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Strategic Analysis of Air National Guard Combat Support and Reachback Functions

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Summary

VANGUARD, the Air National Guard's (ANG's) long-range transformation program (released in December 2002), calls for the ANG to evaluate new concepts, prepare for new missions, and adopt a new culture that capitalizes on ANG strengths and ensures that the ANG continues to add value as warfighters and to warfighters in the future. One way to support warfighting and warfighters is to continue to support the Air and Space Expeditionary Force (AEF), a concept developed by the Air Force to allow quick response, when appropriate, to national security interests with a tailored, sustainable force. The ANG already plays an important role in the AEF during wartime operations. Here, we look at expanding that role both in peacetime and during operations.

In this monograph, we focus on operational effects, such as the ability to configure support rapidly and the ability to deploy and employ quickly, enabling the evolving AEF mission. Specifically, this analysis concentrates on options for combat support and reachback missions in four Air Force mission areas:

- Civil engineering deployment and sustainment capabilities
- Continental United States (CONUS) Centralized Intermediate Repair Facilities (CIRFs)

- The Force Structure and Cost Estimating Tool—A Planning Extension to GUARDIAN¹ capabilities
- Air and Space Operations Center (AOC) reachback missions.

More specifically, this project evaluates how fundamentally different policies, at the unit level and above the unit level, are likely to affect Total Force capabilities in meeting the needs of the AEF mission.

Through VANGUARD, the ANG has recognized the need to undertake a fundamental reexamination of its structure to ensure that it continues to play a leading role in meeting the AEF mission. After evaluating each of the four Air Force mission areas, we investigate transformational opportunities for the ANG that would add the most value in achieving the desired operational effects.

Civil Engineering Deployment and Sustainment Capabilities

The first chapter examines new deployment concepts using modified civil engineer (CE) unit type codes (UTCs). Using the current planning and deployment concept of Force Modules,² we modify CE UTCs to deploy and employ quickly in support of the AEF mission. In this transformational concept, a set of UTCs is deployed to perform the Establish the Base function, then is withdrawn. By modifying some CE UTCs in the Establish the Base Force Module, short but intense CE tasks are completed in one UTC, then personnel are withdrawn. A second UTC, composed of fewer personnel, would be created to provide continued CE Sustainment support. These concepts would open more opportunities for the ANG to accept CE tasks on a volunteer basis, and creating the Sustainment CE UTC would reduce active component requirements for sustaining tasks.

¹ GUARDIAN is an Air National Guard information system used to track and control execution of plans and operations, such as funding and performance data.

² Force Modules are sets of UTCs that define capabilities for creating and operating out of a deployed location.

We found that modifying some ANG UTCs, changing the deployment concept, and creating a separate Sustainment UTC might better support the AEF mission. The modified UTCs would provide intense CE support during a shorter deployment to establish the base. Then, a separate UTC would provide sustainment. These concepts could reduce active component deployment requirements as well as deployment and sustainment costs. (See pp. 9–32.)

CONUS Centralized Intermediate Repair Facilities

The second chapter examines the efficiency and effectiveness of CONUS Centralized Intermediate Repair Facilities to rapidly configure combat support and smoothly shift to sustainment in support of the AEF. With the use of CONUS CIRFs, there is a range of possible ANG participation in operating and managing CIRF facilities.

The CONUS CIRF analysis highlights several findings. First, small flying units with small intermediate-level maintenance (ILM) operations can be inefficient, which makes them a prime candidate for a transition to a CIRF. Economies of scale would suggest that one or at most a few large CIRFs for each commodity (for example, engines, pods, and avionics) might be the best option, potentially offering substantial cost savings without degrading weapon-system support. However, large CIRFs might be difficult for the ANG to staff from some local-area labor markets where trained technicians might not be available.

Second, transportation costs and transit times do not seem to significantly govern the CIRF location decisions. Therefore, for commodities for which adequate inventories are available, there is flexibility in the geographic location of the CIRF.

