

**IN THE UNITED STATES COURT OF FEDERAL CLAIMS
BID PROTEST**

SPACE EXPLORATION
TECHNOLOGIES CORP.,

Plaintiff,

v.

THE UNITED STATES,

Defendant.

**REDACTED PUBLIC
VERSION**

Case No. _____
[REDACTED]

COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF

Space Exploration Technologies Corp. ("SpaceX") respectfully challenges the Air Force Space and Missile Systems Center's (the "Agency") evaluation of proposals and portfolio award decision under the Launch Service Agreement ("LSA") Request for Proposals, Solicitation No. FA8811-17-9-0001 (the "LSA Solicitation") as arbitrary and capricious and contrary to law. (*See generally* LSA Solicitation, Ex. A.) In challenging the Agency's LSA award decision, SpaceX does not seek any advantage, but only the opportunity to compete for national security missions on a fair and level playing field. SpaceX understands the importance of these missions and thus does not also challenge the related National Security Space ("NSS") Launch Phase 2 Launch Service Procurement ("Phase 2 RFP Competition").¹

¹ The Agency issued the final Solicitation for the Phase 2 RFP Competition, Solicitation No. FA8811-19-R-002 ("Phase 2 RFP"), on May 3, 2019. The Phase 2 RFP Competition will result in two requirements contract awards to provide launch services for the NSS missions during the five to eight year performance period. (Phase 2 RFP, Att. 5 at 2, Ex. B.) One awardee will receive approximately 60% of all NSS launch orders and the other will receive approximately 40%, as allocated by the Agency. (Phase 2 RFP, Model Contract at 30-31, Ex. C.)
[REDACTED]

I. INTRODUCTION

1. The Agency wrongly awarded LSAs to a portfolio of three unproven rockets based on unstated metrics, unequal treatment under the procurement criteria, and opaque industrial planning. This result occurred despite the Agency determining that SpaceX "not only has more strengths than ULA [United Launch Alliance ("ULA")²]" (the winner of the largest LSA award), "but [SpaceX's] strengths are qualitatively more beneficial to the Government than ULA's strengths." (Portfolio Recommendation at 21, Ex. D.) By any reasonable measure, SpaceX earned a place in the LSA portfolio. For the overwhelming majority of planned NSS missions, SpaceX offered operational rockets already certified to carry the Nation's most important payloads, yet the Agency inexplicably deemed SpaceX's offering the "highest risk." (*Id.* at 20-22.) Likewise, the Agency did not equally apply certain pricing criteria to ULA, significantly understating ULA's cost by hundreds of millions of dollars. The improper LSA awards, which provide developmental funding and Agency cooperation for launch systems that SpaceX's competitors are proposing in the on-going Phase 2 RFP Competition, disadvantage SpaceX and impede Congress's mandate to maintain assured access to space. Accordingly, SpaceX challenges the Agency's LSA award decision.

2. SpaceX has demonstrated an unmatched commitment to the Agency and the broader NSS community for providing reliable, affordable, and innovative space launch. SpaceX has done so through years of effort and billions of dollars of its own capital investments to meet the demanding requirements of the United States' National Security Space Launch ("NSSL")

² ULA is a joint venture between The Boeing Company ("Boeing") and Lockheed Martin ("Lockheed").

program, formerly known as the Evolved Expendable Launch Vehicle ("EELV") program.³ To date, SpaceX has successfully launched its Falcon 9 and Falcon Heavy launch vehicle systems more than 70 times in support of NSS, civil space, and commercial space customers, including recent missions for the Agency and the National Reconnaissance Office ("NRO"). In December of 2018, SpaceX successfully launched the first of the next generation Global Positioning System ("GPS") III satellites to orbit, helping the Department of Defense ("DoD") start a new era for the critically important GPS constellation and mission. In parallel with its national security mission, SpaceX has worked tirelessly to become the global leader in commercial launches, conducting more launches than any other commercial launcher over the past two years, with a record twenty-one launches in 2018 alone. This commercial business and cadence of flight eliminates the burden to the United States Government ("Government") of shouldering the full fixed costs of the launch provider's business, which the Government has been forced to do with legacy providers.

3. SpaceX's commitment to the Nation's space enterprise has yielded extraordinary results for the Government and the taxpayer: in competitive launch services procurements for national security missions, SpaceX has won multiple competitive awards at price levels that have saved the DoD hundreds of millions of dollars versus the prior sole source status quo. At the same time, SpaceX's launch systems have radically advanced the state-of-the-art for rocket technology through reusability and operational responsiveness—a key advantage for the Nation as the space domain becomes increasingly contested—demonstrating the unique ability to maintain a launch cadence of roughly two launches per month. This cadence is set to increase even further to support

³ The Agency renamed the EELV program as the "National Security Space Launch program," effective March 1, 2019. John S. McCain National Defense Authorization Act for Fiscal Year 2019, Pub. L. No. 115-232, § 1603, 132 Stat. 1636, 2105-06 (2018). For ease of reference, this Complaint will refer to the program as the EELV program, which was the common shorthand for the program during its first twenty-five years.

the rapid deployment of critical space assets. Beyond its commitment to innovating launch vehicle technology, SpaceX has consistently made private capital outlays to enable its launch vehicle systems to meet the unique and expensive national security launch requirements that yield no commercial benefit; and, it has borne the expense of certifying its vehicles for NSS missions both in time and money. SpaceX has shown, throughout, a core commitment to the Agency's crucial space mission, and to the mission assurance needs and processes inherent in NSS launch campaigns.

4. SpaceX competed under the LSA Solicitation to be included in the award portfolio. In late 2018, the Agency excluded SpaceX and awarded hundreds of millions of dollars in development funding to each and every one of SpaceX's direct domestic competitors – including the long-term monopoly provider of national security launches, ULA – despite determining that SpaceX offered launch systems qualitatively more beneficial to the Government. (Portfolio Recommendation at 21, Ex. D.) Each of the LSA awardees received funding ranging from \$500 million to \$967 million, even while their proposed launch systems have never flown and, indeed, are still early in their design phase. Yet, each LSA awardee claimed their launch system would be ready starting in 2021 and certified by the Agency to perform NSS missions by 2022.

5. By contrast, SpaceX bid its existing, operational Falcon 9 and Falcon Heavy vehicles for all missions set to occur before late 2025 and a newer, even more capable and cost effective system, the Big Falcon Rocket (now Starship), for a tiny fraction of NSS missions to launch no earlier than late 2025. The Agency's Source Selection Authority ("SSA") nonetheless determined that SpaceX's one developmental launch vehicle rendered the entire SpaceX portfolio the "highest risk" and chose the portfolio that best served the needs of ULA, the long-standing incumbent. (Award Decision at 9, Ex. I.) This appraisal of risk is counter to the stated evaluation

criteria and, by any objective measure, unreasonable. As a consequence, the Agency made significant awards to ULA and the two offerors that are currently developing major components for ULA's new rocket—in effect, the Agency made awards to ULA and two subcontractors for its new, proposed launch vehicle system.

6. By selecting for its LSA portfolio three unbuilt, unflown systems—all of which share major common systems relative to the ULA vehicle—the Agency has tilted the playing field steeply in favor of unproven rockets that clearly will not be certified for *any* NSS launches on the timeframes dictated in the LSA Solicitation, risking assured access to space and defeating the very objectives of the LSA Solicitation. In addition, the LSA awardees have not demonstrated commercial viability, which ostensibly was a requirement for award. In fact, two of the awardees (ULA and Northrop Grumman) have recently and repeatedly acknowledged that their LSA vehicles are "purpose-built" for NSS launches and are unlikely to be commercially viable.⁴ This in turn risks perpetuating the same critical problems that have plagued the EELV program for decades: uncontrolled costs and a lack of competition based on commercial viability.

⁴ See Sandra Erwin, *ULA CEO Bruno: Launch industry challenged by tougher national security missions*, SpaceNews (May 7, 2019), at <https://spacenews.com/ula-ceo-bruno-launch-industry-challenged-by-tougher-national-security-missions/>; see also United Launch Alliance, *Vulcan Centaur: Purpose-Built for National Security Space*, YouTube (May 2, 2019), at <https://www.youtube.com/watch?v=UVblBykNvdw>; Press Release, United Launch Alliance, United Launch Alliance Progresses Towards Purpose-Built Vulcan Centaur for National Security Space Missions: First Flight Hardware Being Manufactured and Launch on Track for 2021 (Apr. 8, 2019), <https://www.ulalaunch.com/about/news/2019/04/08/united-launch-alliance-progresses-towards-purpose-built-vulcan-centaur-for-national-security-space-missions>; Emre Kelly, *Northrop Grumman is ready to 'start cutting metal' at KSC for new Omega rocket*, Florida Today (April 9, 2019), at <https://www.floridatoday.com/story/tech/science/space/2019/04/09/northrop-grumman-time-start-cutting-metal-ksc-new-omega-rocket/3404407002/>; Sandra Erwin, *For Omega, U.S. Air Force launch competition is a must-win*, SpaceNews (April 8, 2019), at <https://spacenews.com/for-omega-u-s-air-force-launch-competition-is-a-must-win/>.

7. Had the Agency properly applied its own criteria to make the LSA awards, SpaceX most certainly would have been deemed "the most advantageous in achieving the Government's goal of assured access to space" and earned an LSA award. (LSA Solicitation at 26, Ex. A.)

II. BACKGROUND

8. The LSA Solicitation is part of the Agency's ongoing procurement of launch services to place the United States' national security satellites into orbit. Put simply, the Agency designed the LSA Solicitation to fund the development of launch systems by awarding LSAs under its Other Transaction ("OT") authority, and the LSA awardees are then expected to propose those taxpayer-funded launch systems for the Phase 2 RFP Competition, which solicits two requirements contracts for launch services.

9. An overarching goal of the LSA Solicitation is to transition from the outdated, unaffordable legacy launch vehicles that the EELV program's long-time monopoly provider ULA has used for more than two decades to perform EELV missions: the Russian-engine-powered Atlas V and the Delta IV Heavy. The LSA Solicitation also expressly identified the following specific objectives for this transition: (1) to maintain assured access to space;⁵ (2) to end reliance on Russian rocket engines; and (3) to leverage commercial launch systems to reduce the time and cost of launch systems development and reduce the cost of launch. (LSA Solicitation at 1, Ex. A.)

