Saving the Government Money

Recent Examples from RAND’s Federally Funded Research and Development Centers

The RAND Corporation’s federally funded research and development centers (FFRDCs) help the government organizations responsible for U.S. national security tackle problems for which solutions require both the sustained analytic attention of multiple disciplines over many years and the trust engendered by rigorous safeguards against conflict of interest. Through their continuous connection with decisionmakers, the three FFRDCs at RAND (see box) have developed unsurpassed expertise, or “research capital,” on issues of policy concern and on the technological, operational, and resource dimensions of these issues. In serving its Department of Defense (DoD) sponsors, RAND applies that research capital in ways that help policymakers solve problems and that often save the government money.

The table on page 2 lists some illustrative projects over the past six years that have helped save the government money or that have the potential to do so. We elaborate on those projects in the subsequent pages. (References and links are provided for further information when a publicly accessible document is available.)

These recent projects are representative of numerous RAND analyses that have been conducted within the FFRDCs over the years and that have yielded similar benefits. Together, they account for billions of dollars in savings and cost avoidance.

WAYS THAT RAND ANALYSES HAVE SAVED DOD MONEY

RAND projects that have helped the government with cost savings and cost avoidance fall into three classes:

• Savings have been achieved or are ongoing.
• Savings have been projected and will accrue, assuming the government follows RAND’s recommendations.
• Savings have been enabled following RAND’s independent validation.
# AN OVERVIEW OF RECENT SAVINGS ACHIEVED, PROJECTED, OR VALIDATED BY RAND RESEARCH

## SAVINGS ACHIEVED OR ONGOING

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<td>Recommending Against Winglets for Tankers</td>
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<td>$300 million in savings under way, plus $76 million per year in projected cost avoidance through 2020</td>
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<td>Helping the Army Better Manage Its Clothing Inventory</td>
<td>$100 million saved in FY 2011 and at least $30 million per year saved thereafter</td>
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NOTE: Dollar amounts are in nominal dollars current with the year of the study or savings. Some savings are thus underestimated in 2015 terms.
Cost-Effective Options for Intratheater Airlift (2010)

$475 million per year in costs avoided over the life of the systems

PAF developed and employed a methodology to allow the Air Force to determine the most cost-effective way to provide intratheater airlift. PAF ensured that its recommendations met the needs defined in the Mobility Capabilities Study and the requirements of eight other missions subsequently identified by the Air Force and the Office of the Secretary of Defense.

With regard to the Air Force’s plan to retire 129 combat delivery C-130Es, PAF’s analysis demonstrated that the Air Force should recapitalize the retiring aircraft with C-130J-30s rather than C-27Js, as some had advocated. The analysis concluded that the C-130J-30 is the cost-effective alternative for all of the missions considered. The C-27J offers approximately 40 percent of the cargo capacity at about two-thirds of the cost and was neither cost-effective nor appropriate for five of the missions. The two aircraft options have comparable short- and soft-field performance under operationally consistent circumstances. PAF concluded that recapitalizing the retiring C-130Es with C-130J-30s instead of C-27Js would save $17 billion over the life of the systems on a net-present-value basis, or an average of $475 million per year.

The Air Force had begun to procure 38 C-27Js but in FY 2012 decided both to stop acquiring C-27Js and to divest the ones it had procured. Thus, the intratheater cargo fleet will be recapitalized with C-130J-30s, as recommended by PAF.

Using Air Force Aircraft to Reduce Intratheater Airlift Costs (2011)

Up to $500 million per year in savings projected at 2009 activity levels, $200 million per year in savings achieved in commercial tender program alone

Using C-17 and C-130 Air Force aircraft as well as commercial aircraft, DoD daily moves large amounts of cargo within the U.S. Central Command (USCENTCOM) theater, which includes Iraq and Afghanistan. PAF compared the costs of Air Force and commercial airlift and found that, for USCENTCOM’s 2009 demands, both C-17s and C-130s provided more cost-effective delivery than commercial providers.

