

White Paper: National Security and Space

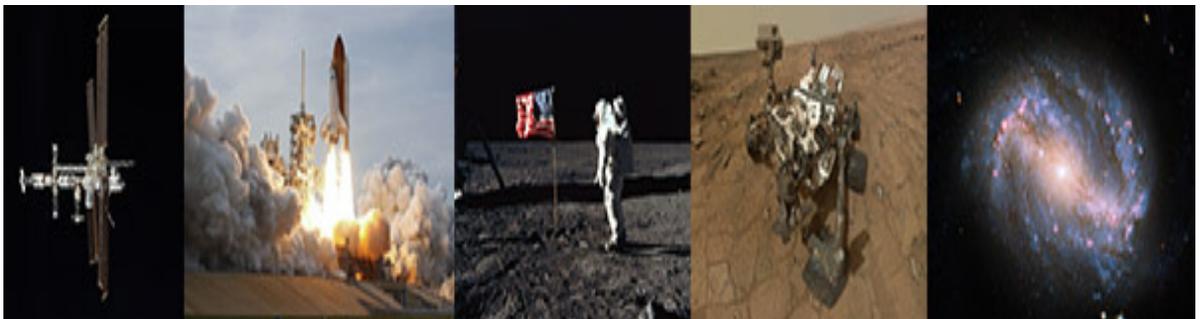
Part 1: The Next Space Race: Competition

April 10, 2014

August Cole

In Brief:

- The United States purchases Russian RD-180 engines, which are used in the American Atlas V heavy-lift rocket.
- This procurement helps support Russian missile technology and other military developments.
- Russia's aggressive policies towards peripheral countries add a sense of urgency to finding an alternative to the RD-180 engine.
- The Air Force has an opportunity to accelerate and refine its plans to spur competition in the military space-launch sector.
- It is important to see the focus on competition within the EELV program as an opportunity to show that the Defense Department can keep up the pace with cutting-edge technologies and business practices.



NATIONAL SECURITY AND SPACE

Introduction

Of any of the armed services, the United States Air Force should know the most about speed. Their pilots, who historically rose to the service's top ranks, fly the fastest fighters in the American arsenal. Yet, there are times when moving as fast as you can may not be fast enough.

In 1997, the U.S. started a program to buy Russian rocket engines now used in the American Atlas V heavy-lift rocket. The initiative employed Russian scientists and procured rocket engines they designed, with an eye on checking the proliferation of missile technology after the Cold War.

Production was supposed to eventually move to the U.S., though it never did. More than 15 years later, the reliance on the NPO-Energomash RD-180 engine is seen as a liability in light of Russia's incursion into the Crimea.

Citing possible concern with the reliability of the supply of these Russian engines used to launch U.S. spy satellites, Secretary Hagel asked Defense Department leaders to review the situation.

Though the engines are just one element within the larger U.S. military space launch endeavor, this is another sign that the way the Pentagon does business needs to be shaken up.

Going Above And Beyond

Space launch, by its nature, is a relatively slow-moving corner of the national security world. Launch windows are fickle for technological or meteorological reasons. Satellites can take years to perfect before being readied for launch, which is in and of itself a laborious process.

Russia's recent invasion of the Crimea has come at a unique moment when the Air Force is already in the middle of trying to bring the way it launches rockets into the 21st Century. It attempts to do this by looking to outside entrants to help lower taxpayer costs. The Defense Department has few options with major acquisitions programs to introduce what would pass for real competition outside of federal contracting.

The Evolved Expendable Launch Vehicle program is one of them.

Currently, it uses two rocket designs, with the Atlas V model relying on Russian engines to lift it from the launch pad. Faced with climbing costs, the Air Force, the National Reconnaissance Office and the National Aeronautics and Space Administration revamped the EELV contract and the government has been working for three years to bring on new competitors.





The temptation might be to say that these efforts were adequate, given how challenging it can be to push the organizational pace with highly technical and expensive programs. According to the Air Force, competition will work to bring down launch costs.¹

Yet acquisition policy in the 21st Century needs to be good enough to hold up to faster-paced commercial standards, not just our expectations for government. It also needs to be rooted in a strategic view of U.S. capabilities.

Procurement reform initiatives such as Better Buying Power 2.0, which touts competition as a prime virtue, are part of the latest attempt to raise the acquisitions metabolism and improve accountability.² Opportunities to break from the status quo need to be taken, and this is one of them.

The Government Accountability Office, which is tracking the possible entry of new competitors to the United Launch Alliance role as sole supplier to the EELV program, noted that new entrants would be interested in using a commercial fixed-price type contract.³ Another challenge GAO found, was that the number of available launches for these new competitors are limited, but are crucial when it comes to demonstrating that the rockets are reliable and safe; as both aspects must be present for the rockets to receive certification from the government.

Russia's aggressive policies with its peripheral countries add a sense of urgency to finding an alternative to the RD-180 engine.

Relocating Russian engine production to the U.S. could cost \$1 billion and take up to 5 years.⁴ There is approximately a two-year supply of engines available to the U.S. if the supply from Russia were interrupted. That could leave a potential three-year gap. It would be faster, and smarter, to speed up the certification of U.S. launch options instead.

That money could be used as a better long-term investment in the capabilities of the U.S. aerospace launch sector, particularly with an eye toward the future as the Air Force pushes ahead in the future by deploying more numerous but smaller satellites.



