquisition. The Air Force should not expect this problem to be as serious in circumstances where the attributes of potential proposed designs were not so well documented in the public record.

The high stakes associated with the CSAR-X and KC-X acquisitions also created exceptional circumstances in both cases. First, each acquisition had a high dollar value. In the KC-X, this value was magnified by the expectation of two follow-on acquisitions of approximately equal value; success in the first would likely support further success in the follow-ons. Second, the winner of each competition was likely to emerge as the global front-runner for the technology in question, gaining an advantage not only in the U.S. market but in markets for other nations seeking the same capability. Technology maturation and learning in production would give the winner an advantage in future competitions that any challenger would have difficulty overcoming. In the extreme, a failure in either source selection could foreclose a loser's future business opportunities in a large share of its potential markets.

In the face of these considerations, the chief executive officer (CEO) of any losing offeror would have a fiduciary obligation to pursue a protest, even if the chances of success were small. The stakes associated with each of these source selections were so high that even a costly campaign to protest the decision could be not only worthwhile from the loser's point of view but absolutely necessary to satisfy stockholders. These stakes make it easy to appreciate the intensity and sophistication of the protest efforts launched in both these source selections. It is hard to imagine that any traditional government jawboning could have dissuaded the losers from pursuing these efforts.

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<sup>2</sup> U.S. Congress, *Weapon Systems Acquisition Reform Act of 2009*, P.L. 111-124, Washington, D.C., May 2009a. Appendix A provides a short summary of WSARA and a discussion of its implications for the issues raised in the text.

Finally, each of these source selections included a significant role for foreign offerors. The Air Force was clear throughout both that it had no position on whether an American or a foreign offeror prevailed.<sup>3</sup> But the potential of a foreign winner raised congressional interest in both competitions and created a heated political environment that heightened the stakes of these competitions in the public policy forum still higher. We found no evidence that this congressional interest affected decisionmaking within the Air Force or GAO in either source selection. But individual decisionmakers do not deliberate in a vacuum, and those responsible for the source selections themselves and GAO's review of them could not avoid being affected by arguments raised in the external debate. This probably made each of these source selections more complicated and more difficult to review objectively than a typical acquisition of similar size, but lacking any foreign participation, would be.

In sum, there are many reasons to believe the CSAR-X and KC-X acquisitions were more prone to protest than typical, large Air Force source selections. That said, the Air Force should not be complacent about the potential for similar problems in the future.

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<sup>3</sup> The RFPs for both procurements included mandatory Buy American Act (BAA) provisions. These provisions exempt contractors in "qualifying countries" from the BAA, treating them the same as U.S. companies for contract award purposes. The political debate revealed no general awareness of this treatment or its role in America's broader program to promote the exports of U.S. defense firms. U.S. firms are treated (reciprocally) as domestic contractors in procurements that occur in qualifying countries.

## ***USAF Will Continue to Face Challenging Protests in High-Value Acquisitions***

- **Sophisticated protesters are learning how to achieve sustainments.**
- **Knowledgeable third-party bar is building its skills.**
- **Sophisticated protests are costly, but**
  - **Worthwhile in high-value acquisitions, and**
  - **Higher cost may place USAF at disadvantage if it does not expand its capabilities to defend itself.**
- **Rate of sophisticated protests could grow.**

**If sophisticated protesters understand GAO's rules better than USAF does, they will win**

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### **USAF Will Continue to Face Challenging Protests in High-Value Acquisitions**

GAO quickly dismisses the majority of protests, because the protesters make obvious errors. These “naïve” protests impose costs on the Air Force, but the costs are small. And much of the improvement in the Air Force’s protest experience during the 1990s came from a reduction in these naïve protests and in the resulting need for the Air Force to deal with them until GAO dismissed them.

The protests associated with the CSAR-X and KC-X acquisitions were anything but naïve. But, as noted above, they were exceptional in many ways. The main thing that the Air Force can learn from the pattern of protests that we have described is that the sophisticated nature of the CSAR-X and KC-X protests is likely the product of circumstances that the Air Force will face again, even without the complications of subtle requirements and foreign sources that make these two acquisitions especially exceptional.

Sophisticated protest campaigns are costly. As a result, we should expect comparable protests only in circumstances where the expected benefits of a protest campaign exceed its cost to a losing offeror. As argued above, that is more likely to occur when the net revenue associated with winning a source selection is large enough. And it is more likely when the stakes of losing—for example, potentially being shut out of important business in the future—are large enough.

That said, evidence from the two acquisitions we explored in depth suggests that sophisticated protesters are learning how to achieve GAO sustainments in merit reviews. Certainly, attorneys associated with the CSAR-X protest benefited significantly from that experience when they later participated in the KC-X protest. And the private bar is probably becoming

increasing capable of supporting or even designing such campaigns. As the ability of losing offerors to protest successfully improves, the balance between future net revenues at stake and campaign costs shifts, justifying sophisticated protests in circumstances when smaller future net revenues are in play. Further learning could bring the level of stakes required to justify sophisticated protest campaigns down even lower. The more this occurs, the more likely the Air Force will face sophisticated protests in the future.

It is likely that one thing sophisticated protesters are learning is that it is hard for the Air Force to surge its resources to counter sophisticated protests. The Air Force has a large staff of attorneys who can be deployed as needed and is increasing its staff to enhance legal support to source selections. Program offices can, in principle, call on core resources in a similar way but in the protests we examined in detail, they had difficulty doing this. The workload on one of the programs was so high that it had great difficulty moving beyond the protests discussed here. A lesson that protesters might take away is that an aggressive protest can stress Air Force capabilities. This could potentially encourage protests explicitly designed to overwhelm available Air Force resources in an effort to force errors that protesters can exploit with resources that they can expand rapidly when errors become apparent. It is possible that the discovery of this Air Force weakness, in itself, may help explain an increased willingness to pursue sophisticated protests.

GAO normally recommends that the Air Force reimburse a successful protester for “allowable costs” of protesting.<sup>4</sup> These can cover a large portion of all legal costs, even if GAO sustains only one of the many grounds for protest that attorneys have developed for the protester. This GAO policy tends to push any cost-benefit calculus toward supporting a protest if an offeror believes that it has a reasonable chance of prevailing on at least one ground for protest. In particular, if a sophisticated protester believes that it has found ways to increase the probability of having a protest sustained in the presence of any given set of legal facts, GAO’s reimbursement policy tends to push any cost-benefit calculus still further toward supporting a protest.

In the face of this threat from sophisticated protesters, the Air Force has a simple and direct defense—learn enough about how these campaigns work so that it can limit their success, either by foreclosing opportunities for protest during the design and execution of a source selection or by being prepared for the protests when they come. A failure to build such a defense will likely encourage still more sophisticated protests and more sustainments against the Air Force’s interests.

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<sup>4</sup> If an agency takes corrective action within 30 days of the date of filing of the protest, the protester is not entitled to recover attorneys fees or protest costs.

## **A Bid Protest Is an Adversarial Proceeding with Finely Tuned Rules**

- **Goals of a GAO proceeding differ from USAF goals:**
  - **USAF acquisition seeks to balance priorities of regulations and the warfighter.**
  - **GAO considers only federal acquisition law.**
  - **Result: Many in USAF question GAO’s motives.**
- **USAF would benefit from a better understanding of GAO’s impersonal, judicial-like approach.**
  - **Attorneys for protesters use such an understanding to scour USAF documents for errors.**
  - **USAF could include attorneys in a red team to anticipate and preempt this effort.**

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GAO Bid Protests in Air Force Source Selections .44 .

### **A Bid Protest Is an Adversarial Proceeding with Finely Tuned Rules**

In our discussions with Air Force personnel, most appeared to be surprised, confused, or even offended by the difference in the priorities of the Air Force and GAO in a bid protest. Air Force acquisition personnel understand the importance of the acquisition regulations that GAO enforces, but they also appreciate the importance of rendering decisions that ultimately serve the warfighter. When ambiguities arise, they may not notice them, because the attention they give to the warfighter helps them clarify the ambiguities in ways that seem to embody common sense for most personnel with a similar perspective. For example, if disagreements arise about how to interpret the language in an RFP during the evaluation of proposals, Air Force personnel often find it natural and reasonable to resolve such disagreements in ways that favor the clear priorities of the warfighter. Military practice emphasizes that few plans survive their first contact with the enemy; inherent uncertainty demands adaptability, informed by constant awareness of the higher priorities of the military mission.

That is not how GAO views the world. GAO draws its authority directly from congressional legislation seeking to highlight the inherent importance of federal acquisition policy. When the Congress considered the best ways to do this, one option was to invest the responsibility for bid protests in the inspectors general of the individual military services where acquisitions occurred. Congress explicitly rejected this option and instead gave the responsibility to an independent third party—GAO. It did this to ensure that the principles of the acquisition regulations were given adequate attention, quite separate from the military missions of the services in which acquisition occurred. That is, GAO draws its authority to review bid protests precisely from a congressional judgment that GAO should not rely on military judgment to



resolve uncertainty. Rather, as an independent agency, GAO should focus on the language in any particular source selection to speak for itself and to interpret this language as a reasonable person would without falling back on military priorities when the language itself is unclear.

That is not to say that GAO will not defer to military judgment. In fact, in the majority of merit reviews, GAO shows great deference to military judgment where the source selection documents clearly define the role for such judgment and the documents underlying evaluation and the final choice of a winner clearly explain the application of that judgment.

Rather, when the language in these documents speaks clearly for itself, GAO accepts this language on its own terms. When the language does not speak clearly, GAO does not resort to the military reasoning that might have resolved any uncertainty in a purely Air Force setting. In fact, GAO views its congressional mandate as requiring judgment quite separate from such military judgment when judgment is required to resolve uncertainty in a source selection.

Most of the Air Force personnel we spoke to greet such a perspective with marked cultural dissonance. To them, it seems technical, counterintuitive, and not supportive of the military mission that most Air Force personnel take for granted. Just beneath the surface, one can feel a certain suspicion that the Air Force and GAO are not on the same team. Viewed appropriately, that suspicion is correct. GAO and the Air Force have separate and distinct missions that naturally come into conflict in bid protests. To be as effective as possible in bid protests, the Air Force personnel in question need to understand this difference in perspective, to understand the rights that GAO gives the Air Force in its bid protest process, and to take full advantage of those rights.

GAO's bid protest process is purely administrative, but GAO has chosen to run it in a quasi-judicial way. GAO tries to focus on procedural issues without involving itself in the substance of the issues raised in a source selection. To do that, it views itself as an impersonal arbiter, simply applying the statutory guidance that defines its mission to the specific facts of individual bid protests. It uses standard administrative methods to promulgate rules of procedure that are consistent with its enabling legislation. It does not use such methods to promulgate specific rules on what government agencies can or cannot do in specific circumstances during a source selection to remain in compliance with this legislation. It is simply the creature of the congressional rules that it applies.

That said, the history of GAO's bid protest decisions yields a record of how GAO interprets the congressional rules that it enforces. When it explains its decision in one bid protest, it relies heavily on decisions it has made in similar cases in the past to explain the reasoning underlying the new decision. The record of GAO decisions closely resembles that generated by judicial decisions in courts. The record itself provides a public statement of how GAO officials think. GAO has been careful not to offer any formal statements of "how GAO thinks" outside the context of specific decisions that apply congressional rules to new sets of facts. That allows GAO to avoid any responsibility as a formal rule maker, with all its attendant administrative responsibilities. But as a practical matter, GAO's decisions explain how it approaches individual bid protests and, in doing so, reveal a set of implicit rules that the Air Force can use to understand what to expect in any new bid protest.

As a practical matter, this approach tends to refine GAO's perspective over time. We should expect merit reviews only when some degree of uncertainty prevails about how GAO will rule. If everyone agrees on how GAO would treat any new set of facts, no one benefits from going forward with a merit review. In this setting, as GAO faces more and more individual sets of facts in bid protests over time, each new set of facts gives GAO a potential oppor-

tunity to clarify its interpretation of the congressional rules it applies in a way that helps resolve the uncertainty that led to the merit review. Over time, this approach necessarily requires that GAO clarify distinctions between situations with different sets of facts and thereby surfaces more and more precise GAO judgments about the practical meaning of congressional rules. As this occurs, it is likely that bid protests today turn on finer distinctions—are more technical in character—than bid protests in the past. So it would be reasonable to expect that GAO’s decisions tend to become increasingly technical in character over time. To the degree that this occurs, the Air Force should not conclude that GAO review officials are consciously becoming less deferential or more picky. Rather, it is a natural consequence of how GAO makes decisions. It will continue. As a result, it behooves the Air Force to accept this trend and accommodate itself. The better the Air Force can anticipate how GAO will treat a new set of facts, the better able the Air Force will be to avoid protests in the first place and respond to them when they occur.

GAO seeks to focus on procedure to avoid second-guessing the Air Force’s substantive decisionmaking. This can be difficult when GAO seeks to assess how reasonable the Air Force has been in evaluating a proposal. Three of the ten grounds for sustainment in the CSAR-X and KC-X source selections raised questions about whether the Air Force’s approach to cost estimation was “reasonable.” In its discussion of these sustainments, GAO made strong statements about how the Air Force should think about cost that, in the KC-X sustainments, ultimately directed the Air Force how to estimate cost. GAO’s guidance appears to carry GAO deep into the substance of how the Air Force makes decisions about source selections; we discuss the issues raised in greater depth below.

GAO’s review process also necessarily extends beyond procedural issues when it determines whether an Air Force error has “prejudiced” any offeror in a source selection. This determination does not directly shape how the Air Force should correct any specific error. But it directly affects whether GAO recommends any correction at all. “Prejudice” exists when an error is serious enough to change the outcome of the source selection. If prejudice is not present, GAO will not sustain a protest. How does GAO decide when prejudice exists? It has no formal rules or guidelines for its review officials. In the context of how the Air Force has applied the terms of an RFP, to reach substantive judgments on who should win and why, GAO officials must judge whether any particular error would affect the balance of substantive Air Force judgments enough to affect the final decision. Even if GAO does not question the substance of most Air Force judgments, it must assess how the substantive implications of an error fit in this broader substantive context—in effect, what substantive change the Air Force would make in its own judgments if it corrected the error. That is, even where GAO is concerned solely about procedural errors, GAO decisions to sustain a protest based on a procedural error necessarily depend directly on GAO judgments about Air Force decisions on substantive issues. Those judgments are likely to conclude that any error is prejudicial in a close procurement.