10. The Agency awarded LSAs committing Government investments valued at: (a) \$967 million to ULA; (b) \$792 million to Northrop Grumman ("Northrop"); and (c) \$500

⁵ Assured access to space means "the availability of at least two space launch vehicles (or families of space launch vehicles) capable of delivering into space any payload designated by the Secretary of Defense or the Director of National Intelligence as a national security payload." 10 U.S.C. § 2273(b)(1). Notwithstanding its statutory obligation to maintain assured access to space, the Agency has never maintained assured access for the heaviest EELV payloads as only ULA's Delta IV Heavy could perform such missions.

million to Blue Origin. (Portfolio Recommendation at 19, Ex. D.) The only offeror denied an LSA was SpaceX.⁶ *The Agency's decision to exclude SpaceX from an LSA award undermines every one of the LSA Solicitation's express objectives.*

11. First, the award decision thwarts assured access to space because SpaceX was the only competitor to propose currently operational, commercially viable launch vehicles. As of the award decision, SpaceX's Falcon 9 had flown 61 successful missions—including 35 consecutive missions in 2017 and 2018 alone—and was certified by the Agency and able to carry most missions on the EELV manifest.⁷ SpaceX's Falcon Heavy had already flown once,⁸ successfully, has a series of launches scheduled in near term, and is already EELV-certified (with open work). The one design-phase rocket that SpaceX put forth—Starship—was proposed solely for so-called Payload Category C missions, which comprise a minute fraction of the EELV manifest (only one of 31 missions at the time of the LSA award), with the first Category C mission launching no earlier than September 2025. Conversely, each of the three awardees proposed *only* one new rocket, all of which are still in the design phase, for all EELV missions starting in April 2022. And unlike SpaceX, not one of the awardees has demonstrated the ability to develop and manufacture new rockets rapidly. In fact, it took ULA's parent companies, Lockheed Martin and Boeing, seven years to complete development of the Atlas V and Delta IV Heavy vehicles, even though they were

⁶ SpaceX was also the only offeror not proposing to develop a major component of ULA's new "Vulcan" launch system: Blue Origin is supplying Vulcan's main first stage engine, and Northrop is supplying Vulcan's strap-on side boosters, which are necessary for ULA's vehicle to meet EELV performance requirements. As a result of these relationships, all three LSAs subsidize the development of a single new launch vehicle offered by ULA, the former monopoly provider and now favored incumbent in the EELV program.

⁷ In the space launch industry, a "manifest" refers to the schedule of missions. The management of satellite systems, including replacing satellites as they reach the end of their planned life, involves long lead planning, and launches are often scheduled—and put on the manifest—years in advance.

⁸ The Falcon Heavy has successfully performed a second mission since the LSA award decision.

developmental iterations of existing vehicles and also significantly financed by the U.S. Government. The LSA award decision thus undermines assured access to space because, unlike the fully operational launch vehicles that SpaceX proposed, which can already perform every EELV mission scheduled before September 2025, it is not clear when, if ever, the LSA awardees' conceptual rockets will be certified and operationally-ready to perform *any* EELV missions.⁹

12. Second, the LSA award decision will not end the United States' reliance on Russian rocket engines. The Agency knew that none of the design-phase rockets it chose for LSA award has a meaningful chance of being ready in time for the Phase 2 RFP performance period (i.e., ready to order in 2020 and launch Payload Category A and B missions by April 2022). Indeed, the Phase 2 RFP acknowledges this operational risk arising from the LSA awards by permitting LSA awardees to offer launch vehicles *other than* the ones they are being paid hundreds of millions of dollars to develop in the near-certain event those launch vehicles are not ready in time. There should be no doubt that ULA—as well as Northrop and Blue Origin, given their subcontractor relationships with ULA—will propose to use ULA's Atlas V as their "secondary launch vehicle" until each awardee's developmental vehicle is ready (whenever that might come to pass). (Phase 2 RFP, Model Contract at 26, Ex. C.) So, while awarding an LSA to SpaceX would have ensured the quickest end to the United States' reliance on Russian engines, the award decision essentially

⁹ In addition, as noted, the awardees' proposed rockets share major subsystems: Blue Origin's "New Glenn" and ULA's Vulcan will both use Blue Origin's BE-4 first stage engine, and Northrop's "OmegA" and ULA's Vulcan will both use Northrop's GEM 63XL solid side boosters and the same RL-10C upper stage engine. If the Agency were to award Phase 2 contracts to ULA and either of the other LSA awardees, this overlapping use of critical propulsion systems—a key risk area for new launch vehicle development—will ensure that a problem with a single subsystem in the development phase, or a single launch failure, could ground the United States' ability to launch any NSS payloads for long periods of time; this is the opposite of assuring access to space.

guarantees such reliance will continue years beyond the Congressionally-mandated end date of December 31, 2022.

13. Third, the LSA award decision does not leverage commercial launch systems. Unlike SpaceX, whose Falcon 9 flies more commercial missions than any rocket in the world, none of the LSA awardees has ever demonstrated commercial viability. Boeing's and Lockheed's inability to win commercial launches is the very reason they had to merge to form ULA and acquire a monopoly in the EELV market in the first place, and on the rare occasion that ULA has won a commercial contract, its offering was heavily subsidized by anticompetitive "launch capability" contracts through which U.S. taxpayers have long covered ULA's overhead (to the tune of some \$1 billion per year). More to the point, ULA has expressly acknowledged that the launch system it proposed for the LSA Solicitation—the Vulcan—is not designed to succeed in the commercial market. As ULA's CEO Salvatore Bruno recently explained: "Vulcan was purpose built for [NSS] requirements, it was a deliberate choice that we made.... *Had we designed our rocket to be optimized for the commercial marketplace, it would have been smaller.*"¹⁰ Northrop has no commercial launch business at all.¹¹ And in nearly 20 years of existence, Blue Origin has yet to

¹⁰ Sandra Erwin, *ULA CEO Bruno: Launch industry challenged by tougher national security missions*, SpaceNews (May 7, 2019), <https://spacenews.com/ula-ceo-bruno-launch-industry-challenged-by-tougher-national-security-missions/> (emphasis added). See also *United Launch Alliance, Vulcan Centaur: Purpose-Built for National Security Space*, YouTube (May 2, 2019), available at <https://www.youtube.com/watch?v=UVbIBykNvdw>; Press Release, United Launch Alliance, United Launch Alliance Progresses Towards Purpose-Built Vulcan Centaur for National Security Space Missions: First Flight Hardware Being Manufactured and Launch on Track for 2021 (Apr. 8, 2019), <https://www.ulalaunch.com/about/news/2019/04/08/united-launch-alliance-progresses-towards-purpose-built-vulcan-centaur-for-national-security-space-missions>.

¹¹ Northrop recently merged with Orbital ATK and thereby acquired the "Antares," a medium-class launch vehicle developed by Orbital ATK; even the Antares—which is not qualified to perform NSS missions—has never won a commercial contract.

reach orbit, let alone put a commercial payload into orbit.¹² Choosing these awardees cannot credibly be said to leverage any commercial launch solutions, certainly not in comparison to SpaceX's offering.

14. In addition to undermining its own stated objectives, the LSA award decision was based on material and demonstrable deviations from the stated evaluation criteria and prejudicial unequal treatment. For example:

- (a) The Agency determined that SpaceX's proposal presented a higher risk in the most important EELV Approach factor than the others even though SpaceX's proffered rockets can already launch nearly every payload on the EELV manifest, and indeed *every* EELV payload scheduled to launch before late 2025. To reach this conclusion, the SSA determined that Starship—the one developmental launch vehicle that SpaceX offered to launch only one or two planned Category C payload missions that will launch no earlier than late 2025 (and potentially much later)—rendered the entire SpaceX solution higher risk than the three design-phase rockets that the awardees proposed to use for *all* mission categories needed for launch by April 2022.¹³ This finding, which provides greater weight to Payload Category C solutions than the LSA Solicitation will permit, is particularly unreasonable in that the underlying evaluation made a false comparison to the Space Shuttle development and ignored SpaceX's demonstrated ability—unique among the offerees—to design reliable, reusable and cost-effective launch vehicles rapidly from the ground up. Equally anticompetitive, the high risk determination also resulted from unwarranted findings based on deviations from the stated evaluation criteria.
- (b) The Agency understated the Government's total investment in ULA's LSA solution by hundreds of millions of dollars by failing to account for the significant contract awards the Government has made, and continues to make, to ULA to pay for the launch infrastructure and integration facilities that ULA proposed to leverage for the LSA. This prejudicial error reflects an unequal evaluation because, opposite to its treatment of ULA, the Agency increased SpaceX's proposed price by the contract value of a

¹² Blue Origin's lack of commercial success is perhaps why its founder, the richest man in the world by most accounts, injects billions of dollars of his own money into the company; he has even stated that he may need to manage that company as a "non-profit." Eugene Kim, *Jeff Bezos Says Amazon Will Announce HQ2 Decision Before the End of the Year*, CNBC (Sept. 14, 2018), www.cnbc.com/2018/09/13/jeff-bezos-speaks-at-the-economic-club-in-washington-dc.html.

¹³ This determination was particularly odd given the Agency's significant, multi-year investment—via the Rocket Propulsion System program—into SpaceX's development of the Raptor engine that will power the Starship.

separate Agency mission that SpaceX proposed to leverage [REDACTED]

- (c) The Agency also overstated SpaceX costs to the Government by over [REDACTED], upwardly adjusting SpaceX's proposed price to include both the East Coast and West Coast vertical integration options, even though the Phase 2 RFP confirms that the Agency has no need for vertical integration on the West Coast. And, having increased SpaceX's proposed price by the vertical integration options, it was unreasonable and unfair for the Agency also to assign a schedule risk to SpaceX by assuming a delayed exercise of the East Coast option. SpaceX cannot reasonably be burdened with both an evaluated risk and the cost of overcoming that risk.
- (d) The Agency also failed to assess the serious risks arising from the fact that all three LSA awardees effectively serve one launch vehicle because ULA's proposed Vulcan depends upon critical components built by the two other LSA awardees for their own proposed launch vehicles. The Agency dismissed the fact that this overlap of critical-but-undeveloped systems proliferates these systems' substantial risks across all current LSA awardees' proposed launch vehicles, reasoning that the LSA Solicitation—which required the Agency to assess risk of the proposed approach—did not include an express criterion related to use of common components.¹⁴

15. In sum, the Agency's evaluation and award decision were so flawed as to be arbitrary and capricious, and contrary to the competitive procedures required by law and the LSA Solicitation.

III. STATEMENT OF FACTS

A. EELV Program Before SpaceX: Non-Competitive And Highly-Subsidized

16. "Competition is fundamental to our free enterprise system": "[i]t is the single most important source of innovation, efficiency, and growth in our economy."¹⁵ But it is precisely the lack of competition that has bedeviled the EELV program and anti-competition procedures that resulted in the arbitrary and capricious LSA award decision.

¹⁴ The Agency also ignored the impact that these relationships—which mean that a Phase 2 RFP award for ULA is also a win for the other two LSA awardees—could have on competition.

¹⁵ Memorandum from Ronald Reagan on Competition in Federal Procurement to the Heads of Departments and Agencies (Aug. 11, 1983), <https://www.reaganlibrary.gov/research/speeches/81183f>.

17. The EELV program was initiated more than two decades ago to achieve affordable, assured access to space for national security payloads.¹⁶ The approach then was similar to the approach the Agency is using now: through OT agreements, the Government gave money to Boeing¹⁷ and Lockheed to develop launch systems—the Delta IV and Atlas V, respectively—and related infrastructure that they would then use to compete with each other for EELV missions, giving the Agency the direct benefits of head-to-head competition.

