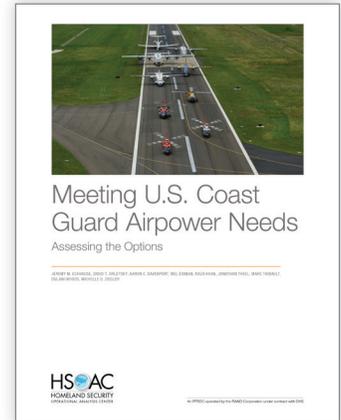


Meeting U.S. Coast Guard Airpower Needs: Assessing the Options

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Because U.S. Coast Guard (USCG) rotary-wing aircraft are nearing their ends of life, the USCG is reassessing its airpower needs for its current missions and future operational requirements. Researchers assessed what airpower mixes could help the USCG execute its missions across the entire geographic domain for operations in the next 30 years. In this report, they document their findings and make recommendations.

RESEARCH QUESTIONS

- What mixes of airpower promise to help the USCG execute its variety of missions across the entire geographic domain for operations in the next 30 years?

KEY FINDINGS

- The USCG captures only actual activity. The USCG captures its actual activity but not data that can indicate priorities or what should have been done, so prioritizing demand for any future scenario remains elusive.
- The most-favorable options in some demand scenarios have roughly the same total numbers of RW and FW aircraft as the current fleet. Because none of the demand scenarios eliminated any specific types of demand, the best fleet often looks like the current fleet.
- Recapitalizing RW assets with more-capable assets appears to be a good option. This is true even if slightly fewer assets are procured.
- Incorporating UASs is particularly cost-effective for demand scenarios with detection and monitoring activities. UASs will likely be a major element of the force structure. In many demand scenarios, fleets with UASs appear to be the most cost-effective, although future UAS costs are

uncertain. However, fleets with UASs could be riskier and less flexible than fleets with additional manned aircraft because UASs cannot do everything manned aircraft can.

- The medium-range UAS (MUAS) appears to be effective. This assumes that MUASs would have an appropriate wide-area sensor package that could be integrated. Surveillance missions especially must be achievable with UASs. If MUASs cannot meet this requirement, a larger UAS or FW manned asset will be required.

RECOMMENDATIONS

- In the long run, build a robust fleet in order to be effective for a variety of possible demand scenarios. The current fleet—although aging—is well suited for having a significant RW aircraft laydown to respond to search-and-rescue cases. It does less well in scenarios that require increased detection and monitoring-type sorties.
- Consider UASs as a potential major element of the future aircraft fleet. Fleets with UASs performed well across demand scenarios.
- Incorporate UASs into the fleet using a measured and deliberate approach to ensure that these aircraft can suitably perform the surveillance mission and that appropriate numbers are procured to ensure an effective and robust fleet.
- Optimize the use of the helicopter fleet. Helicopters are part of a robust fleet, but other assets are typically more efficient and typically better suited for longer-range missions. Determining the right asset for the activity could result in delaying the required time frame to recapitalize the helicopter fleet.
- As UASs are incorporated into the fleet, consider how this change affects the RW and FW fleets. The current fleet provides an enormous capability that could be enhanced with the addition of UASs. However, these changes need to be made very carefully because piloted platforms provide much more flexibility if the overall demand for mission-tasks changes. Introduce UASs into the fleet and modify the current fleets of manned aircraft once sufficient operational experience is gained with the new capability.