At the end of the day, the Air Force should not be dismayed that GAO is not friendlier or fails to defer regularly to Air Force military judgment. GAO clearly views the Air Force as one participant in an adversarial proceeding very much like that in a normal courtroom. The main practical difference is that the Air Force lacks some of the basic rights that a party would have in a courtroom. That is unfortunate and perhaps even unfair. But because any attempt to change that would likely increase the administrative burden imposed by the bid protest process, GAO is unlikely to change the balance of power in the current process. And Congress would probably not support Air Force efforts to make such a change. Given the Air Force’s

generally improving overall experience with bid protests under the current system, even the Air Force itself might regret asking for basic changes that would necessarily complicate bid protests for everyone.

Given the basically legal nature of the process as it exists today and is likely to continue to be in the future, it is natural to imagine an expanded role for attorneys in the process. Attorneys were already heavily involved in two grounds for sustained protests in the CSAR-X and KC-X source selections. The Air Force's effort to respond to the first sustained protest in the CSAR-X case by limiting the ability of offerors to adjust their proposals was heavily vetted by attorneys in the Air Force and OSD. Similarly, when the KC-X program office decided to downgrade its evaluation of Boeing on one subfactor without discussions, it heavily vetted this decision with Air Force attorneys, who endorsed the decision on narrow technical grounds. The role of the attorney is to advise the client. The client must make the decision as to how to proceed. The challenge for Air Force attorneys and decisionmakers today is to learn appropriate lessons from these decisions so that GAO is less likely to sustain similar protests in the future.

The Air Force is already expanding the numbers of attorneys it has available to support source selections in the future. This could make it easier for Air Force attorneys, and potentially for third-party attorneys working under the direction of Air Force attorneys, to pursue new opportunities. Although GAO initially designed the process to allow protesters to use it without legal representation, sophisticated protesters are now using highly skilled attorneys working hard to take full advantage of its idiosyncrasies. For example, the waves of grounds for protest that both the CSAR-X and KX-C programs experienced show clear marks of an orchestrated process to generate grounds for protest designed in part to release significant numbers of government documents that would likely provide material for still more grounds for protest. The grounds for protest offered show the marks of subtle legal thinking designed to appeal to the GAO attorneys who will make final decisions on sustainments and rejections.

A government red team, including attorneys, could proactively scour decisions and documents generated during Air Force source selections seeking to anticipate how a protester's attorneys and advisors would do the same thing after a protest starts. Such a team might also include engineers, logisticians, contracting specialists, cost analysts, and so on; our discussion here focuses on the expanded role that attorneys might play.<sup>5</sup> This review would not be a standard review designed to ensure orderly program execution. Rather, it would deliberately seek weak points, expecting that protesters will use any weak points they discover to leverage their resources to greatest effect. That is, it would anticipate that, in source selections likely to involve sophisticated protesters, the end game will occur in an adversary process in which the Air Force will be asked to defend all of its actions through the course of the source selection.

This approach is likely to be most effective if the Air Force can shield the deliberations of red teams from the official record of the source selection provided to a protester.<sup>6</sup> Red teams will always have limited resources and will have to make decisions about where to focus their attention. Discussions will inevitably arise about whether the structure of an RFP is "good enough," and decisions will have to be made even in the absence of consensus. If a protester

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<sup>5</sup> That said, many of the points raised here about attorneys apply to other potential participants on a red team. The Air Force currently uses review teams with such personnel. The red team we describe would not replace these teams. It could act as an integral part of existing review teams.

<sup>6</sup> Today, the Air Force releases multifunctional independent review team (MIRT) and peer review findings to protesters. The program office must carefully document how it reacts to recommendations from these reviews.

can look at where a red team focused its attention or review the statements of dissenters in this process, such information would become the natural basis for a check list that a protester could use to identify weak points.

Today, when a protest occurs, the Air Force benefits from the attorneys that the winning firm can bring to bear to help defend Air Force decisions made earlier. A government red team would have to be constituted and active long before the government revealed winners and losers. Initial hard reviews would occur before the Air Force released a final RFP. Equally demanding reviews would occur during the evaluation phase—perhaps just before the call for FPRs—and before approval of the final decision. The Air Force would have to rely on its own resources to generate such a capability.

Adding attorneys and steps in the source selection process in which attorneys can review Air Force actions would almost certainly raise the administrative costs of the source selection and add calendar time to its schedule. Additional attorneys cost money to train and sustain; this expense will be easiest to justify if these attorneys can reduce other costs still more. Similarly, because the tasks that attorneys perform will almost surely be on the critical path of any source selection, it will be easiest for the Air Force to justify their presence there if they can shorten the calendar time associated with other steps on the critical path—for example, the calendar time required to complete evaluation or deal with a sustained protest. The protest-induced monetary costs and delays experienced in the CSAR-X and KC-X source selections were large relative to the added cost and delay one might hypothetically associate with any legal red team. But when asking how large a red team should be or how many calendar days the Air Force should give it for review, as the Air Force adds more and more person-days, the incremental benefit of an additional legal person-day will ultimately fall so that it is lower than the cost the Air Force expects for such a person-day.

Such considerations make it clear that any red team activity must be coordinated with other oversight activities, such as MIRTs, to avoid redundancy and limit the burden placed on the people actually conducting the source selection. We conceive the deliberate search for weaknesses as different in character from the compliance perspective that tends to dominate most external oversight, but no bright line separates such activities. For example, closely matching the information requested in a source selection to the methods that the source selection will use to apply this information in evaluation would be a natural activity to include in either approach.

This red-teaming capability need not be wholly organic. The Air Force legal community has been reluctant to use contract attorneys to perform legal tasks that could easily be regarded as inherently governmental.<sup>7</sup> The red team envisioned here involves no activities that could

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<sup>7</sup> The FAR defines the formal meaning of an “inherently government activity” in Subpart 7.5. The Air Force General Counsel has concluded that legal services provided directly to government officials performing inherently governmental functions, such as acquisition professionals, are inherently governmental themselves (personal communication with James Hughes, Air Force Deputy General Counsel for Acquisition [SAF/GCQ]). The Office of Management and Budget recently proposed restricting the type of activities contractors can perform to extend beyond inherently governmental activities in a number of ways (Office of Management and Budget, Office of Federal Procurement Policy, “Work Reserved for Performance by Federal Government Employees,” Notice of Proposed Policy Letter in *Federal Register*, Vol. 75, No. 61, March 31, 2010, pp. 16188–16197): “Functions closely associated with the performance of inherently governmental functions,” for example, could become off-limits to contractor provision if contractor provision “impinge[d] on federal officials’ performance of an inherently governmental function.” Such activities could include “technical advisors to a source selection” and “drafting of legal advice.” The proposed guidance would also define “critical functions” that are “core to the agency’s mission and Operations, . . . whose importance to the agency’s mission and operation requires that at least a portion of the

be construed as inherently governmental. It is strictly an advisory activity with no authority, for example, to exercise discretion in applying federal government authority. In fact, external attorneys might be more effective in this role, because they might show less deference to the government personnel working within a source selection and, if drawn from the same private bar that advises sophisticated protesters, might be exceptionally knowledgeable about how these protesters operate.<sup>8</sup>

Use of third-party attorneys is not a perfect solution. They are expensive relative to government attorneys with comparable experience. Even junior attorneys carry heavy indirect costs, and the real benefit from external attorneys would come from attorneys with appropriate experience. Conflict of interest issues would have to be carefully addressed with experienced attorneys to separate those supporting the government from those supporting protesters. The bars of all states and the federal bar all have clear and strict ethics rules about conflicts of representing clients.<sup>9</sup> But the application of these rules to our setting might limit the government's access to the best attorneys available on the market. These problems will presumably become less compelling as the Air Force grows the number of in-house attorneys who support source selections.

The government should also be cognizant that, despite any conflict of interest agreement, work for the government today could teach an attorney or law firm how to support a protester in the future. The Air Force saw this occur at close quarters in the CSAR-X and KC-X protests when attorneys supporting Boeing in the CSAR-X case and supporting the Air Force in the CSAR-X protests used what they learned about the Air Force in that source selection to mount an effective sophisticated protest for Boeing in the KC-X source selection. That is, private-sector attorneys are already working very close to the government in bid protests and learning about how government processes work. They do not have to work directly for the government to do that. Nonetheless, the Air Force might want to explore appropriate terms of engagement before bringing private-sector attorneys even closer to the Air Force source selection process.

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function must be reserved to federal employees in order to ensure the agency has sufficient internal capability to effectively perform and maintain control of its mission and operations." Only government personnel could perform such functions. These restrictions have not been finalized. In their current draft form, they appear more likely to restrict use of third-party attorneys on red teams because such teams might be considered too "closely associated with the performance of inherently governmental functions" than because they were themselves critical functions (Office of Management and Budget, "Notice of Proposed Policy Letter," 2010).

<sup>8</sup> By similar reasoning, it would be undesirable to use military retirees or former Air Force employees on such red teams, because they would likely be too close in their thinking to the SPO's approach and would likely share its biases and blind spots. The goal is to find red team participants familiar with the practices and culture of aggressive protesters, not the practices and culture of the Air Force. We thank Elliot Axelband for this insight.

<sup>9</sup> We thank Bruce Held for this insight and others about the challenges of using third-party attorneys in this setting.



## ***Plans to Clarify Trade-Off Process in Future USAF Source Selections Appear Useful***

- **Trade-off process has pros and cons**
  - **Pro: Provides framework to increase performance in discussions.**
  - **Con: Can create ambiguity that allows GAO to say what is “reasonable.”**
- **New draft RFP for KC-X strikes useful new balance.**
  - **Greater reliance on pass/fail evaluation.**
  - **Emphasis on discriminators in trade space.**
  - **Clearly stated priorities among requirements.**

RAND

GAO Bid Protests in Air Force Source Selections -45-

### **Plans to Clarify Trade-Off Process in Future USAF Source Selections Appear Useful**

Source selections that trade off price and performance have improved the Air Force’s ability to induce offerors to write proposals that are responsive to Air Force priorities.<sup>10</sup> Such source selections identify a set of requirements and set a “threshold” and “objective” level for each requirement.<sup>11</sup> A proposal must achieve the threshold for every requirement listed in the RFP. The Air Force adds incremental credit as a proposal offers more than the threshold level of a requirement, up to the objective level. The proposal earns nothing more if it offers more than the objective. The range between the threshold and objective for each requirement, viewed across all requirements, constitutes the trade space within which the Air Force assesses the relative value of increases in offered performance for various requirements.

To use this method of source selection to greatest advantage, the Air Force requests for proposals must identify thresholds and objectives clearly and explain clearly how Air Force evaluators will assess the value of increases in offered performance across all requirements in the trade space. When an RFP has done this well, exchanges between the Air Force and its offerors during evaluation create a natural environment in which the Air Force can explore options with offerors and negotiate with them to move from a threshold toward an objective

<sup>10</sup> U.S. Air Force, 2009b, defines this approach in detail.

<sup>11</sup> If the objective equals the threshold for a requirement, the requirement is not part of the trade space. When this occurs, an offeror must achieve the threshold to be considered responsive. For such a requirement, the Air Force provides no extra credit for any performance beyond the threshold.

in the most cost-effective way possible. Advocates believe that this approach has helped the Air Force increase what it gets for the money it ultimately pays the offerors that win source selections.

As advantageous as this approach may be, it probably makes it easier for protesters to have protests sustained. First, priorities within the trade space can be inherently complex and ambiguous. The more complex and ambiguous they are, the more opportunities protesters have to demonstrate that (1) an evaluation deviates from the RFP criteria used in a source selection, (2) the Air Force has not treated offerors equally, or (3) the Air Force has used unreasonable methods or judgments to evaluate criteria in the trade space.

Second, if negotiation reduces the differences between the offers proffered in the FPRs, these small differences potentially open more opportunities for Air Force errors to change the outcome of a competition. Given ambiguity about how GAO decides when an error can affect the outcome of a source selection in practice, this second point is not as compelling as the first. And some observers note that, if negotiation refines all proposals to the point where Air Force evaluation documents that all proposals “exceed specified minimum performance or capability requirements in a way beneficial to the government,” and so all can be given a “blue” rating, then the outcome of the source selection will turn on price.<sup>12</sup> In this situation, errors that do not affect the blue rating for any subfactor cannot change the outcome of the source selection and so should not lead GAO to sustain a protest based on such errors.

Other Air Force observers caution that, even if all proposals exceed minimum requirements in any subfactor, it is desirable from the Air Force’s perspective to draw finer distinctions and seek to discriminate among such proposals where possible. This generally involves using a list of considerations to rate each subfactor. If the Air Force source selection team cannot discriminate among proposals on the basis of the most important considerations in the list, it can move down the list to secondary and, if necessary, tertiary considerations.<sup>13</sup> If the source selection team takes this approach, relatively small errors in evaluation can potentially affect the outcome of the source selection and so prompt a sustained protest.

In the protests sustained by GAO that we examined, we saw many examples of this latter approach without GAO objection. This suggests that GAO is comfortable with an Air Force source selection designed to draw fine distinctions among proposals when more than one exceeds minimum requirements. GAO appears to be concerned not with how fine a distinction the Air Force draws when assessing any particular subfactor but with how well the Air Force evaluation hews to the description of potential distinctions presented in the RFP. In this setting, finer distinctions open the door for smaller errors to prompt GAO sustainments.

One way to avoid such exposure is to avoid the use of such fine distinctions. Experienced Air Force acquisition officials warned us that such an approach can eviscerate the opportunities the Air Force has to drive improvement through negotiations. Without fine distinctions, the motivation to improve performance in response to Air Force prompting during negotiations is hard to sustain. In fact, the finer the distinctions it plans to use in evaluation, the harder the Air Force can press its offerors.

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<sup>12</sup> U.S. Department of Defense, 2009e, Chart 39. When a source selection yields blue ratings for all subfactors and proposals, the source selection team faces a “sea of blue” and must decide how to discriminate among proposals in the face of this outcome.

<sup>13</sup> Advocates of this approach argue that “blue is not blue”; it is feasible and desirable to draw distinctions between proposals that exceed minimum requirements on any subfactor.