Holding the number of C-17s and C-130s at 2009 levels but redistributing cargo assignments (such as increasing the use of C-17s for long sorties) could have reduced 2009 intratheater airlift costs by $175 million. Increasing the number of Air Force aircraft and decreasing the use of commercial aircraft could have saved between $390 million and $500 million. Some savings would persist even if the cost of Air Force airlift increased substantially and that of commercial airlift decreased substantially from 2009 levels. PAF recommended that the Air Force employ decision-support tools to assist with daily airlift cargo allocation.

The Air Force reported that these PAF findings shed important light on the issue for senior leadership, which gave the Air Force and combatant command analysts the opportunity to influence changes in the commercial tender program (a subset of the intratheater airlift considered in the analysis). This resulted in a reduction in CENTCOM’s commercial tender program cost from $450 million to $250 million annually during operations in Iraq and Afghanistan.

Recommending Against Winglets for Tankers (2010)

$1 billion to $2 billion in costs avoided

In a congressionally mandated study, PAF assessed the potential costs and savings of adding winglets to the KC-135R/T and KC-10A fleets. PAF concluded that although adding winglets would modestly improve performance, it was not likely to reduce operating costs for either fleet under most circumstances. In fact, the proposal could result in a net increase in such costs. If the weight and structural stress caused by adding winglets were to reduce tanker service life, the net costs could be considerably higher. Furthermore, adding winglets would increase aircraft wingspan and thus could affect operations on and around parking aprons, taxi-ways, hangars, and other base infrastructure components.

PAF thus recommended against adding winglets to either aircraft fleet, for a cost avoidance of $1 billion to $2 billion on a net-present-value basis. PAF noted that the decision should be reevaluated if fuel costs increase significantly.
CSHs provide the highest level of medical care available in theater, including stabilization and surgical capabilities comparable to those found in trauma centers in major U.S. cities. When deployed, CSHs are fitted with the most-recent medical equipment available; when not deployed, CSHs keep a partial set of equipment at their home station for training, and the remainder of the unit’s equipment is placed in storage, where keeping it in good condition is challenging. Much of this equipment is never or seldom used and soon becomes obsolete. The Arroyo Center developed a radical new equipping strategy for CSHs that would eliminate much of the unit-owned equipment that currently sits in storage or is never used for training. When deploying, units would instead draw on a shared pool of up-to-date and well-maintained equipment. The proposed strategy, which was incorporated by the Army Surgeon General into the Army Medicine Equipping Strategy, with explicit reference to the RAND project, will reduce total CSH equipment costs from $1 billion to less than $700 million. When fully implemented, this will allow the Army to avoid an annual average of $72 million in upgrade costs and $4 million in maintenance costs through 2020.

Helping the Army Better Manage Its Clothing Inventory (2013)
$100 million saved in FY 2011 and at least $30 million per year saved thereafter

More than 90 central issue facilities (CIFs) located at major U.S. Army installations around the world issue organizational clothing and individual equipment (OCIE) to active component soldiers and deploying National Guard and Army Reserve soldiers. The value of OCIE inventory held at CIFs in the continental United States is substantial, having recently reached more than $1 billion. As the Army reduces the size of its force, soldiers return material to the CIFs, thus increasing inventory. An additional complication is the Army’s decision to change its uniform pattern. Transitioning to a new pattern will generate obsolete material. However, while there is a cost to holding excess material, there are risks and costs associated with disposal. As part of continuing efforts to help the Army better manage OCIE, the Arroyo Center was asked to develop a methodology to identify the excess and help the Army manage its disposal. The Arroyo Center developed a web-enabled collaboration tool that allows Army managers to work with CIF personnel to set appropriate inventory levels and identify material no longer needed locally. This material is then made available to other CIFs or can be removed, thus reducing storage and handling costs across the Army.