Investing in U.S. engineering and development makes long-term sense and boosts American competitiveness.

Spurred To Act

Lawmakers are locked on to the issue. In the fiscal 2015 budget proposal, the Defense Department does not plan to compete any of the satellite launches with new entrants and is reducing the number of potentially competitive launches from 14 to 7 during the next few years. On March 25, Sen. John McCain sent a letter to Air Force Secretary Deborah Lee James citing his concern that in light of this, the competitive approach to the EELV program may be “compromised.”⁵

On April 1, a group of senators led by Sen. Dianne Feinstein wrote to Secretary Hagel echoing those concerns. “If there is more than one certified provider capable of executing any Air Force launch, we believe that those missions should be competed,” the senators wrote.⁶



Speeding Up

It is important to see the focus on competition within the EELV program as one step towards tackling an even bigger challenge: to show that the Defense Department can keep pace with cutting-edge technologies and business practices.

From an aerospace and defense industry perspective, there is an awareness that making the most innovative technology in the world available to the Pentagon means breaking with old paradigms.

“For generations the Pentagon has been a technology exporter to the commercial sector of transformational capabilities such as GPS and the initial Internet developments,” wrote William J. Lynn, former Deputy Secretary of Defense and the CEO of DRS Technologies and Finmeccanica North America, in a recent editorial.⁷ “Today it is increasingly becoming an importer of the technological advances taking place all around us.”

Competition drives are advancing outside of the government-contracting realm, but it should do so within it. This benefits taxpayers, new entrants and even legacy firms that want to revamp their businesses but are searching for opportunities to do so.

Anyone betting on the status quo will fail, including the Russians.

About the Author:

August Cole, a writer and analyst specializing in national security issues, is an adjunct fellow at the American Security Project. From 2007 to 2010, August reported on the defense industry for the Wall Street Journal. He has also worked as an editor and reporter at MarketWatch.com where he covered the aerospace and defense business, among other responsibilities. August is also a member of the International Institute for Strategic Studies. Examples of his work can be found at www.augustcole.com.

Further Reading:

[National Security and America's Space Challenge](#)

[Senators Call on DOD for Competition in Air Force Space Launch Program](#)

[RD-180 – The Jeopardized Russian Backbone of the US Space Program](#)

[Risk of Russia's space tie-ins Emerge with Crimea Crisis](#)

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Endnotes

1. Palacios, Desiree N. "Air Force leaders share space budget rollout." Air Force News Service. March 6, 2014. <http://www.af.mil/News/ArticleDisplay/tabid/223/Article/473484/air-force-leaders-share-space-budget-rollout.aspx> (accessed March 31, 2014)
2. Defense Acquisition University presentation. "USD (AT&L) Better Buying Power Initiative: Guidance for Obtaining Greater Efficiency and Productivity in Defense Spending, Removing Obstacles to Competition." Aug. 8, 2011. <http://bbp.dau.mil/docs/Guidance%20for%20Obtaining%20Greater%20Efficiency%20and%20Productivity%20in%20Defense%20Spending-Removing%20Obstacles%20to%20Competition.pdf> (Accessed April 8, 2014)
3. Government Accountability Office. "Space Launch Vehicle Competitions" briefing slide for the Senate Homeland Security and Governmental Affairs Committee, Permanent Subcommittee on Investigations. January 28, 2014. <http://www.gao.gov/assets/670/661330.pdf> (accessed March 25, 2014)
4. Butler, Amy. "U.S. RD-180 Coproduction Would Cost \$1 Billion." Aviation Week & Space Technology. March 24, 2014. http://www.aviationweek.com/Article.aspx?id=/article-xml/AW_03_24_2014_p28-673866.xml (accessed April 8, 2014)
5. Letter to Air Force Secretary Deborah Lee James from Sen. John McCain. March 25, 2014.
6. Letter to Secretary of Defense Chuck Hagel from Sens. Dianne Feinstein, Barbara Boxer, Tom Udall, Martin Heinrich, Mark Warner, Roger Wicker and Claire McCaskill. April 1, 2014.
7. Lynn, William J. "Reinventing A&D, Who Will Lead?" Aviation Week & Space Technology. Viewpoint op-ed. March 31, 2014, p. 54.

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The American Security Project (ASP) is a nonpartisan organization created to educate the American public and the world about the changing nature of national security in the 21st Century.

Gone are the days when a nation's security could be measured by bombers and battleships. Security in this new era requires harnessing all of America's strengths: the force of our diplomacy; the might of our military; the vigor and competitiveness of our economy; and the power of our ideals.

We believe that America must lead in the pursuit of our common goals and shared security. We must confront international challenges with our partners and with all the tools at our disposal and address emerging problems before they become security crises. And to do this we must forge a bipartisan consensus here at home.

ASP brings together prominent American business leaders, former members of Congress, retired military flag officers, and prominent former government officials. ASP conducts research on a broad range of issues and engages and empowers the American public by taking its findings directly to them via events, traditional & new media, meetings, and publications.

We live in a time when the threats to our security are as complex and diverse as terrorism, nuclear proliferation, climate change, energy challenges, and our economic wellbeing. Partisan bickering and age old solutions simply won't solve our problems. America – and the world - needs an honest dialogue about security that is as robust as it is realistic.

ASP exists to promote that dialogue, to forge that consensus, and to spur constructive action so that America meets the challenges to its security while seizing the opportunities that abound.



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