Some observers have concluded from recent experience that trade-off source selections are fatally flawed and that the Air Force should abandon them. Rather, it should use a lowest-price, technically acceptable approach that assesses each proposal to ensure that it is technically acceptable and then, among all technically acceptable proposals, choose the one with the lowest price. This approach encourages offerors to frame proposals that achieve the minimum level of technically acceptable performance so that they can keep their prices as low as possible. It assumes that the Air Force knows exactly what to ask for as minimum standards and does not need to use negotiation to learn the true capabilities of offerors before setting those standards.

This argument does not appear to balance the benefits of a trade-off approach—which helps the Air Force get better systems in its source selections—with its costs—in the form of more frequent demands for corrective action or outright GAO sustainments. Any effort to balance these costs and benefits is likely to yield a mixed approach designed to preserve the benefits and to mitigate any costs that accompany them. Consider some examples.

*Limit the number of factors included in the trade space.* Treat most requirements as pass/fail options that any offeror must achieve—thresholds with no objectives above the thresholds. Then use pre-solicitation market research to identify the factors that the Air Force cares about that are most likely to distinguish offerors from one another and build the trade space around a small set of these “discriminators.”<sup>14</sup>

*State priorities among items in the trade space and subfactors precisely enough that evaluators can clearly justify their assessments and the distinctions they draw between offerors.* That does not imply identifying quantitative weights for finely distinguished requirements. Rather, it involves seeking a balance between (1) definitions in the RFP that are clear enough to allow evaluations to draw meaningful distinctions and justify them and (2) flexibility that allows the Air Force to exercise appropriate, inherently subjective military judgment when it makes these distinctions. For a contracting officer, it would be ideal to write all factors on a white board and start erasing those elements that are not discriminators among offerors. In that vision of the future, for example, the Air Force would not have included the MER for an existing legacy system in the CSAR-X source selection, because it was not a discriminator among offerors. This is not easy to do and involves skills that are not plentiful in the Air Force acquisition workforce today. Close application of the expertise that the Air Force does have would be beneficial.

To the extent that discussions do erase too much of the distinction between final proposals, the Air Force must weigh the advantages of (1) negotiating to the point where the Air Force would be happy with any of the offers and (2) preserving enough difference between offers that the loser has little ability to suggest that it might have won if the government had not made some error—that is, to have a protest sustained. This latter option becomes more attractive as sophisticated protests become more likely. When they are likely, the Air Force can limit discussions by giving offerors fewer opportunities to revise their proposals in response to Air Force feedback. Telling offerors that the Air Force will limit discussions and then following through could induce offerors to proffer their true FPR earlier and preserve differences that could strengthen the Air Force’s hand when inevitable protests occur.

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<sup>14</sup> As we explain below, the MER can be quite helpful in a system program review, where total expected LCC deserves close attention. It is relevant to a source selection only if it helps discriminate among sources. The Air Force use of the MER in the CSAR-X source selection offered no such discriminatory power.



The draft RFPs for the new round of the KC-X source selection appears to strike a balance that reflects many of these observations.<sup>15</sup> For example, it relies much more heavily on pass/fail evaluations than the first round. It has dramatically reduced the number of discriminators included in the trade space. And it has presented precise information on the relative value the Air Force will place on these discriminators. Each of these changes appears to be a step in the right direction.

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<sup>15</sup> Robert A. Burton, director of the White House Office of Federal Procurement Policy under the last administration, has argued that such an approach is “inconsistent with the principal reasons the Congress enacted [the Weapons Systems Acquisition Reform Act of 2009] WSARA.” (See Robert A. Burton, “Analysis of KC-X Tanker Draft RFP for Consistency with the Weapons Systems Reform Act of 2009,” white paper, Washington, D.C.: Venable, L.L.P., October 19, 2009.) We disagree. Our reading of WSARA tells us that it favors a broad trade space early in a program—for example, in the requirements determination phase. WSARA seeks a degree of maturation in programs entering development that by definition has already dramatically narrowed the trade space based on earlier analysis. By the time a program managed under WSARA-type guidance reaches source selection, we would not be at all surprised to see the kind of constrained trade space spelled out in the most recent KC-X RFP.

## **Quantitative Cost Methods Give GAO Openings to Question Reasonableness**

- **Life cycle costs (LCC) will remain important to USAF source selections.**
  - **Explicit formulas invite close questioning of assumptions about the future.**
  - **Stoplight assessment appears to leave more latitude for military judgment if USAF documents evaluation decisions.**
- **Caution: The requirement to estimate LCC at DAB Milestone B will remain.**
  - **USAF must clearly explain the basis for any difference between this estimate and estimates used in a corresponding RFP.**
  - **Distinct cost estimates can increase demands on limited resources**

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### **Quantitative Cost Methods Give GAO Openings to Question Reasonableness**

Three of the ten grounds for protest that GAO sustained in the CSAR-X and KC-X source selections involved GAO's assessment of Air Force LCC estimation practices.<sup>16</sup> LCC will continue to be important in future Air Force source selections as a potentially potent discriminator among proposals. So it will likely be important for the Air Force to adjust its treatment of LCCs in source selection.

The Air Force has already changed policy to require high-level approval before a source selection uses MPLCC as a criterion.<sup>17</sup> Instead, the Air Force will follow the lead of Naval Air Systems Command (NAVAIR) and focus cost estimates in a source selection on the instant contract—in effect, on the price that a proposal offers for the deliverables covered by the source selection. To reflect likely program costs beyond the deliverables covered by the contract, this approach addresses future supportability as a subfactor in the technical proposal and frames supportability in terms of such engineering characteristics as mean time between failure, mean time to repair, system availability or maintainability, and the like. GAO has accepted this approach in NAVAIR source selections for major systems. This approach does not actually

<sup>16</sup> One of these, the first sustainment in the CSAR-X program, ultimately turned on a different issue—the Air Force's failure to execute the approach to life cycle costing implied by its RFP. But GAO's discussion of this error gave close attention to the Air Force's approach to LCC estimation and suggested that a reasonable person would have expected the Air Force to take a different approach than the one the Air Force used in evaluation. The two sustainments from the KC-X program explicitly reject how the Air Force estimated specific elements of LCC, calling them "unreasonable."

<sup>17</sup> U.S. Air Force, 2009a.

attempt to estimate future cost. Rather, it would allow the Air Force to give a proposal credit for engineering characteristics likely to lead to lower future costs.

If the Air Force really cares about LCCs, why should it use engineering proxies for future costs?<sup>18</sup> The accounts used to justify estimates of the MPLCC appear to clarify Air Force assumptions about an inherently uncertain future and to monetize all assumptions with a degree of precision that invites GAO judgments about reasonableness. The completeness and quantitative nature of LCC accounts require stark Air Force statements about inherently subjective assumptions about a highly uncertain future. By contrast, a supportability subfactor can weigh engineering inputs about all aspects of future system support without specifying in advance precisely how the Air Force will combine information about different inputs to yield a final evaluation for the subfactor. Put another way, subjective military judgment appears to be better than precise cost accounts as a way to address factors about which great uncertainty persists. The precision required by cost estimates may create a false sense of certainty about the future that can invite questions about how reasonable it is for the Air Force to use any exact assumption offered. Without asking whether, objectively thinking, it is better to use precise LCC estimates or subjective military judgment to evaluate statements about the future, GAO decisions in bid protest reviews appear to display this kind of reasoning.

As the Air Force is moving toward an approach to evaluating the future supportability of new systems in source selection more qualitatively, it should keep in mind that the DAB program review process will continue to require quantitative estimation of LCCs. This process approaches its Milestone B at almost exactly the same time that the corresponding source selection approaches a final decision. That is, in the future, the Air Force will use one estimate of cost in its source selection process and, nearly simultaneously, a different estimate of cost in its program review process. When it does this, it must ensure that this difference does not confuse GAO.

In the past, GAO did not see the program review estimate, which was broadly understood to be pre-decisional and not suitable for release beyond DoD. Nonetheless, in several recent source selections, GAO has obtained access to this estimate in camera and used it to help assess the reasonableness of the cost estimates used in a source selection. This is likely to happen again in the future. When it does, future Air Force requests for proposal should clearly explain that different definitions of cost are appropriate for the two different decision processes and explain why the source selection uses one while the program review uses another. This will prevent some future GAO official from ruling that the cost estimate in a source selection is

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<sup>18</sup> An irony of the CSAR-X source selection is that GAO misread Air Force requests for information on supportability as evidence that the Air Force cared significantly about differences among proposals in future support costs. In the CSAR-X source selection, Air Force interest in supportability stemmed from concerns that the legacy system that a CSAR-X system would replace could not service new mission requests quickly and reliably enough because its system availability rate was unacceptably low. The Air Force wanted a CSAR-X system to display high availability to reduce the time between receipt of a call for support and execution of a support mission, even if higher availability involved higher future costs. Because the RFP did not indicate how the Air Force planned to use data on supportability, GAO misread the Air Force's intent in the source selection. All of this should remind us that, even though supportability can serve as a proxy for LCC, that is not the only way it can be used. To avoid misunderstanding, the Air Force should be as clear as possible about how it plans to use inputs on supportability or any other factor.

“unreasonable” because it differs from the estimate the Air Force uses in an entirely separate but closely related decision process.<sup>19</sup>

Given the shortage of trained, experienced Air Force acquisition personnel, developing and maintaining two separate cost estimates at precisely the same time could strain resources more than using a single estimate to support both the source selection and the program review. But, in fact, costs relevant to the instant contract in the source selection are a subset of the total costs relevant to the program review. So the only additional effort required to maintain two separate cost estimates is to be clear about which LCCs to associate with the instant contract. To the extent that the Air Force uses a WBS to build cost estimates from the bottom up, costs relevant to the instant contract should occupy a distinct portion of the WBS and so be easy to identify. Using the WBS to distinguish the two cost estimates, then, should help explain the differences between two separate estimates and help clarify for GAO why the two estimates differ.

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<sup>19</sup> For example, the difference in the costs relevant to system program review and source selection appears to have confused Senator John McCain, who asked Secretary of Defense Gates, “will the [KC-X] source-selection authority assess most probable life-cycle cost (MPLCC)” (John McCain [Senator], Letter to the Honorable Robert M. Gates, U.S. Senate Committee on Armed Services, Washington, D.C., October 29, 2009). A full assessment of MPLCC is not required to discriminate between the two offerors for the KC-X, because many costs do not depend on which system the Air Force chooses.

## **GAO Concerns About Cost Estimates in CSAR-X, KC-X Were Well-Founded**

- **GAO’s judgments about “reasonableness” appear to overstep focus on procedure, *but***
- **The substance of GAO concerns appears solid.**
- **Examples:**
  - **MER-based estimates of O&S costs are not good predictors if USAF plans to revise MER when a new system design is mature (CSAR-X).**
  - **Factors relevant to total EMD cost growth can say little about growth in nonrecurring engineering costs within EMD (KC-X).**
- **GAO observations could help USAF cost analysts.**

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### **GAO Concerns About Cost Estimates in CSAR-X and KC-X Were Well-Founded**

GAO’s assessments of Air Force cost estimation in these two source selections look exceptionally intrusive. They basically say that GAO does not approve of how the Air Force uses formal analysis to support its decisions. GAO justified its sustainments on cost issues in the KC-X source selection, not by reference to precedents set by earlier GAO bid protest decisions but by reference to a technical handbook on cost estimation.<sup>20</sup> Such a justification has been quite exceptional in the recent GAO bid protest decisions we examined in the course of this project. The Air Force decision to move away from quantifying future costs in source selection should limit its exposure to such GAO judgments. But Air Force evaluation of costs associated with an instant contract will continue to raise similar issues. What can the Air Force learn from GAO’s discussion of cost issues in the CSAR-X and KC-X decisions?

First, GAO’s discussion of cost estimation in the three grounds for protest sustainment that turned on cost issues was well informed. In each case, GAO applied sound costing principles to produce a better approach to cost estimation than the Air Force had used.

For example, in the CSAR-X program, GAO questioned why, if the Air Force planned to adjust its MER in response to early experience with any new CSAR system, it was appropriate to use the MER for a legacy system that in all likelihood would have different support requirements from any new system. The Air Force has used an MER for decades to estimate

<sup>20</sup> U.S. Government Accountability Office, 2007a.

the support costs of new systems, in program reviews, and in source selections.<sup>21</sup> When, in response to GAO's first sustained protest in the CSAR-X program, the Air Force clarified that that is precisely what it intended to do—to estimate MPLCC of new systems based on the manning levels defined by the MER for a legacy system, GAO backed off and accepted this clarification. But GAO's initial observation was correct—the Air Force's approach, now clearly stated in the amended RFP, was not the approach a reasonable outside observer would expect the Air Force to use in a source selection. At a minimum, because it provided no ability to discriminate between the proposals, it was clear that this approach added no value in the source selection. Although GAO acceded to this flawed approach to costing when the Air Force clearly explained it, the Air Force would benefit from learning from GAO's initial reservations. Doing so would improve Air Force decisionmaking in future source selections—and perhaps in other decision processes that use a similar approach to cost estimation.

GAO was more intrusive in the KC-X source selection. It identified two cases where the Air Force used a flawed approach to estimating future costs. This time, it ruled that these approaches were unacceptable, whether or not the Air Force explained them clearly in the RFP. That is, in each case, GAO sustained a protest, not because of failure to match evaluation to the plan identified in the RFP but because the plan itself was flawed. To understand GAO's view, consider the second protest GAO sustained on these grounds in the KC-X case. GAO rejected Air Force use of historical data on growth in total development and production costs to estimate future growth in one component of development costs—nonrecurring engineering costs. Once again, as intrusive as GAO was in this case, its observation was correct. By learning from this GAO judgment, the Air Force could improve decisionmaking in future source selections and elsewhere. The lesson is not just about future cost growth, which the Air Force's new approach to cost estimation in source selection should render irrelevant, but about justifying the historical data used to assess cost estimates that will continue to appear in future source selections.

The good news is that, if GAO continues to take an intrusive stance on cost methodology—and now it has precedent it can cite to do so—there is a good chance that it will use sound cost estimation principles as a basis for such intrusion. That will make it easier for Air Force cost analysts to prepare for future GAO attention to their work in source selections.