Equipping the Army’s Field Hospitals (2010)
$300 million in savings under way, plus $76 million per year in projected cost avoidance through 2020

The Army uses combat support hospitals (CSHs)—mobile, deployable hospitals housed in tents and expandable containers—to provide surgical and trauma care close to combat action.
In the first phase of this work, RAND researchers worked collaboratively with the Army to design and implement the web-based tool. Thanks to the reductions in wholesale replenishments and the increases in lateral transfers, the Army reduced its FY 2011 centralized OCIE budget by $100 million and subsequent budgets by at least $30 million per year. Work in this area continues to help the Army transition to a more efficient distribution system for OCIE.\(^3\)

### Reforming Military Retirement (2015)

$2.3 billion to $7.7 billion per year in projected savings

Over the past four years, RAND has provided extensive analysis to support military retirement reform efforts in DoD, including analytic support during internal deliberations of the Military Compensation and Retirement Modernization Commission (MCRMC). Using its Dynamic Retention Model, RAND analyzed many retirement plan alternatives—including MCRMC’s retirement reform plan that blends a defined benefit plan, defined contribution plan, and continuation pay in the 12th year of service—to replace the current defined benefit-only system. One feature of MCRMC’s plan is that members of the active component can choose how to structure the defined benefit portion of the plan, giving them choice over the timing and amount of benefit payments. The NDRI analysis of this plan showed that the current size and experience mix of the force could be sustained while decreasing the overall cost of the military compensation and retirement systems. In the long run, the cost savings of the MCRMC plan could range from $2.3 billion to $7.7 billion per year, depending on how the plan is ultimately structured.\(^4\)

### Upgrading Air Force Aircraft Avionics for Air-Traffic Management (2011)

Close to $7 billion in projected cost avoidance

Without upgrades, the communication, navigation, and surveillance capabilities of several Air Force aircraft—including the C-5, C-17, KC-10, and KC-135—will not be in compliance with future air-traffic management mandates around the world. Non-compliance with these mandates would prevent these aircraft from flying the most-fuel-efficient routings and altitudes and would increase air travel times.

PAF developed a methodology to determine the savings if these aircraft were upgraded so as to meet future mandates for global airspace access. PAF used this methodology to demonstrate that upgrading would avoid nearly $7 billion in Air Force costs over the life of the systems on a net-present-value basis, or about $240 million per year. The savings would come primarily from reduced fuel usage. These savings were calculated at a future fuel cost of $3 per gallon; even if fuel prices fall to $1 per gallon, the upgrade would still reduce net costs.

PAF recommended that the Air Force modernize the avionics for the C-5, C-17, KC-10, and KC-135 to comply with forthcoming air-traffic management mandates. PAF’s findings helped to inform the Air Force’s decision to upgrade these aircraft, and the FY 2014 President’s Budget references the PAF report.

### Slowing the Rate of Increase in Military Pay (2012)

$5 billion to $17 billion in savings projected over ten years

Budgetary pressures to reduce the federal deficit have raised the question of whether DoD can realize savings in the military personnel budget without jeopardizing the nation’s ability to sustain a high-quality all-volunteer force. RAND’s study answering that question points to two favorable trends. First, manpower demand will decrease, by some 80,000 soldiers and 20,000 marines, as the drawdown in Afghanistan continues. Second, the factors influencing supply are also favorable: Military pay has grown greatly relative to civilian pay in the past decade, the services’ active and reserve components have met or exceeded their numerical recruiting goals over the past few years, and at the same time recruit quality has been increasing. The evidence from the NDRI study indicates that the nation has taken care to pay its service members well, compared with civilian benchmarks, and that some easing of the growth in compensation could occur without putting force management at risk. RAND proposed several options for slowing the rate of increase, e.g., temporarily dropping the increase rate below that of civilian compensation, or freezing basic pay for a year; such changes could produce cost savings totaling $5 billion to $17 billion over ten years.\(^5\)
Researchers considered 28 beddown alternatives, with a maximum of 36 PAA per squadron, and determined that all beddowns could satisfy surge deployment requirements and most could also satisfy rotational requirements. Raising the F-35 squadron sizes from 24 to 30 PAA in the active and reserve components while raising the squadron sizes from 18 to 24 PAA in the Air National Guard could save more than $200 million in one-time support equipment requirements, more than $400 million in annual pilot absorption flying costs, more than $180 million in annual maintenance manpower costs, and more than 10 percent in annualized facilities costs. The projected savings would increase if the Air Force were to select a posture with 36 PAA in the active and reserve squadrons and 24 PAA in the Air National Guard squadrons.7