18. The success of the approach, however, was premised on Boeing and Lockheed winning commercial launches to spread their overhead costs and keep their suppliers busy, and neither proved capable of securing any meaningful commercial business, even with their taxpayer-funded launch systems. This left both Boeing and Lockheed to rely exclusively on U.S. Government launches to cover their respective overhead, support a supply chain, and still generate a return on the modest investments they themselves made in their launch systems. To make matters worse, Boeing won numerous competed EELV missions using misappropriated Lockheed pricing data. The Agency was forced to reallocate the missions (at great cost), and Boeing was barred from competing for 20 months.¹⁸ So after investing well over one billion taxpayer dollars to help Boeing and Lockheed develop launch systems on the premise that they would compete to provide affordable EELV launches,¹⁹ the Agency ended up with no commercially or competitively-viable launch systems and a massive fraud to clean up.

¹⁶ Steven Hildreth, Cong. Research Serv., R44498, National Security Space Launch at a Crossroads 2 (2016), <https://fas.org/sgp/crs/natsec/R44498.pdf>.

¹⁷ The award was made to McDonnell Douglas, which was later acquired by Boeing in 1997.

¹⁸ Press Release, Dep't of Justice, Boeing to Pay United States Record \$615 Million to Resolve Fraud Allegation (June 30, 2006), https://www.justice.gov/archive/opa/pr/2006/June/06_civ_412.html.

¹⁹ From the start of the EELV program until Boeing and Lockheed merged their launch businesses to create ULA, the Government invested approximately \$1.27 billion into Boeing (\$696.983

19. The inability of both companies to win commercial launches (and the malfeasance of Boeing) forced the Agency to abandon any hope for true competition between Boeing and Lockheed, and instead to let them merge their launch businesses in 2006 to form ULA. After that, ULA enjoyed a complete monopoly in the EELV program, with the Agency awarding all missions to ULA on a sole source basis.

20. In addition, because ULA was not commercially viable, the Agency was forced to cover ULA's entire overhead. It did so using an unusual and complicated two-part contracting mechanism.²⁰ Specifically, one contract line item, called the EELV Launch Services ("ELS"), paid ULA for the launch vehicles for each mission and the other contract line item, called the EELV Launch Capability ("ELC"), paid ULA an annual subsidy that has—for ULA's entire existence and to this day—covered all of its overhead, costing taxpayers nearly \$1 billion per year regardless of whether ULA performs a single launch. This structure has made it essentially impossible for anyone, even the Agency or the Government Accountability Office ("GAO"), to calculate precisely how much ULA actually charges for each EELV launch.²¹ What is known,

million) and Lockheed (\$569.853 million). The Government spent an additional \$124.695 million in Research, Development, Test, and Evaluation oversight. Dep't of the Air Force Fiscal Year (FY) 2009 Budget Estimates Research, Development, Test and Evaluation (RDT&E) Descriptive Summaries, Volume II Budget Activities 4-6 (Feb. 2008) at 974, available at <https://www.saffm.hq.af.mil/Portals/84/documents/FY09/AFD-080130-061.pdf?ver=2016-08-22-141512-193> (listing "Total Prior to FY 2007 Costs" of System Development and Demonstration for EELV program).

²⁰ Indeed, former Under Secretary of Defense for Acquisition, Technology, and Logistics Frank Kendall told the Senate Armed Services Committee in 2016 that he was aware of no other such contracting instrument in the entire DoD portfolio. *Hearing on Military Space Launch and the Use of Russian-Made Rocket Engines Before the S. Comm. on Armed Services*, 114th Cong. 14 (2016) (statement of Frank Kendall, Under Secretary of Defense for Acquisition, Technology and Logistics), available at <https://www.govinfo.gov/content/pkg/CHRG-114shrg25116/pdf/CHRG-114shrg25116.pdf>

²¹ See generally U.S. Gov't Accountability Office, GAO-14-377R, *Space Launch Vehicle Competition: The Air Force's Evolved Expendable Launch Vehicle Competitive Procurement* (2014), available at <http://www.gao.gov/assets/670/661330.pdf>; U.S. Gov't Accountability Office, GAO-11-641, *Evolved Expendable Launch Vehicle: DOD Needs to Ensure New Acquisition*

however, is that the billion-dollar-a-year ELC subsidy has undermined full and open competition in both the national security and civil space launch markets by enabling ULA, with U.S. taxpayers covering its overhead, to offer launch services at artificially low prices.²² What is also known is that this billion-dollar annual subsidy is what enables Boeing and Lockheed to rake in profits,²³ because ULA would operate at a substantial loss without it. This ELC contract structure is so problematic that Congress ordered the Agency to end it.²⁴

21. The results of ULA's monopoly were predictable: costs skyrocketed and innovation stagnated.²⁵ For example, ULA still performs the large majority of EELV launches with its Atlas V, which is powered by the Russian-designed and Russian-made RD-180 engine. When Lockheed first proposed using the RD-180 more than two decades ago, it was subject to a DoD requirement that the engines be manufactured domestically within four years. That never happened, and more

Strategy is Based on Sufficient Information (2011), available at <http://www.gao.gov/new.items/d11641.pdf>.

²² See S. Rep. No. 114-49, at 259-60 (2015).

²³ See The Boeing Co., 2017 Annual Report 31 (2018) ("BDS earnings from operations include equity earnings of \$183 million, \$249 million and \$202 million primarily from our ULA joint venture in 2017, 2016 and 2015"), available at http://s2.q4cdn.com/661678649/files/doc_financials/annual/2017/2017-Annual-Report.pdf; Lockheed Martin Corp., 2017 Annual Report 42 (2018) ("Total equity earnings recognized by Space (primarily ULA) represented approximately \$205 million, \$325 million and \$245 million, or 21%, 25% and 21% of this business segment's operating profit during 2017, 2016 and 2015"), available at <https://www.lockheedmartin.com/content/dam/lockheed-martin/eo/documents/annual-reports/2017-annual-report.pdf>.

²⁴ See National Defense Authorization Act for Fiscal Year 2016, Pub. L. No. 114-92, § 1608, 129 Stat. 726, 1100-01 (2015).

²⁵ GAO reports show that ULA's per launch prices averaged \$366.6 million in 2016, which represented a 256% increase over original estimated pricing. U.S. Gov't Accountability Office, GAO-16-329SP, Defense Acquisitions: Assessment of Selected Weapons Programs at 135 (2016), available at <https://www.gao.gov/assets/680/676281.pdf>; see also U.S. Gov't Accountability Office, GAO-17-333SP, Defense Acquisitions: Assessment of Selected Weapons Programs at 137 (2017), available at <https://www.gao.gov/assets/690/683838.pdf>. Spiraling cost growth in the program has triggered Nunn-McCurdy breaches, most recently in 2012. U.S. Gov't Accountability Office, GAO-16-329SP, Defense Acquisitions: Assessments of Major Weapon Programs at 79 (2016), available at <https://www.gao.gov/assets/680/676281.pdf>.

than twenty years later ULA still performs most EELV missions using engines developed and manufactured in Russia. And with the LSA award decision, it is likely that ULA will continue to do so—contrary to the Agency's stated objectives and Congressional mandates—through at least 2024.

B. SpaceX's Limited Entry Into The EELV Program

22. While ULA was enjoying massive taxpayer subsidies to maintain its capability and a sole-source monopoly for launches in the EELV program, SpaceX was developing innovative and successful launch solutions and winning more launches than any other launch services provider in the competitive global commercial launch market.

23. SpaceX was also actively seeking Agency approval to compete for EELV missions. But only days before SpaceX's final Falcon 9 EELV certification launch,²⁶ the Agency sole-sourced to ULA a 28-mission block buy and then cut the number of missions available for competition in half, thus minimizing any competition in the EELV program for many years. At that point, SpaceX was compelled to file a complaint in this Court challenging the block buy award and seeking the opportunity to compete for EELV launch contracts.²⁷ On January 23, 2015, the Agency settled SpaceX's legal challenge by agreeing to "expand[] the number of competitive opportunities for launch services" going forward.²⁸

²⁶ To perform EELV missions, a launch system must be certified by the Agency. The Agency set up a rigorous, lengthy, and expensive process for SpaceX to get Falcon 9 and Falcon Heavy certified to perform EELV missions.

²⁷ See generally Am. Complaint, *Space Exploration Technologies, Corp. v. United States et al.*, No. 14-354C (Fed. Cl. May 19, 2014), ECF No. 53, available at https://www.spacex.com/sites/spacex/files/spacex_amended_complaint.pdf.

²⁸ Christian Davenport, *Elon Musk's SpaceX Settles Lawsuit Against Air Force*, The Washington Post (Jan. 23, 2015), https://www.washingtonpost.com/business/economy/elon-musks-spacex-to-drop-lawsuit-against-air-force/2015/01/23/c5e8ff80-a34c-11e4-9f89-561284a573f8_story.html?noredirect=on&utm_term=.490e207c883e.

24. Once SpaceX was allowed to compete for EELV missions, it became increasingly clear that the ELC payments to ULA created an uneven playing field. As a key Agency official acknowledged in Congressional testimony:

The EELV Launch Capability (ELC) was created in 2005 by the Air Force to augment a fragile domestic industrial base and maintain a national capability to launch national security payloads as set forth in the National Security Presidential Directive-40 (NSPD-40). Since 2005, the Air Force has spent billions of dollars supplementing the infrastructure and capacity of the incumbent launch provider. Also since 2005, new launch providers have entered the market and created competition. The committee believes that with the introduction of space launch competition, launch capability subsidies inappropriately inhibit fair competition and are no longer necessary. The Commander of Air Force Space Command testified to this point before Congress on March 25, 2015 when he stated "I don't think you can have fair competition with [the ELC] contract in place."²⁹

As a result, Congress required the Agency to discontinue the ELC payments to ULA by Fiscal Year ("FY") 2020.³⁰

25. Congress also raised significant concerns regarding ULA's continued reliance on Russian rocket engines for EELV launches, and directed DoD to "develop a next-generation rocket propulsion system that enables the effective, efficient, and expedient transition from the use of non-allied space launch engines [i.e., Russian-made rocket engines] to a domestic alternative for national security space launches."³¹ In response, ULA reported that it purchased an additional 20 RD-180 engines in 2015 to keep the Atlas V flying national security launches into the early

²⁹ S. Rep. No. 114-49, at 259-60 (2015).

³⁰ See National Defense Authorization Act for Fiscal Year 2016, Pub. L. No. 114-92, § 1608, 129 Stat. 726, 1100-01 (2015).

³¹ See Carl Levin and Howard P. "Buck" McKeon National Defense Authorization Act for Fiscal Year 2015, Pub. L. No. 113-291, § 1604, 128 Stat. 3292, 3623 (2014); *see also* National Defense Authorization Act for Fiscal Year 2017, Pub. L. No. 114-328, § 1603, 130 Stat. 2000, 2582-84 (2016).