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<sup>21</sup> The Air Force mans its in-house maintenance units so that they can execute expected wartime missions, including significant surges. Having the assured ability to execute the wartime mission has traditionally been more important to the Air Force than the cost of doing this. Using data from the MER to calculate future O&S costs can be viewed as a way of placing higher priority on executing the wartime mission than on savings in support costs claimed for nonmilitarized commercial-based helicopters. That said, the Air Force adjusts the MER for a weapon system over time to reflect its actual experience with the system. If the helicopters offered in the competition operate as claimed, the Air Force knows that it will adjust its MER—and any cost estimates based on it—to reflect that realized performance of the winning helicopter. If the Air Force accepts the claims of the winning offeror, it can reasonably expect that the support costs for the winner will be lower than the support costs implied by the MER for the legacy system.

### ***Minute Details Led GAO to Sustain Three Protests in CSAR-X, KC-X***

- **CSAR-X #1: One sentence in an attachment to RFP Section L let GAO redefine support costs**
- **KC-X #2: Two sentences in disparate parts of RFP let GAO reject credit for higher fuel offload capacity**
- **KC-X #3: One evaluation notice, incompletely closed, let GAO question whether winner met a basic requirement**
- **Two conclusions are possible:**
  - 1. Perfection is impossible; errors are inevitable.**
  - 2. GAO makes the rules; USAF can learn them.**

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### **Minute Details Led GAO to Sustain Three Protests in CSAR-X and KC-X**

Three of the ten grounds for protest that GAO sustained in the CSAR-X and KC-X source selections involved small errors that would be very hard to detect without a minutely detailed review of the RFP and evaluation process. These errors created ambiguities that GAO concluded were significant enough to potentially affect the outcome of the source selection. A quick review of them illustrates why they are so hard to catch.

The first sustainment in the CSAR-X program resulted from the wording in one sentence in an attachment to Section L, which defines the inputs the Air Force wants in each proposal, not Section M, which explains how the Air Force will evaluate inputs from proposals.<sup>22</sup> That sentence states that the “primary purpose” of the attachment is to “capture all relevant CSAR-X Operating and Support (O&S) costs.” GAO read this table to indicate that the evaluation process would consider proposal-specific information on O&S costs in its assessment of cost. The attachment explained that “Unit Mission Personnel, Training Munitions, and Indirect Support will be calculated by the government team,” but the RFP never explained how that would happen. GAO inferred from language throughout the RFP that a “reasonable person” would expect the Air Force to use inputs from the proposals to make these calculations. Although GAO drew this inference from language throughout the RFP, its discussion treated this one sentence as the linchpin that made such an inference reasonable. When the Air Force clearly explained how the government would execute the calculations in question in its amended RFP,

<sup>22</sup> U.S. Air Force, 2005, § L, Attachment 13.



GAO withdrew its reservations, even though, as noted above, it thought the method the Air Force would use to make the calculations was substantively inappropriate for the task at hand.

The second sustainment that GAO listed for the KC-X source selection similarly resulted from ambiguity that resulted from just a few words in the RFP—two sentences in the SRD and one sentence in Section M. The SRD set a KPP threshold (a mandatory minimum requirement) for fuel offload versus unrefueled range and a KPP objective that the offerors’ “aircraft should be capable of exceeding” the threshold.<sup>23</sup> Section M then stated that “no consideration will be provided for exceeding KPP objectives.”<sup>24</sup> Taken together, these three statements clearly say that, once an offeror achieves the threshold requirement for fuel offload versus unrefueled range, the Air Force will give an offeror no consideration for exceeding the threshold. This was clearly not the intent of the Air Force, but the RFP clearly stated that this is what the Air Force would do.

To catch either of these errors, someone would have to read the entire RFP in all of its detail, hold all of that detail in his or her head at the same time, and see the implications of statements in unexpected places or unexpected juxtapositions of various statements in different places. It is worth noting that GAO does not have the resources to do this. It relies on protesters to bring these inconsistencies to its attention for its consideration. Once it has all the detail placed before it in an orderly fashion, however, its conclusions become relatively easy to justify and document.

The third error is a bit different. This is the third ground for sustainment that GAO listed for the KC-X source selection. The Air Force told Northrop Grumman twice during discussions that its “initially identified maximum operational airspeed . . . would not be sufficient under current Air Force overrun procedures to achieve required overrun speeds . . . for various fighter aircraft.”<sup>25</sup> If the Northrop Grumman proposal could not achieve this requirement, it would be technically unacceptable. The Air Force ultimately accepted Northrop Grumman’s proposed solution as satisfying this KPP threshold but never documented the basis for its acceptance. Boeing complained that the Northrop Grumman solution did not appear to meet the threshold requirement. During the protest proceedings, the Air Force could not rebut this complaint.

GAO’s decision discusses this protest at considerable length and ultimately concludes that very serious doubts exist about whether Northrop Grumman can meet the threshold. As a starting point for our own analysis, we take as given the Air Force’s argument that Northrop Grumman could meet the threshold. Whether Northrop Grumman could or not does not affect our argument. Even if the Air Force was correct in its evaluation, it erred in its documentation of that evaluation and its defense of it in GAO hearings on the question.<sup>26</sup> The more basic error was the failure to close out the EN that the Air Force opened when it first queried Northrop Grumman about this issue. The KC-X program office used a standard information management system—EZ Source—to track the status of all ENs. Despite the presence of that system, the program office failed to see that it had never explained, in the record, the basis

<sup>23</sup> U.S. Air Force, 2007, SRD § 3.2.1.1.1.1 and § 3.2.1.1.1.2.

<sup>24</sup> U.S. Air Force, 2007, § M.2.2.1.1.a.

<sup>25</sup> U.S. Government Accountability Office, 2008.

<sup>26</sup> If the Air Force’s judgment on this issue was not correct, it faces a more serious problem than those we focus on here. That is a basic substantive failure that none of the solutions we offer here can address.



for its judgment that the issue was resolved. The KC-X source selection generated hundreds of ENs, so it is not an easy task to track all of them and verify that the evaluation team has documented its resolution of each issue in a substantively sound way—a way that GAO would view as “reasonable.” The failure to track this one EN opened the door for GAO to raise questions about the evaluation during its hearing. As noted above, the Air Force was unable to explain its approach satisfactorily during the hearing. This ultimately led to a sustained protest. A small error had large consequences.

Such small errors ultimately forced the Air Force to make large changes in its approaches to the CSAR-X and KC-X programs. Many senior Air Force personnel we spoke to take a dire lesson from this observation. Perfection is impossible and so sustainments are inevitable. Even if this is true—almost by definition—we believe a more constructive lesson to draw is that greater attention to the details can improve the Air Force’s performance. Accepting that GAO makes the rules of the game is a first step toward efforts to have Air Force source selection personnel understand those rules more completely.<sup>27</sup>

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<sup>27</sup> Again, GAO has no formal set of rules that it applies to make its judgments; we refer here to the “rules” implicit in the body of decisions that GAO has made on bid proposals in the past.

## **Anticipated Quality Assurance Measures Cannot Catch Small Errors**

- **GAO sustained protests in CSAR-X, KC-X both despite intense USAF efforts to catch and correct errors.**
- **Inability to catch small errors appears to result from**
  - **Lack of experienced, trained personnel**
  - **Too much emphasis on speed**
  - **Lack of tools to support discipline. Examples:**
    - **Systematic mapping in RFP of all data requested to all evaluation events that use them**
    - **Systematic tracking and documented closeout of each evaluation notice**

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### **Anticipated Quality Assurance Measures Cannot Catch Small Errors**

One way to try to catch errors of the kind just discussed is to make increased use of external, high-level teams to enhance QA. The new Air Force AIP places heavy emphasis on such teams, which will check source selections at several critical points in time. The CSAR-X and KC-X programs had very high visibility and used external review processes very similar to those implemented in the AIP. Despite such efforts, they suffered ten grounds for protest sustained by GAO (two in CSAR-X and eight in KC-X). Why? An examination of the two programs suggests that three factors contributed.

Both programs had shortages of properly trained personnel with enough prior experience in complex source selections to prepare them for handling the tough, day-to-day task of scrubbing down an RFP and then documenting and controlling evaluation material carefully to prevent adversarial attorneys representing protesters from finding residual problems in the record. The two programs relied heavily on a small number of senior personnel to train and mentor the personnel who actually executed most of the work during the source selection. Ongoing efforts to rebuild the organic Air Force acquisition workforce should help address this problem, but they will take many years to make a significant difference in future Air Force source selections.

Both source selections moved too fast. The KC-X program office felt pressure from above to move forward, at least in part to offset the considerable delays that the program had suffered before this source selection. It was unsuccessful in its efforts to push back against this pressure. A number of people suggested that excess speed contributed to errors that could have been avoided if more time had been available to review decisions thoroughly. The CSAR-X put a premium on speed, believing that the faster the source selection occurred, the fewer external

surprises could occur that could change the basic parameters of the source selection and so add administrative burden and complexity to the process.<sup>28</sup> But combining speed with a shortage of personnel ultimately burned out the key personnel in the source selection. If the CSAR-X had continued on to another source selection, a new source selection team would probably have had to be assembled to relieve those who went through the first two rounds of protests. In effect, after building considerable experience in the context of the CSAR-X source selection, the Air Force would have had to train a fresh team and start over with similar gaps in the experience of the team. The recent shift in Air Force policy to make source selections event-oriented rather than schedule-oriented could potentially ameliorate some of these pressures if the Air Force can in fact maintain the discipline required to give source selections the time required to complete appropriate tasks. Because source selections typically draw in people with other responsibilities, pressure is likely to continue to get through them quickly so that they can release these personnel to their primary longer-term duties.

Two types of tools could have helped structure activities in these source selections in ways that made it easier to catch small errors such as those discussed above. One tool would track each evaluation activity described in Section M to the specific requirement that this evaluation addresses and to each piece of information requested in Section L in support of this evaluation activity. Such a tracking tool would facilitate consistency checks across the entire RFP and help ensure that the RFP describes the specific evaluation methods the Air Force will use to explain how the methods inform requirements and how they use information. Such a mapping, in itself, could clarify the Air Force's plans for evaluation in ways that could (1) make it harder for offerors to claim misunderstanding about evaluation and (2) provide a clear benchmark against which to track evaluation. Many Air Force source selections have used a simple matrix that supports such tracking. The draft RFP in the new round of the KC-X source selection uses one. Neither the CSAR-X nor the original KC-X source selection used one.

A second tool could track ENs from their inception to their final resolution. An effective system of this kind would support ongoing reviews of such questions as the following: (1) Has each question raised in an EN been resolved? (2) When differences of opinion arose within the evaluation team in response to ENs, were these differences decisively addressed and disposed of? (3) Does the record contain sufficient documentation to justify resolution of the question? (4) Does the record include any information not required to track evaluation and justify final decisions? If so, why is it there? Air Force programs often rely on EZ Source, a standard information management system, to check regularly the status of documentation against GAO-informed standards. Both the CSAR-X and KC-X programs used this system. Unfortunately, EZ Source is a cumbersome system that records actions but does not ensure as much as it could appropriate execution of these actions. In the lessons learned exercise conducted at the close of the CSAR-X program, for example, EZ Source was the dominant object of complaints about how the source selection proceeded. Whatever system is used, it cannot simply be used to check boxes. A proactive awareness of how the record created by this process will look to outsiders should lead to more discipline in the maintenance of the records required to justify decisions and the maintenance of *only* these records.

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<sup>28</sup> They envisioned themselves operating within a classic Observation-Oriented-Decision-Action loop in which they would keep their decision cycle as short as possible relative to those in other processes that could affect the source selection (John R. Boyd, "Discourse on Winning and Losing," briefing, 1976).

## ***Only People Inside a Source Selection Can Assure That It Gets the Small Things Right***

- **Rebuild the acquisition workforce. This will take a long time.**
- **In the meantime**
  - **Use practical training to substitute for currently missing experience**
  - **Back up junior personnel with skilled technical personnel**
  - **Systematize document control; train personnel to retain only what is needed**

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### **Only People Inside a Source Selection Can Assure That It Gets the Small Things Right**

As noted above, the Air Force is rebuilding its organic acquisition workforce, but that will take time. The hiatus in hiring during the 1990s has left the Air Force with a serious shortage of contracting personnel with 10 to 20 years of experience.<sup>29</sup> This is the cohort that has traditionally carried the heaviest load in executing day-to-day acquisition activities of the kind experienced in source selections. Entry-level hiring today will not refill the ranks of this group for another decade or more. A significant portion of the cohort with more than 20 years of experience, which the Air Force has traditionally relied on heavily for training young people, is nearing retirement age. Given these demographic facts, what can the Air Force do today to enhance the capabilities of the people within source selections who ultimately must build quality into a source selection to avoid sustained protests? Our discussions with personnel around the Air Force supported the following findings.

Most observers agree that the best way to learn how to do source selections is to participate in them. Real-world experience teaches by forcing personnel to make complex judgments in an ill-defined decision environment. So the best form of training for a major source selection is real-world experience in a smaller source selection where errors will cost the Air Force less. One reason the Air Force is experiencing its current shortage of personnel with source selection experience is because it has been conducting fewer complex source selections in recent years than in the past. To some degree, case-based training and role-playing exercises tailored

<sup>29</sup> Kayes, 2008, Chart 29.

to the circumstances in a specific new source selection can help substitute for experience in real source selections. They cannot replace such experience, but they offer low-risk environments in which participants can experience the consequences of making hard decisions in a structured environment. They are time-consuming and costly, in terms of the time of the participants and the cost of the trainers. But if coordinated closely with the terms of an upcoming source selection, they can help a small number of coaches prepare new players for the roles they will play.

Coaches can continue to support the players through the course of a source selection by watching over their shoulders as they go through their day-to-day activities. A coach or mentor on site allows quick detection of and recovery from errors as they occur. Presence on site keeps the coach knowledgeable about the status of the source selection and so well prepared to detect trouble and help remedy it when it occurs. A coach might even participate occasionally if things get too demanding. But mainly, a coach should work to stretch his or her own capabilities by transferring them to others doing the heavy work.