Centralizing Selected Aircraft Maintenance Activities (2010)

$300 million per year in projected savings

Currently, Air Force flying wings include maintenance organizations that are responsible for both mission-generation and significant non-mission-generation maintenance. PAF identified alternatives for reconfiguring aircraft maintenance units to better support evolving steady-state and contingency operations. In particular, PAF suggested consolidating certain non-mission-generation wing-level maintenance at a network of centralized repair facilities (CRFs) to improve effectiveness and efficiency. PAF estimated that these measures have the potential to save up to $300 million per year for the F-16, KC-135, and C-130 fleets, because the reductions in maintenance manpower greatly exceed the transportation costs and infrastructure investments needed to establish CRF networks. These manpower reductions are achieved from economies of scale: Larger-scale CRF operations are better able to achieve high levels of manpower utilization.

The CRF approach would also improve effectiveness, making an average of more than 30 C-130 aircraft available due to a decreased flow time for inspection operations. The Air Force’s Repair Network Integration effort is undertaking a phased implementation approach to extend the use of such centralized maintenance concepts to weapon systems that are currently maintained using wing-level repair capabilities.8

Making the Reserve Retirement System Similar to the Active System (2014)

$790 million per year in projected savings

The Arroyo Center analyzed how offering a retirement annuity immediately to vested Army reserve component (RC) members—both enlisted personnel and officers—would affect RC participation and Army active component (AC) retention, both in the steady state and during the transition period. Arroyo researchers also estimated the change in personnel costs in the steady state and considered how quickly RC participation and AC retention would change if currently serving RC members were given a choice between the two retirement systems.

Modeling results suggest that offering an immediate retirement annuity would change retention patterns among both the RC and AC forces. Overall, the RC force would decrease in size, become more junior, and leave the Army with less seniority. The policy would have small but discernible effects on AC retention: It would increase in midcareer but decrease near and immediately after retirement vesting. In the steady state, Army personnel costs would fall, largely because the AC force would become more junior, more AC members would separate prior to 20 years of service, and those who do make it to 20 years of service would tend to leave the Army with less seniority. Decreases in RC costs would also contribute to the cost savings.

If AC force size were held constant, and if continuation pay were offered to sustain RC force size, total cost savings for the Army would be $790 million annually in the steady state. Results are expected to be qualitatively similar for all the other services.6

Beddown Alternatives for the F-35 (2013)

$580 million per year in projected savings, plus $200 million in one-time projected savings

As currently planned, the F-35 Joint Strike Fighter is the most costly aircraft acquisition program in DoD history. One approach to ensuring program affordability could be to increase the number of Primary Aerospace Vehicles Authorized (PAA) per F-35 combat-coded squadron, with a resulting reduction in the number of such squadrons, which could reduce a variety of costs. PAF explored the impact of increasing the PAA per squadron, adjusting the mix of PAA across the active and reserve components, and adjusting the percentage of the active component PAA assigned to home-station locations in the continental United States.
**Common Vertical Lift Support Platform (CVLSP).** Through the CVLSP program, the Air Force planned to procure helicopters with a flyaway cost of $28 million apiece. Funding for the CVLSP program was canceled in 2012 because, at that price and with expected future budgets, the helicopter was judged to not be affordable.

In September 2013, Air Force Global Strike Command requested that PAF carry out a business case analysis of potential replacement options for the UH-1N. The analysis found that the CVLSP helicopter was larger and more expensive than required. PAF found that the relevant mission requirements would be most cost-effectively met by helicopters with a flyaway cost in the range of $15 million; the analysis identified several cost-effective options in that price range. The exact level of savings depends on the particular cost-effective option chosen, but for all of them, acquisition cost savings are in the $1 billion range (for a fleet of 70 helicopters, allowing for attrition reserve and including flyaway and other procurement items).