2020s.³²

26. If there were any doubts that the EELV program would benefit from competition, they were quickly put to rest. Although the block buy from ULA kept the vast majority of EELV missions from being competed, the Agency has competed a handful of missions. Notably, SpaceX, offering a fully burdened price without the benefit of the billions in ELC subsidies that ULA has received, has still proposed launch services at substantially lower prices than ULA in these competitions. Specifically, SpaceX has offered to provide the same services at an approximately [REDACTED] cost savings. For example, while the Agency paid ULA some \$380 million per launch in the block buy, through competition, the Agency has awarded SpaceX seven missions using its Falcon 9 for less than [REDACTED] each, and the Agency recently purchased a launch service utilizing the Falcon Heavy for [REDACTED]

27. As explained to Congress by Elon Musk, Chief Executive Officer and Chief Designer for SpaceX:

With respect to the EELV program . . . the Air Force and other agencies are simply paying too high a price for launch. The impacts of relying on a monopoly provider since 2006 were predictable, and they have borne out. Space launch innovation has stagnated, competition had been stifled, and prices have risen to levels that General Shelton has called "unsustainable."

When the merger between Boeing and Lockheed's business occurred, the merger promised, in the press release, \$150 million of savings. Instead, there were billions of dollars of cost overruns and a Nunn-McCurdy breach for the program exceeding 50 percent of its cost projections.

According to congressional records, in fiscal year 2013, the Air Force paid an average of \$380 million for each national security launch, while subsidizing ULA's

³² See generally Space Foundation, Fact Sheet: Russian Rocket Engines Used by the United States, <https://www.spacefoundation.org/sites/default/files/reports/RussianRocketEnginesUsedByTheUnitedStates.pdf>. In 2016, Congress passed legislation phasing out any contractor's ability to use Russian rocket engines for NSS missions by the end of December 31, 2022 and capping the use of such engines to 18 total for NSS launches. National Defense Authorization Act for Fiscal Year 2017, Pub. L. No. 114-328, § 1602, 130 Stat. 2000, 2582 (2016).

fixed costs to the tune of more than \$1 billion a year, even if they never launch a rocket.

By contrast, SpaceX's price is well under \$100 million, meaning a savings of almost \$300 million per launch, which in many cases would pay for the launch and the satellite combined. So if you took something like a GPS satellite, which is about \$140 million, you could actually have a free satellite with the launch. So our launch plus the satellite would cost less than just their launch, which is an enormous difference. And we seek no subsidies to maintain our business.

To put this into perspective, had SpaceX been awarded the missions ULA received under its recent noncompeted 36-core block buy, we would have saved the taxpayers \$11.6 billion.³³

28. Unsurprisingly, competition has had a salutary impact on ULA's pricing. For example, in FY 2012, the Agency was paying ULA around \$190 million per mission for the ELS component of each launch (plus over \$200 million per launch under the ELC for a total average launch cost of nearly \$400 million per mission).³⁴ In the recent head-to-head competitions with SpaceX, ULA is bidding around \$145 million per mission for the ELS component (ULA continues to receive ELC payments through 2019 and will receive payment for some ELC-like costs in 2020 and beyond).³⁵

³³ *Hearing on National Security Space Launch Programs Before the S. Subcomm. of the Comm. on Appropriations*, 113th Cong. 19-20 (2014) (statement of Elon Musk, Chief Executive Officer and Chief Designer of SpaceX), available at <https://www.govinfo.gov/content/pkg/CHRG-113shrg49104594/pdf/CHRG-113shrg49104594.pdf>.

³⁴ *See generally* Dep't of Defense Fiscal Year (FY) 2013 President's Budget Submission, Missile Procurement, Air Force, Justification Book Volume 1 at 219 (Feb. 2012), available at <https://www.saffm.hq.af.mil/Portals/84/documents/FY13/AFD-120207-052.pdf?ver=2016-08-24-090237-167>.

³⁵ *See* Press Release, U.S. Air Force, Air Force Awards \$739M Launch Services Contracts (Feb. 22, 2019), <https://www.af.mil/News/Article-Display/Article/1764306/air-force-awards-739m-launch-service-contracts/>; *see generally* Dep't of Defense Fiscal Year (FY) 2019 Budget Estimates, Space Procurement, Air Force, Justification Book Volume 1 of 1 at 67 (Feb. 2018), available at <https://www.saffm.hq.af.mil/Portals/84/documents/FY19/Proc/Air%20Force%20Space%20Procurement%20FY19.pdf?ver=2018-02-12-190223-850>.

C. The EELV Program's Next Phase—Multi-Step Procurement Of Domestic Commercially-Viable Launch Services

29. In 2015, the Agency detailed a four-phased approach for its next procurement of EELV launch services structured to address Congressional concern over reliance on Russian-powered rockets:

The Air Force's strategy is a four step approach to transitioning to domestic propulsion while assuring access to space. Step 1, started last year, matures the technology to reduce the technical risk of engine development. . . . Step 2 initiates investment in rocket propulsion systems in compliance with the fiscal year 2015 NDAA. The Air Force will partner with propulsion system or launch system providers by awarding multiple contracts that co-invest in on-going development efforts. In step 3, the Air Force will continue the public-private partnership approach by entering into agreements with launch system providers to provide domestically powered launch capabilities. In step 4, the Air Force will compete and award contracts with certified launch providers for launch services for 2018 and beyond....³⁶

30. Subsequently, the Agency completed the second step of its four-step procurement approach to eliminate reliance on Russian-powered rockets by awarding four domestic Rocket

³⁶ *Hearing on Department of Defense Appropriations for Fiscal Year 2016 Before the S. Subcomm. of the Comm. on Appropriations*, 114th Cong. 61 (2015) (statement of Hon. Ashton Carter, Secretary), available at <https://www.govinfo.gov/content/pkg/CHRG-114shrg59104641/pdf/CHRG-114shrg59104641.pdf>; see also *Hearing on Assuring National Security Space: Investing in American Industry to End Reliance on Russian Rocket Engines Before the H. Subcomm. of the Comm. on Armed Services*, 114th Cong. 175 (2015), available at <https://www.govinfo.gov/content/pkg/CHRG-114hhr95320/pdf/CHRG-114hhr95320.pdf> ("The Air Force has developed a four step plan to partner with industry and invest in domestic, commercially-viable launch services. Step 1 is funding the up-front technical maturation and risk reduction. Step 2 is shared investment in industry's proposed rocket propulsion systems. Step 3 expands this shared investment to encompass the entire launch system. Step 4 is to award launch services to certified providers. These four components are not mutually exclusive, and aspects of each may overlap or be conducted in parallel with the others. The goal of this plan is to ensure two or more domestic, commercially viable launch providers that also meet National Security Space requirements and are available as soon as possible but no later than the end of Phase 2 (FY22) or earlier.").

Propulsion Systems ("RPS") agreements.³⁷ SpaceX and Orbital ATK (now Northrop)³⁸ each received an award³⁹ and ULA partnered with Blue Origin and Aerojet Rocketdyne, respectively, for the other two awards.⁴⁰ These RPS agreements formed part of the technology maturation process for launch systems proposed by SpaceX, ULA, Northrop, and Blue Origin for the LSA Solicitation.

D. The LSA Solicitation—Investing In Commercial, Domestic Launch Systems For Phase 2 RFP Competition

31. In October 2017, the Agency issued the LSA Solicitation to "quickly transition from the use of non-allied space launch engines, implement sustainable competition for National Security Space (NSS) launch services, and maintain assured access to space." (LSA Solicitation at 1, Ex. A.)

32. The LSA Solicitation expressly sought "to leverage industry's commercial launch solutions" for a "future selection of two NSS launch services providers for Phase 2 launch service procurements, starting in FY20." (*Id.* at 1.) Accordingly, the Agency advised that each LSA would "be tailored to each launch service provider's needs in order to enable commercial launch systems to meet all NSS requirements." (*Id.*)

³⁷ See Carl Levin and Howard P. "Buck" McKeon National Defense Authorization Act for Fiscal Year 2015, Pub. L. No. 113-291, § 1604, 128 Stat. 3623 (2014) (directing DoD to "develop a next-generation rocket propulsion system that enables the effective, efficient, and expedient transition from the use of non-allied space launch engines to a domestic alternative for national security space launches").

³⁸ Because Northrop acquired Orbital ATK, this Complaint will hereafter use Northrop to refer to Orbital ATK as well as Northrop Grumman.

³⁹ Press Release, Air Force Space Command, Air Force Awards Two Rocket Propulsion System Prototype OTAs (Jan. 13, 2016), <https://www.afspc.af.mil/News/Article-Display/Article/730913/air-force-awards-two-rocket-propulsion-system-prototype-otas/>.

⁴⁰ Marcia Smith, *ULA Wins Big with Two AF Propulsion Contracts, One with Blue Origin, One with Aerojet Rocketdyne*, Space Policy Online (Feb. 29, 2016), <https://spacepolicyonline.com/news/ula-wins-big-with-two-af-propulsion-contracts-one-with-blue-origin-one-with-aerojet-rock etdyne/>.

33. The LSA Solicitation sought shared public-private investment in fully-developed and certified launch systems for the Phase 2 RFP Competition, including the development and test of any required propulsion systems, the "launch vehicle and its subsystems, infrastructure, manufacturing processes, test stands, and other items required for industry to provide domestic commercial launch services that meet all NSS requirements," as well as the "associated operation and support services and personnel that provide the capability to perform all EELV missions." (*Id.* at 2.)

34. The LSA Solicitation explained that through the Phase 2 RFP Competition, the Agency "intends to competitively award [FAR-based] firm fixed price (FFP) contracts to two launch providers ... as soon as possible, but no later than 2020 for 2022 launches." (*Id.* at 2.) It further outlined the Agency's vision that this procurement approach would reduce the Agency's costs by spreading their overhead and supply chain costs to commercial and civil space customers: "allow[ing] launch system fixed costs to be shared across more launches, including commercial and civil," would serve the Agency's goal of "reduc[ing] the overall cost to the Air Force." (*Id.* at 1-2 (emphasis added).)

35. The LSA Solicitation identified nine EELV reference orbits that each proposed commercial launch system must meet to satisfy the Agency's requirements, dividing the missions into those involving Payload Categories A, B, and C, reflecting the size of the payload involved:

Table 10: Reference Orbits

Orbit Description	Apogee Altitude (nmi)	Perigee Altitude (nmi)	Inclination (deg)	Mass to Orbit (lbm)	Payload Category*		
					A	B	C
LEO	500	500	63.4	15,000	X	X	--
Polar 1	450	450	98.2	15,500	X	X	--
Polar 2	450	450	98.2	37,500	--	--	X
MEO Direct 1	9,815	9,815	50.0	11,750	X	X	--
MEO Transfer 1	10,998	540	55.0	9,000	X	X	--
GTO	19,323	100	27.0	18,000	X	X	--
Molniya	21,150	650	63.4	11,500	X	X	--
GEO 1	19,323	19,323	0.0	5,000	X	X	--
GEO 2	19,323	19,323	0.0	14,500	--	--	X

* In order to standardize terms with respect to payload size, SIS Rev C is implementing payload categories. Reference EELV SIS Rev C, Section 3.1.1.4.