Proper document management occurs every day. The best way to judge the information used to support a decision is to consult the documents created as the decision occurred. As a result, GAO relies heavily on documentation generated contemporaneously with the decisions involved and gives little weight to new documents generated after a protest raises a question. Well-crafted, concise documentation can dispose of questions quickly without much verbiage. Poorly focused documentation crafted without a clear purpose in mind can generate as many questions as it resolves. Finding the right balance of creating just enough to justify a decision in a compelling way and not so much that irrelevant issues come to light must happen in real time. A good document-tracking system and good coaching should facilitate inherently on-the-job training that at the same time generates the primary information that will inform any bid protest.

## ***The Right Kind of External Quality Assurance Can Help***

<b>Timely</b>	<b>Find errors early enough to allow corrections</b>
<b>Well-informed</b>	<b>Read advisors in before they arrive to avoid increasing the burden on overworked, inexperienced staff</b>
<b>Technical</b>	<b>Choose advisors technically sophisticated enough to anticipate fine distinctions that GAO makes</b>
<b>Hands-On</b>	<b>Devil is in the details when justifying an evaluation plan and matching it to evaluation execution</b>

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### **The Right Kind of External Quality Assurance Can Help**

As the Air Force goes forward with its plans to use external QA teams more aggressively, the CSAR-X and KC-X programs offer insights into how to do this better than the Air Force did in those programs. Personnel associated with both programs believe that external oversight is more likely to add value if it displays four basic characteristics.

First, it is timely. Any oversight, internal or external, should occur quickly enough after an action occurs to fix any errors embodied in that action—whether that be preparation of the RFP, management of ENs, execution of evaluation, or justification of final decisions. For example, once the requests for proposal were finalized in both source selections, both program offices found themselves committed to conducting evaluations that differed from those they had intended to conduct because this realization came too late.

Second, it is well informed. When external advisors arrive as short-term visitors, they should arrive well informed about the issues in the source selection and the status of the source selection. They have a limited time on site to add value; the personnel working within the source selection have limited time to learn from them while continuing their primary tasks in the source selection. Asking already overworked staff to withdraw from their ongoing source selection responsibilities to educate visitors, who might be somewhat disengaged by their off-site status to begin with, can easily cost more than the value it adds.

Third, it is technical.<sup>30</sup> It is well informed about the technical issues relevant to GAO's oversight of source selection decisions. It is current on recent lessons learned. It can engage junior, less-experienced staff on the working level with detailed support on specific issues. It does not emphasize high-level, graybeard strategic thinking unless the resulting advice can come early enough in the source selection to affect its overall strategy. GAO emphasizes fine points. The review should mainly respond to that emphasis.

Finally, it is hands-on. It addresses specific decisions and specific documentation in near real time, with the intent of assuring relevant decisions and documentation and training personnel within the source selection to generate similarly concrete decisions and documents after the team leaves.

It is no accident that such support is most likely to come from senior, experienced technicians on-site for the duration of the source selection. External QA teams cannot replace such on-site expertise. They can offer a different set of eyes with perhaps a slightly different interpretation of what to watch for. They can offer input from expertise that is too costly—in terms of its budgetary costs and its opportunity costs—to commit to a source selection full time. But at the end of the day, even this higher-level support coming from a distance will be most likely to add net value if it is timely, well-informed, technical, and hands-on—just like the coaches on site.

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<sup>30</sup> In this context, we do not use “technical” to suggest that an activity is associated with technology or engineering. Rather, “technical support” stringently applies to specialized knowledge about each of the functions relevant within a source selection in a precise, detailed, and up-to-date manner well attuned to the facts at hand.

## Potential Changes in Air Force Policy or Practice

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### *Road Map*

- How source selections and bid protests work
- Patterns for bid protests during FY2000-08
- Protests sustained in CSAR-X, KC-X source selections
- Synthesis of findings
- **Potential changes in policy or practice**
  - **Defensive source selection tactics**
  - **Defensive source selection design**
  - **Data on protests and “realized prejudice” in protests**

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GAO Bid Protests in Air Force Source Selections -52-

The last chapter raised a broad range of potential specific changes in Air Force policy and practice. This chapter brings these potential changes together in one place, organized as (1) potential changes in source selection tactics, (2) potential changes in source selection design, and (3) collection of data on source selection outcomes to clarify the costs that inappropriate GAO protest sustainments impose on the Air Force.

The Air Force can change tactics without changing the design of a source selection. Changing the design of a source selection adds costs early in a source selection, but may potentially offset the overall costs resulting from a protest by simplifying evaluation and the choice of a source. Even if the Air Force cannot offset these additional costs, better design should help it avoid future corrective actions and protest sustainments. It could potentially do any of these things without seeking changes in regulations or legislation beyond its control. Better data on the cost of sustainments could help the Air Force justify the investments required to try options discussed under the first two points. More broadly, new data could also potentially help the Air Force change the effective rules within which it addresses bid protests. They would do this by helping the Air Force build the case for adjustments in how GAO conducts bid protests.



## ***Defensive Tactics Need Not Affect the Content of a Source Selection***

- **Systematize document control; retain only what is needed**
- **Use practical training to substitute for currently missing experience**
- **Back up junior personnel with skilled technical personnel**
- **Sharpen QA—use technical personnel, read them in early, bring them early enough to matter**
- **Introduce red teams with attorneys and other relevant specialists**

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GAO Bid Protests in Air Force Source Selections -53-

These options take as given the *content* of the RFP, suggest ways to refine the RFP, and then evaluate it more successfully.

Better document control seeks to ensure that the basis for each evaluation decision is documented in just enough depth to meet GAO's standards for contemporaneous record-keeping and clear statement of "reasonable" decisionmaking and no more. Similarly, it keeps "just enough" documentation to justify the final choice of a source. Systematically mapping requirements to inputs requested from offerors and to the methods in which the Air Force will use these inputs in evaluation can clarify exactly what documentation is needed. A less-cumbersome document control system than EZ Source should help on both scores, but even more important is effective coaching on how to document decisions clearly without creating ambiguities that GAO can use to insert its own judgments. Limiting document flow should help the Air Force focus its efforts to sustain effective quality control and assurance of document creation and flow.

Until the Air Force develops an appropriately experienced acquisition workforce, just-in-time, on-the-job training based on role-playing can teach inexperienced personnel specific new skills that they can apply immediately in an upcoming source selection. Tailored training focuses each person on the skills relevant to his or her own role in the source selection. Immediate application of the training makes it more likely that trainees will retain new skills acquired in this way. Role-playing offers personnel an opportunity to see the consequences of errors quickly without imposing large costs on the Air Force when they make such errors during training. In the same way that flight simulators allow pilots to prepare safely for high-

risk situations in flight, role-playing allows trainees to face serious challenges and learn from them safely.<sup>1</sup>

Providing experienced, technically skilled coaches to back up inexperienced personnel through the course of a source selection makes it more likely that<sup>2</sup>

1. quality control will detect errors fast enough to correct them before they impose serious costs
2. specialists are informed about the current status of the source selection when inexperienced personnel turn to them for advice
3. specialists are (ideally) well informed about GAO's standards and use these standards to provide backup
4. specialists are prepared to get their hands dirty when personnel need their help in hard-brushing source selection documents to remove grounds for sustainment of protests.

In principle, such coaches could also provide the training described above. Providing external QA that features similar characteristics can ensure this backstop, especially when oversight capabilities are too costly to commit for the duration of a source selection.

Red teams that include attorneys and other specialists relevant to an acquisition can potentially bring a new perspective to oversight that is more likely to catch errors that protesters can exploit to force corrective action or induce a sustainment. Such red-teaming deliberately seeks the weakest spots in a source selection—in the RFP, evaluation plan, documentation of evaluation, final evaluation, and final SSAC and SSA briefings. Attorneys who are uninvolved with the particular procurement may be better suited to such work as they may be more willing to critically examine the judgments made to date in the procurement and the corresponding protest risks. Private-sector attorneys with significant experience in bid protests could be ideal for this role, especially if they have participated in such red-teaming for potential protesters in other procurements. But the Air Force must resolve conflict of interest, cost, and oversight issues before engaging such attorneys. As noted above, such red-teaming would add administrative costs and probably add days to any source selection schedule. The Air Force would use such red teams where it expected them to reduce the costs and schedule delays associated with protests by more than enough to offset the immediate negative effects of the teams on costs and schedule.

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<sup>1</sup> Of course, it is worth spending a great deal more money on a flight simulator than on just-in-time training. But cost-effective, just-in-time training can be tailored to the characteristics of an upcoming source selection. Presumably, more training would be warranted where the risks to the Air Force in a source selection are higher.

<sup>2</sup> Again, in our usage, technically skilled personnel can stringently apply specialized knowledge about many functions other than engineering.

## ***Defensive Source Selection Design Changes Content of Request for Proposal***

- **Simplify evaluation criteria**
  - **Reduce number**
  - **Use more pass-fail requirements**
  - **Focus on discriminators in trade space**
  - **Clarify relative priorities**
- **Simplify cost criteria**
  - **Focus quantitative estimate on instant contract**
  - **Assess supportability qualitatively**
  - **Coordinate with DAB estimates**

RAND

GAO Bid Protests in Air Force Source Selections -54-

Changes in source selection design are more aggressive, because they change the substantive terms the Air Force uses to compare proposals.

We endorse the guidance in the AIP to simplify evaluation criteria. We believe that the importance of preexisting system designs to the CSAR-X and KC-X programs led to some complications there that will be easier to avoid in typical future Air Force acquisitions. But in any future acquisition, the guidance of the AIP is sound. Reduce the number of requirements included in a source selection. Limit as many as possible to pass/fail criteria in which a threshold value states an acceptable level of performance. When a specific requirement is important to the Air Force *and* is likely to help it discriminate among proposals, include the criterion in the trade space for a trade-off-based source selection. Be clear about the relative priority that the Air Force places on requirements included in the trade space.

The importance of being able to use the trade space to discriminate among proposals should lead a source selection to use a smaller trade space than WSARA seeks to promote earlier in the capability planning and development planning phases of a new system program.<sup>3</sup> The Air Force faces special challenges, as it moves forward, to distinguish these two perspectives. WSARA focuses on capability and engineering trades early in a program, hoping to mature the system under development considerably before it reaches DAB Milestone B and source selection. Maturation will narrow the grounds for choice considerably before source selection occurs. Narrower grounds for choice inherently imply a smaller trade space in the

<sup>3</sup> WSARA seeks to broaden the trade space considered early in a program—well before source selection. Early consideration of a broad trade space should allow the Air Force to make decisions that will simplify later source selection—in part by narrowing the trade space in source selection to focus attention on criteria likely to discriminate among proposals. Appendix A provides a short summary of WSARA and a discussion of its implications for the issues raised in the text.

source selection. The requirements included in the source selection trade space can then focus on attributes important to the user community *that are likely to differ across proposals*.

We also endorse AIP guidance that encourages a source selection to focus cost estimation on the deliverables most directly addressed by the source selection—those covered by the “instant contract.” The apparent precision of cost estimates appears to draw particular protester attention and hence GAO interest. The inherent uncertainty of future costs can create an appearance of unacceptable ambiguity in a precise set of LCC estimates. Under these circumstances, using the technical evaluation to assess reliability and supportability issues likely to affect future costs appears to offer a more reliable way to address such uncertainty so as to avoid GAO protest sustainment. OSD’s DAB program review requires that the Air Force estimate LCCs at almost exactly the same time that a program runs its source selection. To avoid confusing GAO about the different cost estimates used in these two processes, the source selection should clearly explain the difference and why the nearer-term estimate used in the source selection is more appropriate in that setting.

## ***New Data Could Help USAF to Target Its Attention in the Future***

- **In proactive defense, USAF can emphasize tactics and designs above where risks are highest**
  - **Where do sophisticated protests occur?**
  - **What costs do sophisticated protests impose on USAF?**
- **Longer term, USAF can ask if the “balanced” GAO approach has in fact sustained protests only when USAF “violated a procurement statute or regulation and ... the violation prejudiced the protester.”**
  - **Prejudice: “But for the agency’s actions, [a protestor has] a substantial chance of receiving the award.”**
  - **Evidence of GAO overestimate of prejudice might provide basis for regulatory or legislative relief.**

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GAO Bid Protests in Air Force Source Selections -55-

The changes listed on the last two slides can improve outcomes for the Air Force in any source selection, but they can be costly to execute and so are more appropriate in situations where it is more likely that a sophisticated protest will occur and impose costs on the Air Force.<sup>4</sup> We believe that such protests will be more likely to occur in large, complex acquisitions with high stakes for the participants, but we cannot be much more specific without more information on when such protests occur. We have no solid information on the costs they are likely to impose on the Air Force. The more the Air Force knows about when they will occur and how they will likely affect the Air Force, the more effectively it can plan when to introduce changes such as those discussed above and how far to carry them.

A relatively simple way to gather such information is to track future protests sustained by GAO and collect information on their characteristics and the costs that they impose. We have argued above that the Air Force is as likely to suffer costs from corrective actions as from sustained protests. But sophisticated protests appear to be designed to force the Air Force into a GAO review where a well-prepared protest team expects that it will outperform an Air Force defense well enough to secure a GAO sustainment on at least one issue. So monitoring the relatively small number of sustained protests is a natural place to start collecting data to prepare for future sophisticated protests.

<sup>4</sup> Sources of quotes on the slide: Second bullet: U.S. Government Accountability Office, 2006, p. 7. First item under the second bullet: Scientific and Commercial Systems Corporation; Omni Corporation (B-283160, October 14, 1999). Cf. language from a decision of the Court of Appeals for the Federal Circuit, *Statistica v. Christopher*, 102 F.3d 1577, 1581 (1996): “To establish competitive prejudice, a protester must demonstrate that but for the alleged error, there was a ‘substantial chance that [it] would receive an award, that it was within the zone of active consideration.’ *CACI, Inc.-FED. v. United States*, 719 F.2d 1567, 1574-75 (Fed. Cir. 1983).” Both quoted in Edwards, 2006, p. 339.