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**Fuel Reduction for the Mobility Air Forces (2015)**

$60 million per year in projected savings

Reducing aviation fuel use is an ongoing goal for military and civil operators, and the Air Mobility Command is feeling increasing pressure to further reduce fuel use by implementing and following known best practices. Although the Air Force achieved significant fuel reductions in recent years, it must continue to pursue cost-effective options to reduce fuel use. The PAF team considered 16 options for reducing fuel use and determined that 12 of these were cost-effective. However, about half of these had some negative implications. At 2015 fuel prices, six options were both cost-effective and could be reasonably implemented: engine-out taxiing, always flying at optimum altitudes and speeds, continuing to reduce aircraft weight, reducing the use of aircraft auxiliary power units (APUs) by using ground equipment instead, ensuring that loads are properly balanced, and installing microvanes on the C-130 fleet. Implementing all six options could save $60 million per year in fuel costs at 2015 fuel prices.10

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**A More Cost-Effective Option for Replacing UH-1N Helicopters (2014)**

$1 billion in projected acquisition cost avoidance

The Air Force operates a fleet of 62 UH-1N helicopters for security in intercontinental ballistic missile fields, emergency reaction airlift, and other missions. These aircraft cannot meet their mission requirements, and the Air Force has been planning since 2006 to replace them with a more capable helicopter, called the

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Hundreds of millions of dollars per year in projected savings

Operations Iraqi Freedom and Enduring Freedom imposed unique demands on Air Force agile combat support (ACS) forces and put stress on several career fields. PAF was asked to analyze how well the Air Force’s ACS forces are postured to meet emerging requirements and to suggest ways to improve that posture. The Air Force sizes and shapes many non-maintenance ACS career fields to meet the requirements of home-station installation operations rather than expeditionary operations. This often results in a discrepancy between the supply of ACS forces and operational expeditionary demands. PAF developed new metrics to quantify expeditionary ACS capacity by synthesizing planning scenarios and deployment rules, assessed the capacity of the current ACS manpower mix to support expeditionary operations, and assessed the benefits of alternative ACS manpower mixes in terms of recurring savings (maintaining constant home-station manpower authorizations).

PAF’s analysis revealed that, by rebalancing ACS manpower, the Air Force could both reduce military end strength and increase expeditionary capacity. Although active-duty end-strength reductions would be accompanied by civilian billet increases (to maintain home-station support), each rebalance option with end-strength reductions would realize net cost reductions while increasing expeditionary capacity—up to a point. An ACS rebalance that maximizes expeditionary capacity might afford little reduction in end strength or savings. But a rebalance that includes, for example, a 25-percent reduction in military end strength from that maximum-capacity alternative could still result in a greater than 50-percent increase in expeditionary capacity over the current force—and more than $300 million in annual savings. Further savings could be achieved from further end-strength reductions, if the Air Force is satisfied with its current expeditionary capacity.9

In the Air Force, aircraft engine maintenance costs account for roughly $3 billion per year. The Navy also spends hundreds of millions of dollars on aircraft engine maintenance each year. This NDRI project analyzed the feasibility and extent to which DoD might decrease its operating and support costs, without loss of safety or reliability, through an increased use of Parts Manufacturer Approval (PMA) parts and designated engineering representative (DER) repairs on military engines that share many of the same parts used on commercial jet engines. The NDRI team focused on two case study engines: the CF6-50C2 (or F103) and the CFM56-2. The CF6-50C2 (or F103) is used on the Air Force KC-10. The CFM56-2 powers the Navy E-6B and Air Force KC-135 and RC-135; the CFM56-2A is used on the Navy E-6B, and the CFM56-2B (or F108) is used on the Air Force KC-135 and RC-135.