- Payloads in Category A fit within a 4-meter envelope
- Payloads in Category B fit within a 5-meter envelope
- Payloads in Category C fit within an extended 5-meter envelope

(*Id.* at 27.)

36. Seven of the nine reference orbits carry Category A/B payloads and two carry Category C payloads. (*Id.*) The LSA Solicitation advised offerors that the Phase 2 RFP Competition would cover launch services for Payload Category A and B and noted expressly that the Agency may procure Payload Category C launch services separately. (*Id.* at 2.)

37. The LSA Solicitation identified the dates when Agency-certified launch capabilities would be needed—i.e., the Initial Launch Capability ("ILC") date—as April 2022 for all Category A/B payload missions and September 2025 and October 2026, respectively, for the two Category C payload missions. (*Id.* at 29.)

E. The LSA Solicitation's Stated Criteria

38. The Agency advised offerors that it sought to award at least three LSAs, but "reserve[d] the right to award any number of agreements." (LSA Solicitation at 4, Ex. A.)

39. The LSA Solicitation called for the award to a portfolio of solutions that, based on the three evaluation factors (EELV Approach, Technical, and Investment Cost), "are most

advantageous in achieving the Government's goal of assured access to space via two or more domestic commercial launch service providers that also meet NSS requirements." (*Id.* at 26.)

40. The LSA Solicitation provided the following factor weighting: EELV Approach is more important than Technical, and Technical and Investment Cost are of equal importance and when combined, more important than EELV Approach. (*Id.* at 22, 24-25.) The Technical factor consists of two subfactors, Technical Design and Technical Schedule, with the former more important than the latter. (*Id.* at 24-25.)

41. For the most important EELV Approach factor, the LSA Solicitation required the Agency to evaluate the extent to which each offeror's development and qualification approach demonstrates that it will meet the following requirements, not one of which directs offerors to propose specific Government facilities or adopt Government concept of operations for Category C payload integration:

- (1) The ability to meet all EELV reference orbits defined in Table 10 at the orbital insertion accuracy required in [System Performance Requirements Document] 3.2.4⁴¹
- (2) The ability to support up to five NSS launches per year
- (3) The ability of the launch system to meet the payload orientation requirements in SPRD 3.2.7
- (4) The ability of the launch system to meet the basing requirement in SPRD 3.2.11
- (5) The ability of the launch system to meet the EELV mated payload protection requirements in the SPRD 3.3.2
- (6) The ability of the launch system to meet the payload envelope requirement in [Standard Interface Specification] 3.1.1⁴²

⁴¹ The EELV System Performance Requirements Document, or SPRD, sets forth certain requirements for EELV-certified launch vehicles.

⁴² The EELV Standard Interface Specification, or SIS, defines the standard interface between the payload and the EELV launch system and standardizes equipment, processes and services across launch providers.

- (7) The proposed mission assurance approach to ensure low risk and high confidence in launching NSS missions
- (8) The ability to slow or surge production to accommodate uncertain NSS, commercial, and civil launch forecasts.

(*Id.* at 22-24.)

42. The LSA Solicitation also did not require offerors to launch [REDACTED]

[REDACTED] In response to offeror questions, the Agency expressly confirmed the absence of [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (*See* Response to Industry Comment [REDACTED] Ex. F (emphasis added).) In LSA Solicitation Amendment 2, the Agency

specifically removed [REDACTED] Category C payloads. (*See* LSA Solicitation, Amend. 2 at [REDACTED], Ex. G (removing the phrase [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED].)

43. For each factor and subfactor, the LSA Solicitation called on the Agency to assess either (i) strengths and weaknesses to determine the adjectival Technical rating, or (ii) weaknesses to determine the risk rating, or both. The LSA Solicitation defined a "significant weakness" as a "flaw that appreciably increases the risk of unsuccessful agreement performance," i.e., a flaw in the proposed approach that will degrade performance of the LSA. (LSA Solicitation at 22, Ex. A.)

44. For the Technical Schedule factor, the LSA Solicitation provided only for a risk assessment:

[REDACTED]

The Government will evaluate the Offeror's schedule to determine the risk of delayed development for:

1. Launch system(s) capable of launching Category A and Category B payloads by 1 April 2022 from Cape Canaveral Air Force Station/Kennedy Space Center or Vandenberg Air Force Base
2. Launch system(s) capable of launching Category A and Category B payloads from Vandenberg Air Force Base by 1 October 2024
3. Launch system(s) capable of launching Category C payloads to Polar 2 by 1 September 2025.

(*Id.* at 25.)

45. The LSA Solicitation required the Agency to evaluate the Investment Cost factor based on five equally-weighted criteria: (1) Total Government Investment (i.e., "the total dollar amount of Government investment requested by the offeror"); (2) Total Non-Government Investment (i.e., "the total dollar amount of non-Government investment provided by the offeror"); (3) Total Combined Investment; (4) Industry Cost Share (i.e., "the proportion of the Combined Total Investment that will be funded by Non-Government sources"); and (5) Time Phasing of Government Investment. (*Id.* at 25.)

F. The LSA Proposals

46. On September 17, 2018, SpaceX submitted its Final Updated Proposal of a launch system comprising: (i) the EELV-certified Falcon 9 which is capable of performing more than 70% of the missions identified for launch between 2017 and 2026; (ii) the EELV-certified (with open work) Falcon Heavy for certain Category A/B missions which is capable of performing almost all of the remaining missions; and (iii) Starship for the small number of Category C missions not planned for launch until September 2025 at the earliest.⁴³

⁴³ It appears the Falcon 9 and Falcon Heavy can perform all but possibly one of the 34 missions the Agency expects to order through the Phase 2 RFP Competition. Although only the Payload Category C missions require the super heavy lift capabilities introduced by Starship, this launch

47. The Falcon 9 has successfully performed 69 missions since 2010, including 41 consecutive missions in 2017, 2018, and 2019 alone. It is the first intermediate launch vehicle ever to employ a reusable first stage, and it is far and away the most cost effective intermediate-lift launch vehicle available today. (Final Updated Proposal (Excerpts), Executive Summary at I-1, Ex. H.) The Falcon Heavy has launched twice, both times successfully, and is the most powerful operational rocket in the world; it is capable of lifting more than twice the payload of ULA's Delta IV Heavy [REDACTED]⁴⁴ Starship leverages technologies developed for the Falcon 9 and Falcon Heavy as well as SpaceX's Dragon spacecraft and provides the lowest mission cost of any Category C capable launch vehicle. (*Id.* at I-3.)

48. ULA, Northrop, and Blue Origin all proposed only conceptual "paper" rockets: Vulcan, Omega, and New Glenn, respectively.

49. As noted above, both the Vulcan and New Glenn rely on Blue Origin's BE-4 first stage booster engine, which is still in development and has yet to demonstrate the ability to reach orbit, and both the Vulcan and Omega rely on Northrop's GEM63 XL solid side boosters, which also are still in development, and on Aerojet Rocketdyne's RL-10C upper stage engine. (*See* Award Decision at 8, Ex. I.) Selecting a portfolio of awardees that rely on common propulsion systems is the opposite of assured access to space because a developmental delay or a failure in a common system would ground multiple providers.

50. The Agency recognized both that SpaceX was the only LSA offeror to propose currently operational launch vehicles and that SpaceX had demonstrated the ability to achieve an

vehicle will also be capable of providing assured access to space for Category A and Category B missions served by the Falcon 9 and Falcon Heavy vehicles under SpaceX's LSA approach.

⁴⁴ SpaceX, Falcon Heavy, <https://www.spacex.com/falcon-heavy>.

"unprecedented launch rate . . . clearly exceeding the Government[']s five per year [launch] requirement." (Final Evaluation at 5, 18-19, Ex. J.)

G. The Agency's Anticompetitive Evaluation

1. Factor 1: EELV Approach Evaluation

51. With the currently operational, EELV-certified Falcon 9 and Falcon Heavy capable of launching the vast majority (if not all) of the manifested Phase 2 RFP missions, and the developmental Starship required (if at all) only for missions scheduled to launch in late 2025 or after, SpaceX proposed the least risky approach for the Agency's needs and the assured access to space objective.

52. Under the most important EELV Approach factor, SpaceX earned an Outstanding Technical rating, demonstrating that SpaceX's proposal offered "an exceptional approach and understanding of the requirements and contains multiple strengths." (LSA Solicitation at 23, Ex. A; Award Decision at 6, Ex. I.) The evaluators identified seven technical strengths, three that provided a "significant benefit to the Government." (Award Decision at 6, Ex. I.)

53. The seven strengths identified for SpaceX's proposed EELV Approach are:

- All three launch vehicles offered performance that exceed requirements, which could reduce Government costs by enabling the manifesting of multiple payloads per launch and reduce the risk of inaccurate orbital insertion. (Final Evaluation at 2, Ex. J.)
- Starship offered "potentially groundbreaking technology" [REDACTED] and "provide unheard-of mass-to-orbit capacity and orbit insert flexibility." (*Id.* at 2.)
- SpaceX has demonstrated the ability to exceed five missions per year and offered multiple [REDACTED], which provides "sufficient infrastructure to maintain the Government's requirements while servicing demand from the commercial and civil markets." (*Id.* at 5.)
- Starship offered [REDACTED] providing the Agency with "increased resiliency, schedule flexibility and

responsiveness [REDACTED]
[REDACTED] (*Id.* at 9.)

- Starship offered [REDACTED] that exceeds Government requirements by a significant margin, which offers flexibility in the future design of spacecraft for national security payloads. (*Id.* at 12.)
- SpaceX proposed an approach that "focuses on the initial and evolving designs for low risk and high reliability," as well as a certification approach that will drive a "high level of reliability." (*Id.* at 13.)
- SpaceX, unlike the other offerors, has a successful civil and commercial launch business, and thus provides the Government "assured access to space . . . regardless of global launch market fluctuations or increased competition for Category A/B missions utilizing the Falcon family of rockets." (*Id.* at 14.)

54. The redacted evaluation reports reveal that SpaceX's technical merit surpassed the other LSA recipients under the EELV Approach factor. For instance, the Agency stated that SpaceX "not only has more strengths than ULA, but its strengths are qualitatively more beneficial to the Government than ULA's strengths." (Portfolio Recommendation at 21, Ex. D.)

55. The Agency, however, unfairly nullified SpaceX's advantage by improperly attributing two "significant weaknesses" and one "weakness," all related to SpaceX's approach to launching Category C payloads, resulting in a High risk rating. (*Id.* at 22; Final Evaluation at 4-10, 16-18, Ex. J.)