Over time, data collected for this purpose could potentially serve the Air Force in another way. When GAO sustains a protest, it reaches a judgment that the Air Force has made a large enough error potentially to change the outcome of the source selection in question. Is the error in fact large enough to change the outcome? When the Air Force implements any changes suggested by GAO, does the Air Force then award a contract to a different offeror than it did when the protest occurred? If it does, the error presumably prejudiced the ultimate winner, who received the contract only because the Air Force corrected its error. If not—if the sustained protest has no effect on the ultimate winner—the Air Force error was probably not serious enough to prejudice the offeror whose protest was sustained.<sup>5</sup> How often does this occur? A preliminary Air Force review of recent sustained protests found that many sustained protests do not lead to changes in the winner of an Air Force competition, suggesting that GAO has tended to misjudge the degree of prejudice associated with an Air Force error in these protests.<sup>6</sup>

If more systematic evidence on how sustainments affect the ultimate winner of Air Force source selections supported this observation, the Air Force could potentially use such evidence, along with evidence on the cost imposed by such unwarranted sustainments, to inform GAO and Congress of the effects of such sustainments.<sup>7</sup> As a fundamental element of its approach to reviewing bid protests, GAO seeks a “balanced” approach that protects offerors that do experience real prejudice in federal source selections without imposing undue costs on other participants in these source selections when GAO determines that prejudice was not present.<sup>8</sup> The Air Force could use evidence of the kind described here to test how well GAO’s approach to balance has worked in practice. If GAO has in fact sustained too many protests where it turns out that prejudice was not present, the Air Force would have a strong empirical basis for arguing that GAO is not implementing the balance it seeks as effectively as it could.

In the wake of the recent, high-visibility sustained protests associated with the Druyun scandal and then in the CSAR-X and KC-X programs, it is easy to lose sight of the Air Force’s broader experience with GAO bid protests. During the 1990s, the number of unwarranted protests dropped markedly, leaving the Air Force in a position to focus on protests that were more likely to require corrective action. Since 2001, the numbers of corrective actions and of merit reviews per 1,000 contract awards have slowly dropped. The Air Force should be careful to protect the policies and practices that have supported this pattern of steadily improving performance.

The threat manifested in the CSAR-X and KC-X programs appears to be relatively new in character and so does justify significant adjustments in policies and practices in appropriate circumstances. But we expect this threat to present itself in a relatively small number of acqui-

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<sup>5</sup> We condition these statements, speaking of “presumably prejudiced” and “probably not serious” because, following a protest, the Air Force can never simply correct an error and rerun precisely the same competition it ran earlier. The competition following the protest is necessarily a new competition that takes place in new circumstances. So the result of any second competition cannot tell us with certainty that prejudice was present in the first competition. But the more often the second competition fails to overturn the decision of the first, the more likely it is that material errors are not occurring in the initial competitions. Such a pattern would suggest that GAO balances its decisions too much in favor of protesters.

<sup>6</sup> Kayes, 2008, Charts 15–16.

<sup>7</sup> In principle, to speed development of a meaningful body of evidence, the Air Force could collect more historical data as well as data on sustainments in source selections run by other federal agencies. Either approach would be more costly than gathering information on Air Force sustainments as they occur. Gathering reliable historical data well after the fact on the costs imposed by unwarranted sustainments would be particularly challenging.

<sup>8</sup> U.S. Government Accountability Office, 2009.

sitions—the large, complex ones, with relatively large stakes for the participants, and probably more likely when the participants understand how to pursue sophisticated protests. Such protests will continue and could increase in number until the Air Force demonstrates that it can effectively counter them. The Air Force should focus its countermeasures on the places where the threat is greatest. That should make it easier to tailor the countermeasures to the circumstances and so to choose the set of measures best suited to helping the Air Force avoid future costs and delays such as those associated with the protests sustained in the CSAR-X and KC-X source selections.

## A Simple Model of the Pattern of Protests and Protest Outcomes

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### *Model Says “Corrective Action Cost” Is Likely to Be Higher with Merit Review Than Without*

- **Absent empirical data, an economic model can offer insights on relative costs of corrective action**
- **Model compares alternative assumptions in terms of:**
  - **Consistency of their implications with observed protest patterns**
  - **Implications for the cost of corrective action with and without merit review**
- **Model predicts higher cost with merit review but...**
- **It is impossible to say how much higher without knowing the inherent characteristics of protests being pursued**

RAND

GAO Bid Protests in Air Force Source Selections -56-

It is clear that corrective actions can impose significant costs on the government, whether they result from voluntary negotiation with a protester or from a GAO protest sustainment. It is also clear that merit reviews impose administrative costs, delays, and distractions on the government that are not present when voluntary corrective action occurs. But, setting these “protest costs” aside, what are the relative costs of the corrective actions themselves when they are initiated in these two different ways?<sup>1</sup> No reliable quantitative data exist to answer this question. This appendix offers a simple economic model that can help us frame what is currently known and what this implies about these relative costs.

It starts by considering a situation in which the government conducts source selections, and events occur in these source selections that create potential opportunities for protests. It asks, which protests go forward? How does the government react to these protests? And how does that government reaction shape the patterns of protests and protest outcomes that we

<sup>1</sup> This appendix distinguishes “protest costs”—the administrative costs, delay, and distraction associated with a protest—from “corrective action costs”—the costs (or benefits) that accrue outside the administrative bounds of the protest itself. This is the same distinction used in the text. We typically present these phrases in quotation marks in this appendix to emphasize that these are terms of art that are nonstandard but have specific meanings in this context.



observe? It offers a simple model based on stylized facts that are consistent with the information we gathered in interviews in the Air Force. It then asks if the model can generate patterns of protests and protest outcomes that are compatible with what we have observed. Finally, it posits some conclusions based on the model and its compatibility with what we observe in the world.

## The Stylized Facts and Model

Let:

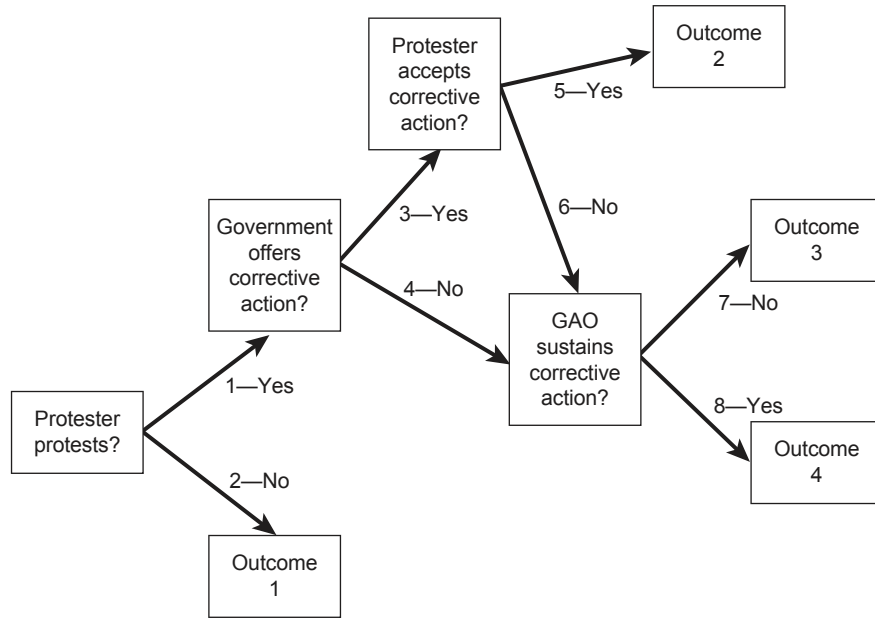
- $C_0$  = cost to the protester of initiating a protest and seeing it through to the start of a merit review
- $C_P$  = cost to the protester of seeing a protest through a merit review
- $C_G$  = cost to the government of seeing a protest through a merit review
- $BA$  = benefit to the protester of receiving corrective action
- $CA$  = cost to the government of providing corrective action
- $PG$  = probability that the government prevails in merit review.

Assume the following (we will adjust assumptions later if they prove to yield unrealistic results):

- Each opportunity for a protest is unique and is accompanied by a set of values for the six attributes listed above. The protester and government share exactly the same beliefs about these values. These beliefs entail no uncertainty.
- A joint probability distribution exists for these six attributes. Opportunities for protest appear as random draws from this distribution. The values associated with each attribute in each draw are fixed and beyond the control of the protester or government.
- The opportunities for protests appear to the protester, which decides whether or not to follow each opportunity and file a protest. When the protester files a protest, the government decides whether to offer voluntary corrective action or move directly to a merit review. When the government decides to offer corrective action, the protester decides whether to accept it or move to merit review. If a protest reaches merit review, the GAO review yields an outcome through a random process based on the probability of government success associated with the original protest opportunity. Figure A.1 summarizes this sequence of events.
- The cost of corrective action to the government is the same whether the government volunteers it or GAO requires it. The benefit of corrective action to the protester is the same whether the government volunteers it or GAO requires it.

Start with the final decision in Figure A.1 and work back to the beginning. When the government offers the protester a voluntary corrective action,

**Figure A.1**  
**Decisions Relevant to Protest Patterns and Outcomes**



RAND DB603-A.1

If  $BA > (1 - PG) * BA - CP$ , the protester accepts. Stated differently, this condition is  $PG * BA + CP > 0$ , which always holds. A protester accepts every corrective action offered (Link 5) and rejects none (Link 6).

When the government receives a protest:

If  $(1 - PG) * CA + CG > CA$ , it offers voluntary corrective action. Equivalently,  $CG > PG * CA$ . When this occurs, a protest moves through Link 3.

If  $(1 - PG) * CA + CG < CA$ , it goes directly to merit review. Equivalently,  $CG < PG * CA$ . When this occurs, a protest moves through Link 4.

Anticipating this, the protester protests

If  $(1 - PG) * CA + CG > CA$  and  $BA > C0$  or if  $(1 - PG) * CA + CG < CA$  and  $(1 - PG) * BA > C0 + CP$ . When either combination of conditions applies, the potential protest moves through Link 1. All other potential protests move through Link 2, and no protest occurs.

In sum, the following conditions exist along each link:

- Link 1:  $[CG > PG * CA \text{ and } BA > C0]$  or  $[CG < PG * CA \text{ and } (1 - PG) * BA > C0 + CP]$
- Link 2: Conditions in Link 1 do not apply.

- Link 3:  $CG > PG*CA$ .  
 Link 4:  $CG < PG*CA$ .  
 Link 5:  $BA > (1 - PG)*BA - CP$ . This always holds, because  $PG*BA + CP > 0$ .  
 Link 6: Empty  
 Link 7: Government succeeds in merit review, which occurs PG of the time.  
 Link 8: Government fails in merit review, which occurs  $(1 - PG)$  of the time.

The following conditions apply in the outcomes for the four subsets into which the model sorts potential protests:

- Outcome 1: Conditions in Link 1 do not apply. No protest occurs.  
 Outcome 2: Conditions in Links 1 and 3 apply. Voluntary corrective action occurs; merit review does not.  
 Outcome 3: Conditions in Links 1 and 4 apply. Merit review occurs and, PG of the time, the government prevails.  
 Outcome 4: Conditions in Links 1 and 4 apply. Merit review occurs and,  $(1 - PG)$  of the time, the government fails.

## Implications

**Implication 1: Protesters always accept a corrective action when it is offered.** (Link 6 is empty.) We do observe protesters rejecting voluntary Air Force corrective actions. So the stylized facts miss something important. Consider two possibilities.

Perhaps, contrary to the assumptions in the model, the government can affect the amount of corrective action it offers in a particular case and recognizes that it need not offer as much corrective action as GAO might require to induce a protester to forgo a merit review. If the government guesses wrong about what to offer in this case, a protester may reject the government offer. This seems unlikely if negotiation is feasible and the government and protester agree on the values of all relevant attributes.

Alternatively, contrary to the assumptions in the model, a protester gains something beyond the expectation of winning when it moves to a merit review. Many have argued that protesters can delay a contract award in this way and either extend their existing contract or buy time to be more competitive when a source selection resumes, making the benefit from the corrective action greater to them if the source selection resumes later. This sounds more plausible. When this is relevant to a particular potential protest, a protester may be willing to protest even if it believes that it has no chance of winning in a merit review. This might help explain why the government prevails so often in merit reviews.

**Implication 2: All else equal, the government's willingness to offer corrective action falls as the probability of success in merit review rises.** This is true because the government offers voluntary corrective action when  $CG > PG*CA$ . Therefore, the expected degree of government success in a protest should be lower when the government offers corrective action than when it chooses to go directly to merit review. Our interviews in the Air Force support this expectation and in fact identify it as a reason to expect that "corrective action costs" are probably about the same whether the Air Force offers corrective action or is forced to do so fol-

lowing a merit review. In any specific situation, the Air Force has a limited ability to affect this cost and must react by deciding whether to offer corrective action.

**Implication 3: All else equal, the government’s willingness to offer corrective action falls as the level of the cost of corrective action rises.** This is also a result of the fact that (in the model) the government offers voluntary corrective action when  $CG > PG \cdot CA$ . This may be a bit trickier than the implication above, because a reasonable set of beliefs would allow  $CG$  and  $CA$  to move together. The higher the cost of a corrective action, the higher the optimal amount the government would likely expend to deal with it if it goes to a merit review. But if the government believes that the fixed costs to going to merit review are significant relative to the total costs, this implication would still apply. Another way to say this is that, the smaller the expected “protest costs” relative to the expected “corrective action costs,” the less likely the government is to offer voluntary corrective action. If the share of “protest costs” in total costs falls as total costs rise, the observed cost of corrective actions should, on average, be higher for actions that result from merit review than for those that do not. This could well result in significantly higher observed costs for corrective actions resulting from merit reviews than for those resulting from voluntary action, even if, in any particular case, the costs do not differ.

