HOLD UNTIL RELEASED BY THE
U.S. HOUSE OF REPRESENTATIVES

STATEMENT OF

HON KATHARINA MCFARLAND

ASSISTANT SECRETARY OF DEFENSE
(ACQUISITION)

BEFORE THE

HOUSE COMMITTEE ON ARMED SERVICES

SUBCOMMITTEE ON STRATEGIC FORCES

ON

ASSURING NATIONAL SECURITY SPACE: INVESTING IN AMERICAN INDUSTRY TO END RELIANCE ON RUSSIAN ROCKET ENGINES

JUNE 26, 2015

HOLD UNTIL RELEASED BY THE
U.S. HOUSE OF REPRESENTATIVES

Chairmen Rogers, Ranking Member Cooper, and distinguished members of the Committee, I appreciate the opportunity to appear before the subcommittee and testify about Assuring National Security Space: Investing in American industry to end reliance on Russian rocket engines.

Assured Access to Space

Our defense space capabilities are central to our national security. This policy is codified in 10 U.S.C. 2273, which requires the Department of Defense to sustain at least two space launch vehicles capable of delivering into space any national security payload, while also maintaining a robust space launch infrastructure and industrial base. We must not allow this to be compromised due to the current uncertain budgetary and programmatic environment. The Department's Evolved Expendable Launch Vehicle (EELV) program has had an unprecedented record of 83 successful launches since 2002. A critical element of the EELV program's success to date has been the availability of two families of launch systems, the Delta IV and Atlas V systems provided by the Joint Venture of Boeing and Lockheed Martin - United Launch Alliance (ULA). Both systems are capable of supporting the DoD's launch requirements such that, in the event one capability is not available due to the need to resolve an issue, the other is able to continue operations and meet the Nation's space launch needs.

Enabling Competition

In the late 2000's, the Department anticipated the emergence of New Entrant launch service providers and foresaw the opportunity to reintroduce competition into EELV for the first time since 2006. The Under Secretary of Defense for Acquisition, Technology & Logistics approved the Air Force's strategy to reintroduce competition into the EELV program in November 2012 and placed the EELV program on a path to competition by 2015 and competition on all National Security Space (NSS) launches by 2018. This competition was expected to be between launch service providers such as Space Explorations Technology Corp. (SpaceX) with its Falcon 9v1.1 launch system and ULA with their most cost effective medium launch capability, the Atlas V which uses the Russian RD-180 engine. Concerns about reliance on Russia for rocket engines or propulsion systems accelerated with Russian aggression in the Ukraine. This concern resulted in the passage of section 1608 of the Carl Levin and Howard P. "Buck" McKeon National Defense Authorization Act for Fiscal Year 15 (Public Law 113-291)

(FY15 NDAA) which prohibits the Department from awarding a contract for the procurement of launch services under the EELV Program that is carried out using rocket engines designed or manufactured in the Russian Federation.

The medium and intermediate class payloads traditionally serviced by Atlas V and Delta IV represents the bulk of our current NSS launch requirement. Even with SpaceX now eligible for award of launch service contracts, the Falcon 9v1.1 is certified to four of the eight NSS orbit requirements and therefore cannot currently meet all of the DoD's medium to intermediate class spacecraft launch needs. To avert segmenting the launch market, with sole source providers individually servicing portions of the medium/intermediate and heavy market segments, the Department developed a strategy that preserves assured access to space while rapidly transitioning from use of the Russian RD-180 engine. To replace the RD-180, and ensure a domestically produced rocket, it takes about seven years with technologically mature components to build and re-certify a launch system with a new engine. The transition has already started and will complete during the next phase of the EELV program, which is known as "Phase 2" and is for procurements to be awarded starting in FY18. The Department's path will remove the Department from reliance on Russian engines, while maintaining assured access to space.

Rocket Propulsion System (Engine) Replacement

In August 2014, the Air Force released a Request for Information (RFI) to industry soliciting their feedback on approaches to transitioning from use of the RD-180. Industry responses supported the Department's strategy to invest with industry to transition off the RD-180 engine and provide launch capabilities able to support NSS requirements. Support, commitment, and capability to achieve the ultimate objective of access to two viable, domestically designed and produced propulsion systems in accordance with 10 U.S.C 2273 and National Space Transportation Policy by the end of EELV Phase 2 procurement in FY22 is clearly visible by Industry respondents. However despite this support, in order to maintain competition and launch schedule during the Phase 2 procurement, the Department determined and recognized it required continued use of the Atlas V necessitating that DOD be allowed to use the remaining RD-180 engines from ULA's 2012 purchase agreement during the transition period to Phase 3 procurement.