56. The Agency based the first "significant weakness" on an unstated criterion focused on the Government's current facilities and processes omitted from the LSA Solicitation requirements: "The Government assessed [SpaceX's] design approach for [Starship] against the current processing requirements for Government reference missions to include [G]overnment facilities, Government and LSP tooling, facility throughput capacity, spacecraft design requirements, and spacecraft integration CONOPS [i.e., concept of operations] driven by both spacecraft and launch vehicle design approaches." (Nov. 5, 2018 Response to Add'l Debriefing Question No. 8a, Ex. K (emphasis added).) This approach directly contradicts the LSA

Solicitation's stated purpose of leveraging industry's commercial launch systems, and the Agency's statements that each "public-private agreement[] will be tailored to each launch service provider's needs in order to enable commercial launch systems to meet all NSS requirements." (LSA Solicitation at 1, Ex. A.) The Agency's unstated evaluation focus on current Government processes and facilities clearly favors Government-specific launch systems like ULA's Vulcan, which ULA itself says is "purpose-built" for NSS missions.⁴⁵

57. The evaluators based the second "significant weakness" on an unstated requirement as well. Specifically, the Agency assessed a High risk based on SpaceX's proposal to [REDACTED] [REDACTED] (Final Evaluation at 17-18, Ex. J), even though the LSA Solicitation was revised expressly not to require [REDACTED]

[REDACTED] The evaluators also ignored SpaceX's commitment to work with the Government to determine the optimal [REDACTED] [REDACTED] (Final Updated Proposal (Excerpts), SOW at § 2.7.1.2, Ex. L.)

58. The one "weakness" the Agency assessed to SpaceX under the EELV Approach factor—that SpaceX [REDACTED] [REDACTED] [REDACTED] (Final Evaluation at 4, Ex. J)—misreads SpaceX's proposal, which proposed to perform [REDACTED] SpaceX's approach provides nearly [REDACTED] of schedule margin, well in excess of the margin offered by the other offerors for their launch vehicle concepts. (See Portfolio Recommendation at

⁴⁵ United Launch Alliance, *Vulcan Centaur: Purpose-Built for National Security Space*, YouTube (May 2, 2009), <https://www.youtube.com/watch?v=UVbIBykNvdw> ("Vulcan Centaur—a rocket purpose-built to meet all of the requirements of our nation's national security space launch needs.").

25, Ex. D (stating that Blue Origin's schedule margin was "approximately 11 months," ULA's schedule margin was "approximately 10 months," and Northrop's schedule margin was "approximately 7 months").)

59. All three of these weaknesses that resulted in the flawed High risk rating pertain to Category C missions. Thus, the flawed EELV Approach risk assessment that eliminated SpaceX from the portfolio of LSAs centered on a capability that the Agency will not need until September 2025 at the earliest (if at all for Phase 2) and failed to advise the selection official that SpaceX offered the lowest risk for the Agency's most frequent and most imminent launch needs, namely Payload Category A and B missions that heavily predominate the EELV manifest.

2. Factor 2, Subfactor 2: Technical Schedule

60. The evaluators assessed a "significant weakness" and Moderate risk to SpaceX under the Technical Schedule subfactor by repeating the same erroneous (and unequal) concerns regarding [REDACTED] and misreading when SpaceX offered to perform [REDACTED]

61. The Agency premised the single "weakness" assessed to SpaceX under Subfactor 2 on the evaluators' erroneous finding that if the Agency executed the option for vertical integration on the earliest date of the ordering period, [REDACTED], which the evaluators claimed was [REDACTED] (Final Evaluation at 43-44, Ex. J.) But SpaceX's proposal allowed the parties to exercise the vertical integration option [REDACTED] [REDACTED] "to provide greater schedule confidence." (Final Updated Technical Proposal (Excerpts) at III-76, Ex. M; *see also* Final Updated Proposal (Excerpts), Model Agreement at § II.B.6.d, Ex. N [REDACTED].)

62. With respect to the Agency's assessment of schedule risk, it is worth noting that immediately after receiving their awards, all three awardees announced delays in the development of their proposed launch systems, and Blue Origin has even publicly called for delaying the Phase 2 RFP Competition by "at least 12 months" to enable the awardees time to develop their systems.⁴⁶

3. Factor 3: Investment Cost

63. SpaceX proposed to cover [REDACTED] of the launch system solution costs, the highest Industry Cost Share of all offerors. (Debriefing Slides at 8, Ex. O.) When calculating SpaceX's Total Evaluated Price, the Agency added to SpaceX's baseline proposal: (i) [REDACTED] associated with a separate mission [REDACTED]⁴⁷ and (ii) [REDACTED] for SpaceX's proposed vertical integration option at the Eastern Range launch complex ("LC-39A") and [REDACTED] for SpaceX's proposed vertical integration option at the Western Range launch complex, despite instructing SpaceX during discussions to price the vertical integration efforts out separately as "options." (*Id.*) Consequently, the Agency calculated a Total Evaluated Price of [REDACTED] for SpaceX with an Industry Cost Share of [REDACTED] yielding a Total Government Investment of [REDACTED]. (*Id.*)

64. The Agency did not similarly account for Government monies paid to the other offerors when calculating the Total Evaluated Price for their proposals. For example, although ULA proposed to leverage the infrastructure and vertical integration facilities that it built and continues to maintain using hundreds of millions of Government dollars, the Agency did not add

⁴⁶ See Sandra Erwin, *Blue Origin Urging Air Force to Postpone Launch Competition*, Space News (April 8, 2019), <https://spacenews.com/blue-origin-urging-air-force-to-postpone-launch-competition/>.

⁴⁷ [REDACTED]

(See Final Updated Proposal (Excerpts), EELV Approach at II-2, Ex. P.)

any of the those amounts to ULA's proposed price, a necessary step to compare each offeror's Total Evaluated Price on an equal basis.

H. The Award Decision

65. After completing its evaluation, the Agency assigned ratings to each offeror's proposal:

	EELV Approach Technical & Risk	Technical Design Risk	Technical Schedule Risk
ULA	Outstanding / Low	Low	Low
Blue Origin	Outstanding / Moderate	Moderate	Moderate
Northrop	Good / Low	Low	Moderate
SpaceX	Outstanding / High	Moderate	Moderate

(Award Decision at 8, Ex. I.)

66. The Agency found each offeror's proposed Investment Cost to be both "COMPLETE" and "REASONABLE." (*Id.*)

67. The Agency compared SpaceX's Total Evaluated Price of approximately [REDACTED] against ULA's Total Evaluated Price of \$1.080 billion, Northrop's Total Evaluated Price of \$795 million and Blue Origin's Total Evaluated Price of \$500 million. (*Id.*)

68. Based on the Total Evaluated Price calculations and its purported funding limitations, the Agency elected to fund Blue Origin, Northrop, and ULA because they proposed the three lowest "overall total Government investment" options. (Portfolio Recommendation at 26, Ex. D.)

69. Notably, the Agency elected not to exercise its right to negotiate with the offerors to obtain the cost allocations, and ultimately the portfolio of LSAs, that best met the Agency's assured access to space needs. (*See* Response to Industry Comment No. 40, Ex. Q; LSA Solicitation at 26, Ex. A.) Instead, the Agency chose the portfolio that best served the needs of

ULA, the long-standing incumbent, by awarding an LSA to ULA and an LSA to each of the two offerors that are currently developing major components for ULA's system.

70. The LSA award decision to invest in three launch solutions concepts that depend on common critical systems is at odds with the LSA Solicitation's stated objective, per national policy, "to ensure that there are two reliable sources for all national security launches." (LSA Solicitation at 2, Ex. A.)

71. In a procurement focused on investing in solutions to meet the Phase 2 RFP schedule and mission needs, the Agency elected to invest only in paper rockets and Government-specific solutions instead of including in the portfolio the single commercially-viable launch services provider that is operational and can today meet nearly every Government mission need, including all imminent mission needs.

72. Moreover, given that the reasonably anticipated delay in the development of new, untested launch systems would lead to a gap in readiness to meet the Phase 2 RFP mission requirements, Government investment in the Falcon 9 and Falcon Heavy launch systems offered by SpaceX would have best served Congress's mandate for "rapid, responsive, and reliable" commercial launch services at lower cost and acceptable risk levels. The Agency has acknowledged this gap and the risk it creates by allowing Phase 2 RFP Competition awardees to offer other launch vehicles after contract award to mitigate schedule risk associated with the development of their new launch systems:

Outcome 2: If the Government determines one Contractor is unlikely to meet the Reference Mission's required launch date with its Primary Launch Vehicle Segment due to an unacceptable LSMAP schedule maturity score, or if after LSMAP completion, a grounding event, the Contractor may offer a Secondary Launch Vehicle Segment. If the Contractor does not offer a Secondary Launch Vehicle Segment then the associated Reference Mission will be assigned to the Contractor that can meet the Reference Mission launch date with its Primary Launch Vehicle

Segment, or Secondary Launch Vehicle Segment if that Contractor's Primary Launch Vehicle Segment is unlikely to meet the Reference Mission launch date due to an unacceptable LSMAP schedule maturity score, or if after LSMAP completion, a grounding event. If either Contractor offers its Secondary Launch Vehicle Segment, that Contractor shall honor its Primary Launch Vehicle Segment's pricing needed for that Reference Mission and honor any mission unique item pricing required for that Mission Set, in accordance with Attachment 8, Pricing Tables. Offering of Secondary Launch Vehicle Segments by either Contractor is only allowed in FY20 and FY21.

(Phase 2 RFP, Model Contract at 27 (emphasis added); *id.* at 26 (defining "secondary launch vehicle" as "[t]he Certified Launch Vehicle Segment that mitigates schedule risk while meeting the mass to orbit requirement for the orbit defined for the reference mission in the applicable ordering period FY20 or FY21, but is not the Primary Launch Vehicle Segment.").)

73. An LSA award to SpaceX also would further 10 U.S.C. § 2273's stated goal of facilitating a robust base of commercial launch providers available to support the Government's missions in order to reap the benefits of competition—lower costs, better quality, and innovation—as well as the purpose of the LSA Solicitation, which sought to invest in solutions that would position the Agency to share launch costs across commercial, civil, and NSS missions.

74. None of the three awardees proposed to leverage commercial launch solutions modified for the NSS requirements necessary to meet the Agency's stated goal. Instead, each of their proposals require the Government to invest in the development of launch systems designed specifically for Government missions.⁴⁸ The LSA award decision thus repeats the Agency's past

⁴⁸ ULA's Chief Executive Officer Tory Bruno recently described the Vulcan as "purpose-built" for national security space missions, and Northrop has said it will not continue developing its Omega rocket without Government funding. *See, e.g.,* United Launch Alliance, *Vulcan Centaur: Purpose-Built for National Security Space*, YouTube (May 2, 2009), <https://www.youtube.com/watch?v=UVblBykNvdw>; *see also* Press Release, United Launch Alliance, United Launch Alliance Progresses Towards Purpose-Built Vulcan Centaur for National Security Space Missions: First Flight Hardware Being Manufactured and Launch on Track for 2021 (Apr. 8, 2019), <https://www.ulalaunch.com/about/news/2019/04/08/united-launch-alliance-progresses-towards-purpose-built-vulcan-centaur-for-national-security-space-missions>.

mistake of investing significant taxpayer dollars into launch vehicle systems that are not commercially viable and will thus rely exclusively on Government contracts and will likely require taxpayer subsidies to stay in business.