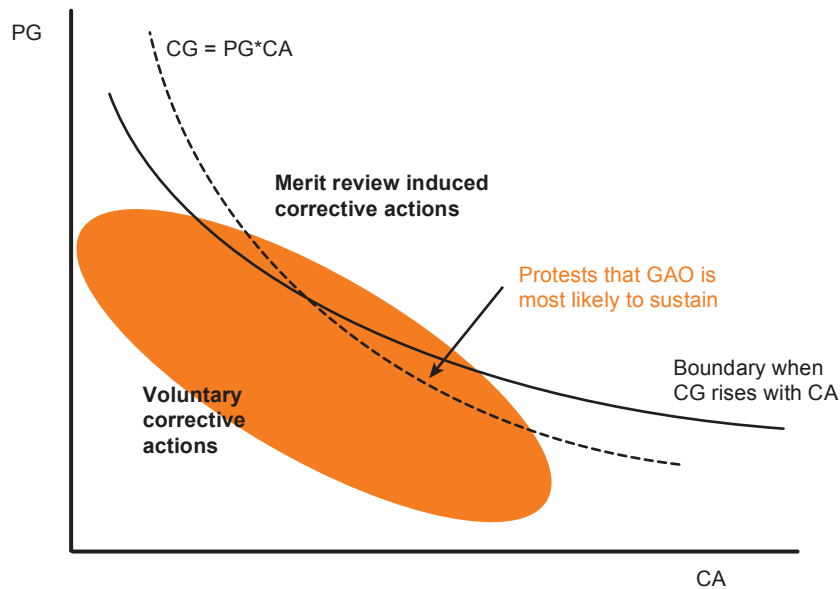
**Implication 4: We cannot infer the relative sizes of “corrective action costs” with and without merit review from the government’s observed rate of success in merit reviews.** This success rate depends on only cases that go to merit review, and the model makes it clear that these cases differ systematically from those that result in voluntary corrective actions. Figure A.2 illustrates this. It shows the “corrective action cost” ( $CA$ ) on the abscissa and probability of government success ( $PG$ ) on the ordinate. The dotted curve,  $CG = PG \cdot CA$ , traces the boundary that divides cases where the government offers voluntary corrective action from those where it does not *if* “protest cost” ( $CG$ ) is constant. If  $CG$  rises with  $CA$ , as is likely, the boundary would look more like the solid curve. The shaded area posits a distribution of the values of  $CA$  and  $PG$  in the subset of potential protests that the protester has chosen to pursue.

The observed government success rate is the average of the values of  $PG$  for the protests in the shaded area above the solid curve. The (unobserved) average cost to the government of a sustained protest is a weighted average of the values of  $CA$  for these same protests. The weight for the  $i$ th case in this group is

$$(1 - PG_i) / \sum_{t=1}^n (1 - PG_t),$$

where there are  $n$  cases in the group. This gives cases with lower probabilities of government success—and so higher values of  $CA$ —greater weight. The (unobserved) average cost to the government of a voluntary corrective action is simply the average of  $CA$  for the protests below the solid line. By itself, given a set of cases such as those in the shaded area, the observed government success rate does not serve as a useful summary statistic that can tell us something specific about these other two values, even when we know something about the attributes of the protests the protester has chosen to pursue.

**Figure A.2**  
**Comparison of Protests for Which the Government Offers Voluntary Corrective Action and Those for Which It Does Not**



RAND DB603-A.2

## Other Observations

There are two reasons not yet discussed to raise questions about the realism of this model. First, our interviews in the Air Force indicated that, contrary to the assumption in the model, the government does have some ability to affect the cost of a voluntary corrective action. If we allow that in the model and continue to assume that the government and protester share the same beliefs about all attribute values, we have to question why the government would ever offer more corrective action than that required to induce a protester to accept it rather than moving to merit review. In fact, both the government and the protester could avoid “protest costs” by settling before a merit review. Merit reviews would simply cease and be replaced by settlements that achieved outcomes very similar to what a merit review would have yielded.

If that occurred for all protests, the costs of voluntary corrections would be about the same as those for GAO-directed corrections when the government had little chance of winning and just a fraction of GAO-directed costs when the government had a high chance of winning. In fact, the government’s ability to adjust corrective actions is limited, preserving a role for merit reviews. But even if the government could settle a significant portion of protests through negotiations that reduced its costs of voluntary corrective action, the logic displayed in Figure A.2 still applies. We could not infer what the settlements would look like in the voluntary agreements by examining only the government’s success rate in merit reviews.

Second, the model is as simple and orderly as it is because we have assumed that the government and protesters share the same beliefs about the values of our six core attributes. The large number of protests withdrawn by protesters and dismissed by GAO, even when a corrective action is not offered, points to a high degree of naïveté among real protesters. If,

contrary to the assumptions in the model, many protesters were naïve, it would be inappropriate to assume that protesters and the government agree on the values of the six attributes of any potential protest. Such disagreement would further complicate any effort to infer relative values of costs associated with corrective actions based on the observed pattern of government wins in merit reviews.

That said, protesters are more likely to share government beliefs in acquisitions with large enough stakes to impose significant costs when corrective action occurs. For these protesters, something like the model offered here probably offers useful insights. But even in these large, complex acquisitions, beliefs can differ. One way to interpret the CSAR-X and KC-X protests is to suggest that the protesters involved discovered methods that the government had not anticipated. As a result, the government treated the expected probabilities and costs of successful protests as smaller than the protesters did, with serious implications for the outcomes of the protests in these acquisitions. Some observers believe that the government has responded to these two protests by becoming more conservative and offering voluntary corrective actions more often. One way to interpret this is to say that the government has adjusted its beliefs so that they are more in line with those of potential protesters. And so, the beliefs of the government and these protesters are better aligned than they may have been when the CSAR-X and KC-X protests occurred.



## Weapon Systems Acquisition Reform Act

### ***WSARA Could Clarify Requirements, Improve Evaluation, Reduce Uncertainty***

<b>Goals of WSARA</b>	<b>Implications for source selection</b>
<b>Rebuild government capabilities in cost assessment, DT&amp;E, systems engineering</b>	<b>Improve technical evaluation, allow use of more sophisticated cost criteria</b>
<b>Improve capabilities for performance assessment, root cause analysis</b>	<b>Improve acquisition program structure, cost estimation</b>
<b>Trade off cost, schedule, and performance priorities in requirements development</b>	<b>Clarify relative importance of source selection criteria</b>
<b>Tighten rules for reporting cost, schedule growth to Congress</b>	<b>Improve cost estimates early on, thereby improving source selection outcomes</b>
<b>Tighten compliance with DAB milestone certifications</b>	<b>Reduce uncertainty about technologies</b>

RAND

GAO Bid Protests in Air Force Source Selections -57-

The Weapon Systems Acquisition Reform Act of 2009 made a number of important changes in the organization of DoD systems acquisition and the policies that govern it.<sup>1</sup> These changes will help define a new environment for source selections and, hence, for protests of government decisions made during source selection. This appendix briefly summarizes the elements of WSARA that could affect source selection and so the findings and recommendations developed in this document.

WSARA has the following broad effects:

- reorganizes cost estimation, program assessment, and risk evaluation in ways that should increase their level of influence in DoD decisionmaking
- increases the role of the combatant commanders in the development of requirements for new acquisition programs

<sup>1</sup> U.S. Congress, 2009a; U.S. Congress, *Conference Report to Accompany House of Representatives Bill S.454*, Washington, D.C., May 20, 2009b.



- requires consideration of trade-offs among cost, schedule, and performance objectives as part of the JCIDS process for developing requirements that will be used in source selections
- promotes greater use of competition and prototyping
- tightens oversight of unplanned cost and schedule growth
- promotes better use of workforce incentives
- tightens oversight of earned value management
- promotes monitoring of the health of the industrial base relevant to DoD systems acquisition.

If these changes have the intended effects, they should all improve the general environment in which system acquisition—and so source selection in particular—occurs. But a number of these changes could have more specific effects on source selection and so on the issues discussed in this document. The slide summarizes these.

The act accepts as valid a broad perception that DoD's ability to estimate costs, conduct developmental testing and evaluation (DT&E), and perform system engineering has declined with recent secular reductions in the size and seniority of the in-house acquisition workforce and increasing dependence on outside providers of these capabilities. WSARA seeks to heighten the visibility and perceived importance of these capabilities inside the government and to sharpen accountability for them. To the extent this effort succeeds, government SSETs should become more sophisticated, allowing better designed and more thoroughly executed evaluations. Independent cost estimation should improve, allowing the use of more sophisticated methods and more reliable evaluations of the costs associated with proposals. Such improvements in technical sophistication and cost estimation capability are directly relevant to concerns about the capabilities of the government workforce in general and cost estimators in particular addressed in the text.

The act requires that the Secretary of Defense identify a “senior official in OSD as the principal official of DoD responsible for conducting and overseeing performance assessments and root cause analyses for major defense acquisition programs.”<sup>2</sup> Performance assessment will track program cost, schedule, and performance relative to program targets of a program and determine whether the program is likely to meet DoD requirements more cost-effectively than any alternative might. When such assessment identifies shortfalls, root cause analysis will seek the underlying cause or causes. Possibilities include, among others<sup>3</sup>

(1) unrealistic performance expectations; (2) unrealistic baseline estimates for cost or schedule; (3) immature technologies or excessive manufacturing or integration risk; (4) unanticipated design, engineering, manufacturing, or technology integration issues arising during program performance; (5) changes in procurement quantities; (6) inadequate program funding or funding instability; and (7) poor performance by government or contractor personnel responsible for program management.

If these changes have the desired effects, program discipline should improve, problems should be caught earlier, and the Air Force and offerors should have a better understanding of

<sup>2</sup> U.S. Congress, 2009a, Sec. 103(a)(1).

<sup>3</sup> U.S. Congress, 2009a, Sec. 103(d).

the technological status and likely future costs of systems coming into source selection. This should reduce uncertainty and support development of more clearly stated requirements and requests for proposals. As noted in the text, vaguely crafted requirements and requests for proposal have induced protests in the past and led to sustained protests in the CSAR-X and KC-X source selections.

The act requires “consideration of trade-offs among cost, schedule, and performance objectives as part of the process for developing requirements for Department of Defense acquisition programs.”<sup>4</sup> The JROC will ensure such consideration and, in particular, ensure that analyses of alternatives consider these trade-offs for each alternative considered. That is, the acquisition process will complete such trade-off assessments well before source selection occurs. If these changes have the effects desired, the requirements process should clarify the relative importance of requirements identified, helping source selection teams frame and evaluate requests for proposal more precisely. More clearly defined requirements should help the Air Force address concerns discussed in the text. Note that the act does not require greater consideration of trade-offs within a source selection, as at least one observer has suggested.<sup>5</sup>

The act tightens the rules under which major programs identify shortfalls and report them to Congress. When a large enough shortfall occurs in cost, schedule, or performance, DoD must quickly report it to relevant congressional committees, explain the root cause and road ahead to remove the shortfall, and justify the continuation of the program and the plan for correcting the shortfall or terminate the program. Greater technical maturity should clarify the status of the program and, as above, simplify design and execution of a cost-effective source selection. Such improvements appear likely to help the Air Force address some of the difficulties, discussed in the text, that it has had with faulty cost estimates in source selection.

Tightening of rules related to milestone certification should increase the technical maturity of programs reaching source selection, with similar benefits to the source selection process.

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<sup>4</sup> U.S. Congress, 2009a, Sec. 201(a).

<sup>5</sup> Burton, 2009, for example.



## Bibliography

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- Acquisition Advisory Panel, *Report to the Office of Federal Procurement Policy and the United States Congress*, Final Panel Working Draft, Washington, D.C., December 2006.
- Bailey, Jeff, and David M. Herszenhorn, "Boeing Says It Will Protest Tanker Deal," *New York Times*, March 11, 2008.
- Boockholdt, Kathy, "Source Selection Lessons Learned," briefing, Washington, D.C.: Office of the Air Force Acquisition Center of Excellence (SAF/ACE), December 10, 2008.
- Boyd, John R., "Discourse on Winning and Losing," briefing, 1976. As of November 30, 2010: <http://www.ausairpower.net/JRB/intro.pdf>
- Burton, Robert A., "Analysis of KC-X Tanker Draft RFP for Consistency with the Weapons System Acquisition Reform Act of 2009," white paper, Washington, D.C.: Venable, L.L.P., October 19, 2009.
- Butler, Amy, "Air Mobility Command to Begin Search for KC-135 Tanker Replacement," *Inside the Air Force*, December 17, 1999.
- , "Air Force Mulling Replacement for Aging, Maintenance-Needy KC-135," *Inside the Air Force*, May 4, 2001.
- Buy American Act, 41 U.S.C. § 10a–10d, 1933.
- Cahlink, George, "Ex-Pentagon Procurement Executive Gets Jail Time," *Government Executive*, October 1, 2004.
- Camm, Frank, Mary E. Chenoweth, John C. Graser, Thomas Light, Mark A. Lorell, and Susan K. Woodward, *Government Accountability Office Bid Protests in Air Force Source Selections: Evidence and Options—Executive Summary*, Santa Monica, Calif.: RAND Corporation, MG-1077-AF, 2012. As of January 24, 2012: <http://www.rand.org/pubs/monographs/MG1077/>
- Christie, Gary E., Dan Davis, and Gene Porter, *Air Force Acquisition: Return to Excellence*, CNA Independent Assessment, CRM D0019891.A2/Final, Alexandria, Va., February 2009.
- Congressional Research Service, *The Air Force KC-767 Tanker Lease Proposal: Key Issues for Congress*, Washington, D.C.: The Library of Congress, RL32056, updated September 2, 2003.
- "CSAR-X Request Cut by \$42 Million, Stipulations Placed on FY06 Funds," *Inside the Air Force*, December 23, 2005.
- "CV-22 Likely to Take Over All Current Air Force Rotorcraft Missions," *Inside the Air Force*, November 27, 1998.
- Dahmann, Judith S., and Mike Kelley, *Systems Engineering During the Materiel Solution Analysis and Technology Development Phases*, white paper, Washington, D.C.: Office of the Director, Defense Research and Engineering, System Engineering, September 2009.
- Defense Information Services Agency (DISA), *Acquisition Deskbook: Source Selection*, Washington, D.C., March 2000.
- Donley, Michael B., "Strengthening the Acquisition Process," memorandum, Secretary of the Air Force, Washington, D.C., July 18, 2008a; not available to the general public.

———, “Strengthening the Acquisition Process (Your memo, dated 2 Sep 08),” memorandum, Secretary of the Air Force, Washington, D.C., September 9, 2008b; not available to the general public.

Edwards, Vernon J., *Source Selection Answer Book*, 2nd ed., Vienna, Va.: Management Concepts, 2006.