The NDRI team found the most powerful evidence of potential cost savings on the Air Force F103 engine used on the KC-10 and supported with a contractor logistics support contract. The analysis of F103 overhaul costs performed on the previous and current contracts found a cost savings of over $1 million per overhaul, or over $200 million from FY 2010 to FY 2013. The team also found that purchases of commercial, used, and refurbished parts for six F108 National Stock Numbers (NSNs) in FY 2012 and FY 2013 resulted in an average savings of 61 percent on those items, or over $64 million. Over half of Air Force spending on engine maintenance is for commercial-derivative engines. NDRI estimated that if DoD made greater use of commercial refurbished parts or of PMA parts and DER repairs for its commercial-derivative military engines, it could save up to tens of millions of dollars each year.

Changes to Technical Training for Enlisted Personnel (2010)

$7 million per year in projected savings

PAF investigated training for nine Air Force Specialty Codes (AFSCs) with significantly high attrition and washback rates. High attrition and washback rates drive higher costs by increasing needed schoolhouse capacity, since additional seats are needed for students who will not complete the course and for students who need to retake training blocks. The investigation led to recommendations for changes in each AFSC and for changes that cut across all AFSCs.

One example of a cross-cutting recommendation is the proposed modification of a program that places boot-camp-like restrictions on students in technical training. The program demotivates the high-aptitude individuals who meet the more stringent entry prerequisites for the longer, more demanding courses. The findings also highlighted areas in which recruiting can continue to improve on providing specialty information to recruits, especially helping them to understand the physical challenges of the pararescue, combat-controller, and explosive-ordinance-disposal (EOD) training codes. Furthermore, the study recommended the use of noncognitive screening tools for EOD and selected battlefield airmen occupations. These and other changes PAF recommended could save the Air Force $7 million per year by reducing attrition and washback in technical training courses.

Evaluation of F-35C Fleet Replacement Squadron Fighter-Support Aircraft Options (2014)

$20 million to $52 million in projected cost avoidance

The Navy and Marine Corps are in the process of fielding the F-35C Joint Strike Fighter aircraft, an advanced fighter with low-observable characteristics. The F-35C poses some challenges in the area of “adversary” fighter-support aircraft that are needed for training. The F-35C is considered to be an option for the adversary role, which could increase the number of F-35C resource hours, aircraft required, and wear and tear on the aircraft, thus depleting its useful service life. Moreover, the F-35C is an expensive aircraft to operate. The research objective was geared to examine the demand for support aircraft, potential for alternative aircraft to support the training, costs of alternative aircraft, and potential cost avoidance that could be achieved by using aircraft other than an F-35 in the adversary role. NDRI analysts concluded that alternative aircraft options do exist (with some tradeoffs), and cost avoidance could be achieved through their use. In the aggregate, the use of aircraft other than the F-35C as adversary fighters could result in cost avoidance ranging from $20 million to $52 million (over the time period of FY 2013 to FY 2028), depending on the airframe used.
Validating the Combat Air Forces Restructure Plan (2010)
$3.6 billion in cost avoidance validated

At the request of Congress, PAF assessed how an Air Force—proposed restructuring of combat air forces would affect force structure, capabilities, spending, and manpower. The plan was to accelerate the retirement of 257 aging fighter aircraft to realize savings in operations and maintenance, aircraft modifications, and manpower so as to free funds that could then be applied to critical Air Force needs. Congressional approval for the Air Force to proceed with its proposed divestiture was contingent on an independent assessment of the policy action by an FFRDC.

PAF analysis found that retiring the older aircraft would not significantly add to operational or inventory risks and that Air Force estimates of projected cost avoidances appeared plausible. Although the early retirement of 257 fourth-generation fighter aircraft would not significantly add to risks, the Air Force would face an extended period of operational, acquisition, and sustainment risks with or without the restructuring, based on current acquisition plans. PAF’s confirmation of the validity of the restructuring plan answered the congressional requirement for an independent assessment and allowed the Air Force to proceed with its proposed divestiture was contingent on an independent assessment of the policy action by an FFRDC.