I. Post LSA-Award Schedule Shift

75. Within hours of receiving their LSA awards, Blue Origin and Northrop announced lengthy delays to their respective schedules for the development of their new launch systems.⁴⁹ Days later, ULA announced a lengthy delay of its own.⁵⁰ Meanwhile, Blue Origin has been actively lobbying the Congress to force the Agency to delay the Phase 2 RFP Competition for "at least twelve months" because its rocket will lack the technical maturity when the Agency makes the award decision under the Phase 2 RFP.⁵¹

J. SpaceX's Agency-Level Objection To LSA Evaluation And Award

76. On December 10, 2018, SpaceX timely filed with the Agency its objection to the evaluation of proposals and award decision, in accordance with the process provided in the LSA Solicitation. (LSA Solicitation at 4, Ex. A.)

77. Both prior to and following the submission of its objection, SpaceX sought to engage the Agency in Alternative Dispute Resolution ("ADR") with a third party neutral to resolve

⁴⁹ *USAF Awards \$792m LSA to Northrop's Omega Rocket Development*, Air Force Technology (Oct. 11, 2018), <https://www.airforce-technology.com/news/usaf-eelv-lsa-northrop-omega/>; Alan Boyle, *Blue Origin Resets Schedule: First Crew to Space in 2019, First Orbital Launch in 2021*, GeekWire, (Oct. 10, 2018) <https://www.geekwire.com/2018/blue-origin-resets-schedule-first-crew-space-2019-first-orbital-launch-2021/>

⁵⁰ See Jeff Foust, *ULA Now Planning First Launch of Vulcan in 2021*, Space News (Oct. 25, 2018), <https://spacenews.com/ula-now-planning-first-launch-of-vulcan-in-2021/>.

⁵¹ See Sandra Erwin, *Blue Origin Urging Air Force to Postpone Launch Competition*, Space News (Apr. 8, 2019), <https://spacenews.com/blue-origin-urging-air-force-to-postpone-launch-competition/>.

its concerns with the LSA competition and mitigate the prejudicial impact on SpaceX's ability to compete fairly in the Phase 2 RFP Competition.⁵²

78. The Agency refused to engage in ADR.

79. On April 18, 2019, the Agency sent SpaceX a six-page letter rejecting all of SpaceX's arguments in summary fashion. Although it had five months to consider and resolve SpaceX's objections, the Agency's decision did "not detail [the] analysis on every objection ground" and instead "summarized" its "analysis of some of the objection grounds." (Agreements Officer's Decision at 3, Ex. R.) By addressing only a few objections and even then, in a cursory manner, the Agency reinforced that the process did not comply with the stated procedures and competition principles set forth in the LSA Solicitation.

80. SpaceX timely files this challenge at this Court following the Agency's denial of SpaceX's objection.

K. The Phase 2 RFP Competition

81. The Agency issued the Phase 2 RFP on May 3, 2019.

82. The Phase 2 RFP proposes to split the Agency's requirement for NSS launch services for FY 2020 through FY 2024 between "two requirements contract awards." (Phase 2 RFP, Att. 5 at 2, Ex. B.) The "Requirement 1" provider will perform approximately 60% of the launch services while the "Requirement 2" provider will perform approximately 40% of the launch services. (Phase 2 RFP, Model Contract at 30-31, Ex. C.)

83. The Agency intends to "select for award the two Offerors that, when combined, represent the overall best value to the Government." (Phase 2 RFP, Att. 6 at 2, Ex. S.) The Phase

⁵² Air Force Policy Directive 51-12 and the Air Force Federal Acquisition Regulation Supplement 5333.2(b) direct acquisition personnel to use ADR to the maximum extent practicable to resolve challenges to award decisions.

2 RFP is silent as to what is meant by "when combined," and whether that is different than the first and second ranked offerors under the evaluation criteria. The Phase 2 RFP states that of the two awardees, "the one who provides the overall best value to the Government will be awarded the requirements contract for 'Requirement 1'" and "[t]he other Offeror will be awarded the contract for 'Requirement 2.'" (*Id.*)

84. As noted above, to address its well-founded concerns that the conceptual launch systems funded by the LSAs will not be operational in time for the Agency's mission needs expressed in the Phase 2 RFP, the Agency is permitting the LSA awardees to propose their respective LSA solution and a secondary launch vehicle, which will not be technically evaluated. (Phase 2 RFP, Model Contract at 26, Ex. D ("The Certified [Secondary] Launch Vehicle Segment that mitigates schedule risk while meeting the mass to orbit requirement for the orbit defined for the reference mission in the applicable ordering period FY20 and FY21, but is not the Primary Launch Vehicle Segment.")) The only available "secondary launch vehicle" is ULA's Russian-powered Atlas V rocket. This provision in the Phase 2 RFP will permit ULA—and likely the other LSA awardees, given their subcontracting relationships with ULA—to propose the Atlas V even though the very purpose of the Government's significant LSA investments was to end reliance on Russian-powered rockets for NSS missions. Indeed, provisions in the Phase 2 RFP expressly tie the secondary vehicle to one employing Russian rocket engines, permitting the use of secondary launch vehicles for precisely the time frame during which the Atlas V (and its Russian rocket engine) can legally be used. (*Id.* at 28.)

85. Proposals are due in response to the Phase 2 RFP on August 1, 2019. (Phase 2 RFP, Att. 5 at 7, Ex. B.)

L. Harm To SpaceX, Public Interest, And Lack Of Harm To The Agency

86. The balance of harms and public interest favor the injunctive relief SpaceX seeks.

87. Absent injunctive relief, SpaceX will suffer the irreparable harm of being deprived of the opportunity to compete fairly with competitive procedures to the maximum extent practicable for an LSA. *See, e.g., Palantir USG, Inc. v. United States*, 129 Fed. Cl. 218, 291 (2016), *aff'd*, 904 F.3d 980 (Fed. Cir. 2018); *Magnum Opus Techs., Inv. v. United States*, 94 Fed. Cl. 512, 544 (2010). The Government's flawed decision not to invest in SpaceX's proposed launch system solutions based on unstated criteria and unequal treatment will also cause substantial competitive harm to SpaceX in the final phase of this procurement (the Phase 2 RFP Competition), as SpaceX's competitors will have the benefit of Government investment dollars and Government cooperation in the development and certification of the competing offerors' approaches.

88. Under the circumstances, there is no adequate remedy other than an injunction preventing further investment and performance of the LSAs.

89. Conversely, amending the LSA Solicitation and evaluating all offerors in an equal manner will cause no harm to the Agency but will serve the public's interest in ensuring Government business is conducted with open, honest, and fair competitive procedures. *See generally, ARxIUM, Inc. v. United States*, 136 Fed. Cl. 188, 209 (2018) (granting permanent injunction against arbitrary Government award decision).

IV. THE PARTIES

90. Plaintiff SpaceX is a pioneering space technology provider. It delivers space launch services to the United States and commercial customers worldwide. To date, SpaceX has successfully completed more than 70 commercial, civil space, and national security missions. In less than 20 years of existence, SpaceX has transformed the space launch industry and dramatically

lowered the cost of access to space in all markets, for example by pioneering the ability to return first stages from orbit for rapid and cost-effective refurbishment and reuse.

91. The defendant is the United States acting through the Agency (i.e., the Air Force Space and Missile Systems Center). The Agency manages the EELV program, implemented in the mid-1990s to achieve affordable, assured access to space (and renamed the "National Security Space Launch program," effective March 1, 2019).⁵³ The Agency has stated publicly the program's intent of making launch services "more agile and effective for the warfighter," as well as "leverag[ing] the U.S. commercial launch industry."⁵⁴

V. JURISDICTION AND VENUE

92. Venue is proper pursuant to 28 U.S.C. § 1491.

93. The Court has jurisdiction over SpaceX's challenge pursuant to 28 U.S.C. § 1491(b)(1), which provides broad jurisdiction over "any alleged violation of statute or regulation in connection with a procurement or a proposed procurement."

94. The Agency awarded the LSAs using its OT authority for prototype projects under 10 U.S.C. § 2371b.

95. The LSA Solicitation defines the prototype as a complete launch service capability, expressly describing the "Prototype" covered by the agreement as "[a] fully developed and certified EELV Launch System," which includes "[a]ll activities from initial concept up to, and including production," and covers not only the launch vehicle that meets the full range of the EELV mission

⁵³ John S. McCain National Defense Authorization Act for Fiscal Year 2019, Pub. L. No. 115-232, § 1603, 132 Stat. 1636, 2105-06 (2018).

⁵⁴ Sandra Erwin, *EELV is no more. It is now 'National Security Space Launch'*, Space News (Mar. 3, 2019), <https://spacenews.com/eelv-is-no-more-it-is-now-national-security-space-launch/>.

requirements but "associated operation and support services and personnel that provide the capability to perform all EELV missions." (LSA Solicitation at 2, Ex. A.)

96. The Agency held the competition and awarded the LSAs in connection with, and for the purpose of, the FAR Part 12 procurement for NSS launch services covered by the Phase 2 RFP.

97. The Federal Circuit repeatedly has held the phrase "in connection with a procurement" in § 1491(b)(1) is "very sweeping in scope." *RAMCOR Servs. Grp., Inc. v. United States*, 185 F.3d 1286, 1288-89 (Fed. Cir. 1999); *see also Sys. Application & Techs., Inc. v. United States*, 691 F.3d 1374, 1380-81 (Fed. Cir. 2012) (affirming § 1491(b)'s "broad grant of jurisdiction"). Indeed, the courts have broadly defined "procurement" in the context of § 1491(b), to include, "all stages of the process of acquiring property or services, beginning with the process for determining a need for property or services and ending with contract completion and closeout." *Distributed Solutions, Inc. v. United States*, 539 F.3d 1340, 1346 (Fed. Cir. 2008) (emphasis added); *see Res. Conservation Grp., LLC v. United States*, 597 F.3d 1238, 1244 (Fed. Cir. 2010) (explaining that "procurement or proposed procurement" as used in § 1491(b) "includes all stages of the process of acquiring goods or services."); *see also* 10 U.S.C. § 2302(3)(A).

98. The LSA competition was the penultimate step of a multi-step procurement effort to acquire domestic launch services for EELV missions:

The Air Force's strategy is a four step approach to transitioning to domestic propulsion while assuring access to space. Step 1, started last year, matures the technology to reduce the technical risk of engine development. . . . Step 2 initiates investment in rocket propulsion systems in compliance with the fiscal year 2015 NDAA. The Air Force will partner with propulsion system of launch system providers by awarding multiple contracts that co-invest in on-going development efforts. In step 3, the Air Force will continue the public-private partnership approach by entering into agreements with launch system providers to provide domestically powered launch capabilities. In step 4, the Air Force will compete and

award contracts with certified launch providers for launch services for 2018 and beyond.⁵⁵

99. Consistent with the Agency's statements to Congress, the LSA Solicitation notified offerors that the LSA competition (step 3 above) served as the precursor phase to complete the final procurement phase (step 4 above) of the FAR Part 12 competition for launch services in the EELV program. Specifically, the LSA Solicitation confirmed that the Agency conducted the LSA competition in order to select multiple awardees to mature their launch systems for the next procurement phase: a multiple-award FAR Part 12 acquisition for NSS launch services. (LSA Solicitation at 1, Ex. A) ("The Launch Service Agreements (LSAs) facilitate development of at least three EELV Launch System prototypes as early as possible, allowing those launch systems to mature prior to a future selection of two NSS launch service providers for Phase 2 launch service procurements, starting in FY20.".)