Federal Acquisition Regulation, in Subpart 7.5, “Inherently Governmental Functions.” As of November 16, 2008:

[https://www.acquisition.gov/far/05-06r1/html/Subpart%207\\_5.html](https://www.acquisition.gov/far/05-06r1/html/Subpart%207_5.html)

Gates, Dominic, “Pitching 777 for Tanker Contest Could Mean More Jobs at Boeing Everett Plant,” *The Seattle Times*, June 17, 2009.

Golden, Michael R., “Evaluating Cost or Price in Competitions: Challenges Abound,” Washington, D.C.: U.S. Government Accountability Office, paper presented at DoD Cost Analysis Symposium 42, Williamsburg, Va., February 2009.

Greenberg, Marc, and James Gates, *Analysis of Alternatives*, Teaching Note, Ft. Belvoir, Va.: Defense Acquisition University, 2006. As of November 24, 2010:

<https://acc.dau.mil/adl/en-US/30371/file/5377/05%20-%20Analysis%20of%20Alternatives%20TN-%20Apr%2006.pdf>

Grunbaum, Rami, “Opponents Call Boeing’s Plane ‘Frankentanker,’” *The Seattle Times*, January 27, 2008.

Hawthorne, Skip, “Risk Based Source Selection,” briefing, PEO/SYSCOM Conference, Washington, D.C.: OUSD(AT&L) Defense Procurement Acquisition Policy, November 7, 2006.

Ilg, Scott, “Best Value Source Selection Trade-Offs,” briefing, Defense Acquisition University, Germany, 2006.

Kadish, Ronald (Lt Gen, USAF, Ret.), *Defense Acquisition Performance Assessment: Report by the Assessment Panel of the Defense Acquisition Performance Assessment Project for the Deputy Secretary of Defense*, Washington, D.C., January 2006.

Kayes, Brett N. (Capt, USAF), “Air Force GAO Protest Trend Analysis,” briefing, Washington, D.C.: Deputy Assistant Secretary (Contracting) (Contracting Operations Division) (SAF/AQCK), updated September 19, 2008.

Kennedy, Michael, “Analysis of Alternatives for Recapitalizing the U.S. Air Force KC-135 Aerial Refueling Tanker Fleet,” Santa Monica, Calif.: RAND Corporation, unpublished research, 2006.

Kornreich, Doug, “Bid Protests: How to Avoid Them, and How to Win Them,” briefing, Washington, D.C.: Department of Health and Human Services, Office of General Counsel, General Law Division, 2004. As of February 10, 2010:

[http://oamp.od.nih.gov/NewsEvents/Symposium/Symposium04/RockyGap\\_Presentation/Slides/Bid\\_Protest.ppt](http://oamp.od.nih.gov/NewsEvents/Symposium/Symposium04/RockyGap_Presentation/Slides/Bid_Protest.ppt)

Kreisher, Otto, “Is CSAR Really Nothing ‘Special?’” *Air Force Magazine*, November 2009.

Leung, Rebecca, “Cashing In for Profit? Who Cost Taxpayers Billions in Biggest Pentagon Scandal in Years?” CBS News, January 5, 2005. As of February 8, 2010:

<http://www.cbsnews.com/stories/2005/01/04/60II/main664652.shtml>

Liang, John, “Wall Street Analysts Surprised by Lockheed Team’s Presidential Helicopter Win,” *DefenseAlert-Daily News*, January 31, 2005.

Light, Thomas, Frank Camm, Mary E. Chenoweth, Peter Anthony Lewis, and Rena Rudavsky, *Analysis of Government Accountability Office Bid Protests in Air Force Source Selections over the Past Two Decades*, Santa Monica, Calif.: RAND Corporation, TR-883-AF, 2012. As of January 24, 2012:

[http://www.rand.org/pubs/technical\\_reports/TR883/](http://www.rand.org/pubs/technical_reports/TR883/)

Manuel, Kate M., and Moshe Schwartz, *GAO Bid Protests: An Overview of Timeframes and Procedures*, Washington, D.C.: Congressional Research Service, February 11, 2009.

Martin, Edward C., “Source Selection Improvements,” briefing, Wright-Patterson AFB, Ohio: ASC Acquisition Center of Excellence, April 10, 2007.

- Martin, Edward C., and Daniel C. Fulmer, "What's New in Air Force Source Selection," ASC Acquisition Center of Excellence, briefing, World Congress, National Contract Management Association, Session #711, Cincinnati, Ohio, April 13–16, 2008.
- Matishak, Martin, "Pentagon Appeals Host of CSAR-X Changes Proposed by Lawmakers," *Inside the Air Force*, October 28, 2005.
- , "Lawmakers Want Detailed Cost, Schedule Plans: CSAR-X Request Cut by \$42 Million, Stipulations Placed on FY06 Funding," *Inside the Air Force*, December 23, 2006.
- McCain, John (Senator), Letter to the Honorable Robert M. Gates, U.S. Senate Committee on Armed Services, Washington, D.C., October 29, 2009.
- "New Helicopters Possibly in Store for Enhanced Combat Search and Rescue," *Inside the Air Force*, February 12, 1999.
- Office of Management and Budget, Office of Federal Procurement Policy, "Work Reserved for Performance by Federal Government Employees," Notice of Proposed Policy Letter in *Federal Register*, Vol. 75, No. 61, March 31, 2010, pp. 16188-16197. As of July 21, 2010:  
<http://edocket.access.gpo.gov/2010/2010-7329.htm>
- Payton, Sue C., "Implementation Plan for Strengthening the Acquisition Process, Memorandum," Washington, D.C.: SAF/AQ, September 15, 2008a; not available to the general public.
- , "Strengthening the Acquisition Process (SECAF Memorandum, July 18, 2008)," memorandum with attachments, "Point Paper on KC-X Source Selection: Lessons Learned," "Air Force Acquisition Quick Look: Terms of Reference," Washington, D.C.: SAF/AQ, September 2, 2008b; not available to the general public.
- , "Strengthening the Acquisition Process (Draft Recommendations), Memorandum," Washington, D.C.: SAF/AQ, September 15, 2008c; not available to the general public.
- Pfleger, Katherine, "Lawmakers Consider Air Force as Boeing Commercial-Plane Customer," *Associated Press Newsires*, September 30, 2001, quoted in Congressional Research Service, September 2, 2003.
- Pollock, Rob, "Weekly Assessment of Implementation Plan Progress to Strengthen the Acquisition Process," briefing, Washington, D.C.: Acquisition Chief Process Office (SAF/ACPO), December 2, 2008.
- Schanz, Marc V., "Gates Hits Reset Button on CSAR-X," *Air Force Magazine*, April 7, 2009.
- Schwartz, Moshe, and Kate M. Manuel, *GAO Bid Protests: Trends, Analysis, and Options for Congress*, Washington, D.C.: Congressional Research Service, February 2, 2009.
- Scott, Bethany, "Air Force Eyes Replacement for Aging Pave Hawk Helos," *National Defense Magazine*, September 2001.
- Shanks, Loretta, "Best Value Source Selection," briefing, Norfolk, VA: U.S. Naval Facilities Engineering Command, Mid-Atlantic, June 30, 2009. As of November 30, 2010:  
<http://webcache.googleusercontent.com/search?q=cache:4U595gJd0WgJ:intranet.ncmahq.org/norfolk/2009%20SDVOSB%20Presentations/Best%20Value%20Source%20Selection%20-%20Shanks.ppt+loretta+shanks+%2522best+value+source+selection%2522&cd=1&hl=en&ct=clnk&gl=us>
- Slate, Alexander R., "Best Value Source Selection: The Air Force Approach," *Defense AT&L*, September–October 2004, pp. 52–55.
- Tiron, Roxana, "GAO Rules in Favor of CSAR-X Protesters," *The Hill*, August 30, 2007.
- Tirpak, John A., "Tanker Twilight Zone," *Air Force Magazine*, February 2004.
- U.S. Air Force, *Air Mobility Strategic Plan 2000*, Scott Air Force Base, Ill.: Headquarters, Air Mobility Command, 1999.
- , *Request for Proposal for the Combat Search and Rescue Recovery Vehicle (CSAR-X) System Development and Demonstration (SDD), CSAR-X Low Rate Initial Production (LRIP) and Initial Production Options*, Solicitation FA8629-06-R-2350, Wright-Patterson AFB, Ohio: Aeronautical Systems Center, 2005.
- , *Request for Proposal for the KC-X Tanker Replacement Program*, Solicitation FA8625-07-R-6470, Wright-Patterson AFB, Ohio: Aeronautical Systems Center, January 29, 2007.

———, “USAF Annual Bid Protest Update, FY09Q1,” briefing, Washington, D.C.: SAF/AQC, January 1, 2009a.

———, *Source Selection, Mandatory Procedure MP5315.3*, Washington, D.C.: Deputy Assistant Secretary (Contracting) (Policy Division) (SAF/AQCP), March 2009b.

———, *Acquisition Improvement Plan*, Washington, D.C.: SAF/AQ, May 4, 2009c.

U.S. Air Force Acquisition Chief Process Office, *United States Air Force ‘Strengthening the Acquisition Process’ Final Report*, Report to the Secretary of the Air Force on the “Strengthening the Acquisition Process,” Washington, D.C., 2009; not available to the general public.

U.S. Army, *Army Source Selection Manual*, Addendum AA to AFARS, May 16, 2008.

U.S. Congress, *Weapon Systems Acquisition Reform Act of 2009*, P.L. 111-124, Washington, D.C., May 2009a.

———, *Conference Report to Accompany House of Representatives Bill S.454*, Washington, D.C., May 20, 2009b.

U.S. Court of Federal Claims, “About the Court,” n.d. As of October 21, 2009:  
<http://www.uscfc.uscourts.gov/about-court>

———, “Guidelines for Procurement Protest Cases,” reproduced as a public service of the ABA Public Contract Law Section, Bid Protest Committee, n.d. As of November 30, 2009:  
<http://www.abanet.org/contract/federal/bidpro/cofcguid.html>

U.S. Department of Defense, *Addendum to the Defense Acquisition Structures and Capabilities Review*, Pursuant to Section 814, National Defense Authorization Act, Fiscal Year 2006, Washington, D.C., June 2007a.

———, *Report of the Defense Acquisition Structures and Capabilities Review*, Pursuant to Section 814, National Defense Authorization Act, Fiscal Year 2006, Washington, D.C., June 2007b.

———, “Executive Report,” Understanding the Problem Subcommittee, Source Selection Joint Analysis Team, Washington, D.C., April 24, 2009a.

———, “Guidance Joint Framework,” briefing, Source Selection Joint Analysis Team, Washington, D.C., April 24, 2009b.

———, “Recommendations for Best Practices,” Source Selection Joint Analysis Team, Washington, D.C., April 24, 2009c.

———, “Source Selection Policy and Guidance Assessment—Initial Report: Executive Summary,” Source Selection Joint Analysis Team, Guidance Subcommittee, Washington, D.C., April 24, 2009d.

———, “Understanding the Problem Subcommittee Briefing,” Source Selection Joint Analysis Team, Washington, D.C., April 24, 2009e.

———, “Manual for the Operation of the Joint Capabilities Integration and Development System,” Washington, D.C., July 31, 2009f. As of July 22, 2010:  
<https://acc.dau.mil/communitybrowser.aspx?id=267116>

U.S. Department of Defense, Inspector General, *Acquisition of the Boeing KC-767A Tanker Aircraft*, D-2004-064, Washington, D.C., March 29, 2004.

———, *Air Force KC-X Aerial Refueling Tanker Aircraft Program*, D-2007-103, Washington, D.C., May 30, 2007.

U.S. General Accounting Office, *U.S. Combat Air Power: Aging Refueling Aircraft Are Costly to Maintain and Operate*, GAO/NSIAD-96-160, Washington, D.C., August 1996.

———, *Military Aircraft: Observations on the Proposed Lease of Aerial Refueling Aircraft by the Air Force*, GAO-03-923T, Washington, D.C., September 4, 2003.

———, *DoD Needs to Determine Its Aerial Refueling Aircraft Requirements*, GAO-04-349, Washington, D.C., June 2004.



- U.S. General Services Administration, Department of Defense, and National Aeronautics and Space Administration, *Federal Acquisition Regulation*, Washington, D.C., March 2005.
- U.S. Government Accountability Office, "Bid Protest Regulations," website, n.d. As of February 8, 2010: <http://www.gao.gov/decisions/bidpro/bid/bibreg.html>
- , *Bid Protests at GAO: A Descriptive Guide*, 8th ed., GAO 06-797SP, Washington, D.C., 2006.
- , Decision, Matter of Sikorsky Aircraft Company, Lockheed Martin Systems Integration-Owego, Files B-299145, B-299145.2, B-299145.3, Washington, D.C., February 26, 2007a.
- , Decision, Matter of Sikorsky Aircraft Company, Lockheed Martin Systems Integration-Owego, Request for Reconsideration, File B-299145.4, Washington, D.C., March 29, 2007b.
- , *Cost Assessment Guide: Best Practices for Estimating and Managing Program Costs*, GAO-07-1134SP, Washington, D.C., July 2007c.
- , *Selected Recent GAO Bid Protest Decisions*, Washington, D.C., updated August 2007d.
- , Decision, Matter of Lockheed Martin Systems Integration-Owego, Sikorsky Aircraft Company, Files B-299145.5, B-299145.6, Washington, D.C., August 30, 2007e.
- , Decision, Matter of The Boeing Company, Files B-311344, B-311344.10, B-311344.11, B-311344.3, B-311344.4 B-311344.6, B-311344.7, B-311344.8, Washington, D.C., June 18, 2008.
- , *Report to Congress on Bid Protests Involving Defense Procurements*, B-401197, Washington, D.C., April 9, 2009.
- Van Buren, David M., "Acquisition Improvement Plan Implementation," memorandum, SAF/AQ, Washington, D.C., May 8, 2009.
- Warwick, Graham, "Why Boeing's HH-47 Chinook Won the CSAR-X Competition," *Flight*, Flightglobal.com, October 11, 2006.
- Wayne, Leslie, "U.S.-Europe Team Beats Out Boeing on Big Contract," *New York Times*, March 1, 2008.
- Weisgerber, Marcus, "Gates Reopens Tanker Competition, Shifts Authority from Air Force," *Inside the Pentagon*, August 10, 2009.
- "Where in Federal Contracting," website, n.d. As of November 4, 2010: <http://wifcon.com/aboutsite.htm>