



ISSUE PAPER

Operationally Responsive Space: Industry Imperatives for Small Launch Vehicle Acquisition

AIA RECOMMENDATIONS

- AIA strongly supports Operationally Responsive Space (ORS) efforts to develop responsive support for military operations and commends U.S. Air Force efforts to acknowledge the need for rapid small launch vehicles, scalable to efficiently and effectively accommodate disparate missions in terms of orbital and suborbital launches, throw weight, and orbital regime.
- Maintaining launch capability for the ORS initiative is absolutely critical, yet AIA is concerned that efforts to expand the use of, and operationalize, excess intercontinental ballistic missile (ICBM) assets in the near-term would further negatively impact the U.S. industrial base, limit competition, and may decrease the probability of ORS mission success.
- AIA urges the Department of Defense to pursue ORS strategies that create an environment that ensures support to the U.S. warfighter, enables competition and industry participation, and helps strengthen the U.S. space industrial base.
- AIA supports U.S. Air Force efforts to foster competition in rapid small launch vehicle acquisition efforts to reduce the increasing dependence on aging excess ICBM assets.
- AIA supports the use of transparent full-cost accounting when the Department of Defense performs cost comparisons of small launch vehicles using excess ICBM assets against small launch vehicles provided by U.S. industry.
- AIA recommends the U.S. Air Force initiate a thorough analysis to quantify the probability of success and associated confidence levels of reusing this hardware for operational missions. AIA recommends that ICBM propulsion original equipment manufacturers (OEMs) input should be included in this analysis.
- AIA recommends the Department of Defense assess the impact of the use of residual ICBM assets on our national security, including industrial base and global competitiveness, since the passage of the Commercial Space Act of 1998, and projected impact going forward.

BACKGROUND

The U.S. government makes use of excess Minuteman and Peacekeeper ICBM assets for orbital launches of small satellites and suborbital launches of missile defense targets and hypersonic test vehicles. To date these launches have primarily supported a limited number of test and demonstration missions; however, that number is expected to increase and include operational missions. For example, the U.S. Air Force projects that the 44 Peacekeeper-based variants will fly out by the middle of the next decade. Increased reliance on these excess missile assets may appear convenient and cost-effective, but would negatively impact broader industry investment in future small launch capabilities, and potentially jeopardizes operational missions. Although Aging and Surveillance (A&S) analysis is performed on the excess ICBM solid rocket motors, no calculations are done by the OEM to quantify the probability of success and associated confidence levels of reusing this aging hardware. AIA views the ORS initiative as an important effort, and is concerned about any moves to restrict launch vehicle options for this needed initiative.

In addition, according to section six of the 2005 U.S. Space Transportation Policy, excess U.S. ballistic missiles shall be retained for government use only under certain conditions, including certification that their use limits the impact on the U.S. space transportation industry. Section 205 of the Commercial Space Act of 1998 (Public Law 105-303)

states that only under certain conditions shall excess intercontinental ballistic missiles be used by the U.S. government for space transportation – and their use must be certified to result in cost savings for the U.S. government. To date the cost savings comparisons required for certification have lacked transparency and AIA is concerned all of the costs associated with the storage, maintenance, and use of excess ICBM assets are not being accounted for in the assessment.

Should excess ICBM systems be operationalized for the ORS initiative, AIA is also concerned that such action could be harmful to the launch, missile and propulsion skills base. Since the passage of the Commercial Space Act of 1998, the U.S. industrial base for solid rocket motor propulsion has shrunk from five manufacturers to just two, and only one new U.S. entrant has emerged as a provider of space launch services.

KEY POINTS

- **Assured ORS Power to the Warfighter Requires Industry Competition.** ORS seeks to provide our troops in isolated and hard to reach regions such as Afghanistan with space-based assets for life-saving Intelligence, Reconnaissance, and Surveillance. In order to mature the innovative capabilities called for by the ORS initiative, it will be important to maintain healthy competition in the satellite and launch sectors.
- **Continued Support for Rapid Small Launch.** Industry supports efforts to develop a Rapid Small Launch Vehicle architecture and efforts to mature the Air Force Research Laboratory reusable flight demonstrator. AIA agrees these efforts should foster competition and bolster the industrial base.