Increasing Reserve Component Force Management Flexibility at Lower Cost (2012)
Estimated $200 million to $300 million per year in savings validated

Because reserve component (RC) members are increasingly used in an operational capacity, the 11th Quadrennial Review of Military Compensation (QRMC) proposed paying reservists daily basic pay and allowances in the same way as active component (AC) members, regardless of type of duty. To analyze the new compensation policy, RAND used a stochastic dynamic programming model of AC retention and RC participation to simulate the effects of 11 variants of the proposal on AC retention, RC participation, and cost relative to the current approach. The new QRMC approach changes daily compensation, points earned toward retirement, when retirement may be taken, and supplemental pay. RAND found that the new approach can meet RC force requirements, even in the absence of a decrease in retirement age, but that supplemental pay is critical to ensuring this. Another advantage of the proposed compensation policy is that it offers the opportunity for enhanced force management flexibility as force requirements and economic conditions change. RAND found that the new approach—with supplemental pay set to hold RC prior force size constant—is less costly than the baseline by $200 to $300 million annually.11

Reorganizing the Air Force Materiel Command (2012)
$100 million per year in savings validated

Spending cuts imposed by the Budget Control Act of 2011 resulted in the need to significantly reduce civilian authorizations at the Air Force Materiel Command (AFMC). The command’s leadership responded with a major reorganization to reduce staff functions while implementing the OSD product support business model, which keeps cradle-to-grave weapon system program management under the Service Acquisition Executive. Several members of Congress had concerns about how the reorganization might affect weapon system sustainment and, through the National Defense Authorization Act for 2012, directed the Secretary of the Air Force to have an FFRDC review the proposed reorganization. In January 2012, PAF was tasked to conduct this review, which included an analysis of proposed manpower savings and an assessment of the impact on weapon system life cycle management and support to the warfighter. PAF verified manpower savings of approximately $100 million per year resulting from the reorganization and recommended some additional process enhancements. AFMC has implemented some of the recommendations, which have the potential to enhance support to warfighters and further improve efficiencies. In particular, the House Armed Services Committee has noted that AFMC is implementing a PAF recommendation to develop and use a suite of metrics to track mission performance against goals, which will facilitate root-cause analysis of any inefficiencies resulting from the reorganization.12
Multiyear Contracting for F-22 and F119 Sustainment (2011)

Estimated $340 million to $450 million in savings validated

The Air Force asked RAND to evaluate savings from multiyear sustainment contracts proposed by Lockheed Martin for the F-22 air vehicle and by Pratt and Whitney for the F119 engine. For the F-22 air vehicle, about two-thirds of sustainment work could be awarded in multiyear contracts. For these costs, RAND assessed potential multiyear savings of $340 million to $450 million, or 10 to 13 percent of sustainment costs. The key to these savings is that a multiyear contract would motivate the contractor to make investments that would ultimately reduce costs over the life of the contract.

For the F119, savings possibilities were limited by uncertainty in the scope and timing of major engine overhauls due to occur between 2013 and 2017. Furthermore, RAND found only about $10 million in savings, or 1 percent of engine sustainment costs, likely to result from work that could be awarded in multiyear contracts. As a result, RAND recommended that the Air Force consider a multiyear contract with Lockheed Martin for F-22 air vehicle sustainment work but that it wait until the uncertainty in timing and cost of F119 engine overhauls is reduced before doing so with Pratt and Whitney.

The Air Force did not subsequently request proposals for multiyear sustainment contracts for the F-22, but the program office will reevaluate its approach as part of its 2015 sustainment business case analysis. If the Air Force decides to continue contractor logistics support for the F-22, it would make sense to reconsider multiyear contracting for the next sustainment contracts beginning in 2018. By then, the uncertainty over F119 major engine overhauls will be reduced, and it should be possible to evaluate prospective savings on a multiyear engine sustainment contract as well. ■
NOTES


12 Fuel Reduction for the Mobility Air Forces, Christopher A. Mouton, James D. Powers, Daniel M. Romano, Christopher Guo, Sean Bednarz, and Caolionn O’Connell, Santa Monica, Calif.: RAND Corporation, RR-757-AF. www.rand.org/t/RR757


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