The Department leverages commercial space transportation services to meet its requirements, whenever possible, as mandated by the Commercial Space Act (51 U.S.C 50131) and currently procures launch services for NSS launches. The Department does not take ownership of any launch vehicle hardware and plans to continue using the launch service approach to manage the transition from use of the RD-180.

Statutory Challenges

Subsequent to the Department electing to pursue the launch services approach, the FY15 NDAA was enacted. It contains provisions representing significant challenges to the transition strategy.

Section 1604 of the FY15 NDAA directs the Secretary of Defense to develop a next generation rocket propulsion system and the accompanying Joint Explanatory Statement notes the provision is not an authorization of funds for the development a new launch vehicle.

Section 1608 of the FY15 NDAA prohibits the award of a contract that is carried out using rocket engines designed or manufactured in the Russian Federation. This prohibition, strictly applied, would prematurely curtail the Department's access to the RD-180 engine and thus the Atlas V launch system. ULA's announcement that it plans to phase out its non-price competitive medium and intermediate Delta IV variants after 2018 further complicates matters as the payloads that these two systems service represents the bulk of our NSS launch manifest. Even with the SpaceX Falcon 9v1.1 now certified, the Department is concerned that with the loss of access to Atlas V and phase-out of the medium/intermediate class Delta IV vehicle, we will be in jeopardy of not meeting the assured access to space requirements of 10 U.S.C. 2273. Section 1608 as enacted, creates a multi-year gap without at least two price competitive launch providers servicing medium to intermediate class missions, presuming that SpaceX is able to handle all of the Department's launch needs, and trades one sole source provider for another on medium and some intermediate NSS launches.

To avoid this unacceptable situation and to enable an orderly transition, the Department submitted Legislative Proposal #192 requesting that section 1608 be amended to permit a contractor to use a rocket engine designed or manufactured in the Russian Federation when performing a contract for NSS launch activities under the EELV program if prior to February 1, 2014, the contractor had fully paid for the rocket engine or had entered into the contract under

which the Russian rocket engine would be procured. The Department believes that this would enable ULA to continue to participate in competitions for EELV launch services contracts proposing the use of the Atlas V launch vehicle well into the next decade. If enacted, this legislative proposal coupled with the addition of the newly certified SpaceX Falcon 9v1.1, enables the Department to minimize impacts to its space-based capabilities while industry completes the transition to using domestically designed and produced propulsion systems.

The Department greatly appreciates the Strategic Forces subcommittee's support of Legislative Proposal #192 and looks forward to working with Congress and the Defense committees on other statutory concerns as the FY16 budget authorizations and appropriations language is debated.

Way Ahead

The Air Force is currently moving forward in compliance with section 1604 of the FY15 NDAA. Their strategy is a four step, incremental approach transitioning to domestic propulsion while assuring access to space. Each step gathers requisite programmatic, industrial base and technical information to inform follow on steps. This is necessary for what is a highly cost uncertain program in a highly uncertain, budget constrained environment.

Step 1, started last year, matures the technology to reduce engine development technical risk. The Air Force has obligated approximately $50M toward this effort and will invest an additional $45-50M in the next few months.

Step 2 initiates investment in Rocket Propulsion Systems. The Air Force plans to enter into other transaction agreements with propulsion system or launch system providers that co-invest in on-going domestic propulsion system development efforts maximizing the highest probability of success. On June 2, 2015, the Air Force released a Request for Proposals (RFP) seeking to facilitate the development of domestically produced Rocket Propulsion System (RPS) prototypes, as early as possible, that will enable the associated domestic Evolved Expendable Launch Vehicle class launch system designs to be developed or matured, and will ensure full Government access to appropriate Intellectual Property (IP) rights.

In Step 3, the Air Force plans to enter into other transaction agreements with launch system providers to provide domestically powered launch capabilities, leveraging results of Step 2.

In Step 4, the Air Force intends to compete and award contracts with certified launch providers for launch services. These providers will on-ramp the systems developed under shared investment while off-ramping legacy systems, including those using Russian RD-180 engines.

We anticipate that solutions proposed during Step 2 and 3 will range from new launch capabilities and infrastructure to evolution of existing launch capabilities and infrastructure. For those solutions selected and carried forward into subsequent steps, the Department will work closely with Congress to ensure they are appropriately funded in future Department budget requests.

Conclusion

As the Air Force refines its approach to procuring future EELV missions, I would like to re-emphasize the Department's commitment to transitioning off the RD-180 engine in the most efficient, expeditious and affordable manner possible. The goal of the Department in spacelift has been, and continues to be, maintaining a high standard of Mission Assurance for NSS requirements while leveraging competition to make spacelift more affordable. The transition from the use of Russian manufactured propulsion systems is a difficult challenge. The Department will continue to work with Congress and industry to execute a cost-effective and technically viable plan to end the Department of Defense's use of Russian manufactured rocket propulsion systems.