However, for commodities that do not have an inventory to support transit pipelines, the ability to consolidate ILM may be limited. In this case, large bases will be strong “mini-CIRF” candidates, providing home-station support as well as ILM for a few small units. These large bases generate a substantial portion of the demand for ILM. The ANG could negotiate with the active duty Air Force to

staff all or a portion of these mini-CIRF maintenance complexes. The workload, supporting peacetime steady-state operations and then quickly shifting to contingency operations, would be well suited for a blended ANG/Air Force Reserve Command (AFRC)/active duty staffing rather than relying on civilian contractors. (See pp. 33–60.)

The Force Structure and Cost Estimating Tool— A Planning Extension to GUARDIAN

The third set of opportunities involves adding a new capability to GUARDIAN, the Force Structure and Cost Estimating Tool (FSCET), to develop enhanced program objective memorandum (POM) submissions based on actual weapon-system-usage factors or condition, including age and location history.

We found that the FSCET could be a useful extension of GUARDIAN. It provides an initial capability to examine an ANG fleet's airworthiness, operational suitability, availability, and operations and support (O&S) costs, allowing planners, analysts, and managers to evaluate the potential costs and effectiveness of alternative force-structure and combat-support resourcing plans before implementing them. Because the tool is script-driven and because fleets can be defined as needed by the using organization (for example, to the base level), the current FSCET data set and rules could be reconfigured to examine ANG-unique issues. At a minimum, the tool would also help the command estimate the consequences of the coming changes in force structure and operational tempo, thereby supporting the development of the command's inputs to the POM and the longer-range Air Force Capabilities Investment Strategy (AFCIS). (See pp. 61–95.)

Reachback Options

The fourth chapter examines the cost and effectiveness of using reachback,³ in CONUS, to complete AOC tasks. Modified reachback capabilities for operational and combat support execution planning could reduce deployment requirements and the forward footprint.

During the reachback analyses, we found that the AOC augmentation arrangement currently being used (whereby personnel deploy forward and assist in work processes) is valuable. However, in moving specific tasks and services back to CONUS as ANG missions, ANG strengths are utilized and a place for deep knowledge and backup is developed. Reachback moves the ANG away from augmentation and into providing AOC capabilities from CONUS. This move may save on deployment and sustainment costs while requiring an initial investment in infrastructure to include communications and systems. Consolidation at one reachback location may offer some economies (for example, AOC-context information management expertise and information technology help), although not significant ones. There are, however, implications when moving to reachback. These new concepts could require a new concept of operations (CONOPS) and changes in the way the ANG operates (Title 32 state ANG personnel working Title 10 federal missions). (See pp. 97–132.)

Conclusions

These four Air Force mission areas were examined for possible engagement of the ANG. The objective was to leverage ANG strengths while mitigating their limitations. In each of these areas, there exists a range of potential ANG participation. A marginal cost analysis has been provided for each area (except for FSCET, for which cost would

³ By *reachback*, we are referring to warfighters being located away from the area of operations—for example, operating unmanned aerial vehicles over Afghanistan and Iraq from within the continental United States.

be relatively small: The model has already been developed, and transfer to an ANG computer would likely involve little cost). Each of these areas could offer other potential opportunities of interest. The four areas evaluated were not meant to be exclusive (there are many other areas where the ANG could add value to the warfighter), but they are inclusive. The capability-based analysis approach that was used can be extended to identify other ANG capabilities.

Project AIR FORCE, at RAND, can work with the ANG to establish an analytic framework to guide internal transformation efforts. An approach similar to the approach taken during the Chief of Staff Logistics Review (CLR) (Lynch et al., 2004) could be used to identify opportunities for ANG transformation to better meet the AEF mission. RAND could help the ANG find tasks that can be accomplished to leverage ANG strengths while mitigating limitations.

Any transformational opportunity will require an ANG champion to develop the concept and negotiate mission requirements with the active duty Air Force. The ANG can choose from a range of options, such as those provided in this monograph. Each is likely to require negotiation with the active duty Air Force to determine the extent of participation.

As evidenced in this report, there are several new mission areas, such as CIRFs and AOC reachback, in which the ANG could help the Air Force achieve the operational effects necessary to enable the AEF.