100. The LSA Solicitation makes the Agency's intent plain, noting expressly that the LSA awards served "to allow the Air Force to competitively procure launch services in the future from domestic commercial launch service providers that meet EELV requirements." (*Id.*) The Agency thus made the LSA awards in connection with the Phase 2 RFP Competition, the final step of a multi-step procurement for domestic, commercially-viable launch service providers.

101. SpaceX alleges that the Agency decision not to award an LSA to SpaceX violated at least two statutes and these violations occurred in connection with a procurement for NSS launch

⁵⁵ *Hearing on Department of Defense Appropriations for Fiscal Year 2016 Before the S. Subcomm. of the Comm. on Appropriations, 114th Cong. 61 (2015)* (statement of Hon. Ashton Carter, Secretary), available at <https://www.govinfo.gov/content/pkg/CHRG-114shrg59104641/pdf/CHRG-114shrg59104641.pdf>.

services, and these statutory violations will irreparably harm SpaceX's ability to compete fully and fairly in the final step of the procurement, the Phase 2 RFP Competition.

102. First, the basis for the Agency's selection decision and the decision itself were arbitrary and capricious, an abuse of discretion, and otherwise contrary to law, in violation of the substantive standards for agency action set forth in the Administrative Procedure Act ("APA"), 5 U.S.C. § 706. The APA requires the Government to evaluate proposals and make an award that is both reasoned and consistent with the "competitive procedures" required by law. *See* 5 U.S.C. § 706(2).

103. Second, the LSA evaluation and selection decision violated 10 U.S.C. § 2371b(b)(2) because, contrary to the requirement to use "competitive procedures" to "the maximum extent practicable," the Agency deviated from the LSA Solicitation criteria and treated the offerors unequally in several material ways to SpaceX's competitive prejudice. *See* 10 U.S.C. § 2371b(b)(2).

104. Among the anticompetitive procedures and errors, the Agency applied an unstated preference for reliance on existing Government processes and facilities—the reverse of what the Agency announced in the LSA Solicitation—rather than investing in commercial systems that were adaptable to the Government's needs as required by the National Defense Authorization Act ("NDAA") for Fiscal Year ("FY") 2018.⁵⁶

105. The Agency also weighed purported EELV Approach risks contrary to the terms of the LSA Solicitation to SpaceX's competitive prejudice. For example, the Agency assigned the greatest risk for SpaceX's proposed solution to a mission capability (performance of Payload

⁵⁶ National Defense Authorization Act for Fiscal Year 2018, Pub. L. No. 115-91, § 1605, 131 Stat. 1283, 1724 (2017).

Category C missions) that the Government said it would not need until late 2025 at the earliest if at all during the Phase 2 RFP ordering period, based on deviations from the stated criteria. As a result, the Agency irrationally discounted SpaceX's clear advantage of proposing the only currently operating and proven launch system solution that is already capable of performing the Agency's most frequent and most imminent launch capability needs (Category A/B payloads).

106. The Agency also evaluated the offerors' schedules and Total Evaluated Prices unequally. For instance, SpaceX's proposal has no risk of schedule delay for the overwhelming majority of missions (Category A/B) contemplated in the LSA Solicitation and provided nearly [REDACTED] of schedule margin for the Category C capability—a margin that far surpasses the margin provided by other offerors (11 months (Blue Origin), 10 months (ULA), and 7 months (Northrop)) for all mission categories. Yet, the Agency inexplicably found these other offerors, each of which announced significant schedule delays almost immediately after award, to have lower schedule and overall risk than SpaceX.

107. The Agency also awarded ULA what amounts to a nine-figure discount on its Total Evaluated Price. Although the Agency included in SpaceX's Total Evaluated Price the value of a current Agency contract that SpaceX proposed to leverage, the Agency did not similarly increase ULA's Total Evaluated Price by the hundreds of millions of dollars the Government will pay for the launch infrastructure and integration facilities that ULA proposed to leverage. Had the Agency equally included the Government dollars that ULA proposed to leverage, ULA's Total Evaluated Price would have been nearly double the Total Evaluated Price reported to the selection authority, rendering ULA's LSA proposal far more expensive than SpaceX's Total Evaluated Price.

108. Accordingly, the Agency's anticompetitive evaluation process and the flawed LSA award decision fall within the Court's § 1491(b) jurisdiction.

VI. STANDING

109. SpaceX is an interested party with standing to bring this challenge to the anticompetitive process adopted by the Agency, which resulted in a flawed selection decision committing the Government to invest hundreds of millions of taxpayer dollars into the development of new launch systems by three of SpaceX's competitors, while excluding SpaceX. *See* 28 U.S.C. § 1491(b)(1).

110. "To qualify as an 'interested party,' a protester must establish that: (1) it was an actual or prospective bidder or offeror, and (2) it had a direct economic interest in the procurement or proposed procurement." *Distributed Solutions, Inc. v. United States*, 539 F.3d 1340, 1344 (Fed. Cir. 2008).

111. SpaceX, one of the leading commercial launch vehicle service providers in the world, undoubtedly has a direct economic interest in the LSA competition. SpaceX timely submitted a competitive proposal that offered an Outstanding EELV Approach and lowest Government investment percentage. But for the errors preventing a fair competition, SpaceX would have a substantial chance of receiving an LSA award. *See Info. Tech. & Apps. Corp. v. United States*, 316 F.3d 1312, 1319 (Fed. Cir. 2003).

112. Without an LSA award, SpaceX, a company that less than five years ago filed an action in this Court to break ULA's stranglehold on the EELV program and to compete, will not be able to compete fairly under the Phase 2 RFP to provide the solicited NSS launch services to the Government.

VII. TIMELINESS

113. SpaceX timely challenges the LSA evaluation and award decision.

114. SpaceX timely requested a debriefing and engaged in the Agency's extended debriefing process.

115. In accordance with the LSA Solicitation's stated objection process, SpaceX timely filed its objection to the evaluation of proposals and the award decision with the Agency on December 10, 2018 and sought ADR to resolve SpaceX's objections to the LSA selection decision and the competitive disadvantage that will befall SpaceX in the related Phase 2 RFP Competition.

116. The Agency did not agree to an ADR process and denied SpaceX's objection on April 18, 2019, requiring SpaceX to seek relief in this Court to maintain the right to compete fairly for the Agency's launch service needs that SpaceX fought so hard to obtain approximately five years ago.

COUNT I: THE AGENCY BASED THE LSA AWARDS ON AN ARBITRARY AND UNEQUAL INVESTMENT COST EVALUATION

117. SpaceX incorporates paragraphs 1 through 116 of the Complaint by reference.

118. This Court must set aside any agency action that is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law" or "without observance of procedure required by law." 5 U.S.C. § 706(2)(A), (D); 28 U.S.C. § 1491(b)(4). The Court must also set aside any agency action that fails to use the "competitive procedures" required "to the maximum extent practicable" under 10 U.S.C. § 2371b(b)(2).

119. The statutory requirement to use "competitive procedures" "to the maximum extent practicable" is itself a material limit on agency discretion. *See, e.g., SMS Data Products Grp., Inc. v. United States*, 853 F.2d 1547, 1553-54 (Fed. Cir. 1988) (interpreting "shall," "to the maximum extent practicable" obtain competition when reprocurring following a default termination to mean that "the contracting officer did not have unbridled discretion in conducting the reprourement, but was required to conduct the reprourement in the most competitive manner feasible"); *Palantir*

USG, Inc. v. United States, 129 Fed. Cl. 218, 269 (2016) ("The word 'maximum' in the phrase 'to the maximum extent practicable,' therefore, should not be ignored and read out of the statute. Given the congressional choice of the word 'maximum,' even when coupled with words like 'practicable' and 'appropriate,' agencies cannot ignore or superficially comply with the requirement . . ."), *aff'd*, 904 F.3d 980 (Fed. Cir. 2018).

120. The "competitive procedures" requirement incorporated by Congress into the DoD's prototype OT authority is used throughout the Title 10 procurement provisions as an analog for the competitive procedures required by the Competition in Contracting Act ("CICA").

121. "[I]t is beyond peradventure that a contracting agency must treat all offerors equally, evaluating proposals evenhandedly against common requirements and evaluation criteria." *Banknote Corp. of Am. v. United States*, 56 Fed. Cl. 377, 383 (2003), *aff'd*, 365 F.3d 1345 (Fed. Cir. 2004); *CW Gov't Travel, Inc. v. United States*, 110 Fed. Cl. 462, 490 (2013). "Moreover, agencies must apply the stated evaluation factors in a fair and evenhanded manner across competing proposals." *PlanetSpace, Inc. v. United States*, 92 Fed. Cl. 520, 536 (Fed. Cl. 2010).

122. Affording disparate treatment to offerors competing under the same competition ground rules is clearly arbitrary and capricious behavior that must be set aside under the APA standard. 5 U.S.C. § 706.

123. The Agency's evaluation of the Investment Cost factor violated these bedrock principles of competitive procedures in two material ways and delivered an unfair advantage to ULA.

124. First, the Agency understated the Total Government Investment in ULA's proposed solution, to SpaceX's significant competitive disadvantage, by treating ULA and SpaceX unequally in the Total Evaluated Price calculation.

125. Specifically, the Agency included [REDACTED]—which SpaceX proposed to leverage [REDACTED]—as part of the Total Government Investment and counted this amount toward the Government's percentage cost share. The Agency, however, did not include the much larger amount the Government has given and will continue to give to ULA to build and maintain the launch infrastructure and integration facilities that ULA proposed to leverage under its LSA.

126. ULA's "costs of maintaining launch infrastructure and a skilled workforce, came through a contract vehicle with the Government known as the EELV Launch Capability Arrangement, otherwise known as the ELC."⁵⁷ Although Congress directed the Agency to discontinue the ELC in the FY 2016 NDAA, the Agency issued an \$876 million modification to the services contract in September 2018, covering launch site and range operations, and launch infrastructure maintenance and sustainment, and increasing the total value of ULA's ELC subsidies to over \$9.76 billion.⁵⁸

127. ULA has acknowledged publicly that it intends to use as part of its LSA solution the launch pads and vertical integration facilities that it developed and continues to maintain using ELC monies:

The other thing that's happening is the pad modifications. *We intend to fly Vulcan and Atlas off the same launch pad and they're going to overlap for a number of years*, so we needed to have a launch pad that could go back and forth, because the rockets are different sizes. The diameters are significantly different and Vulcan is also a little bit longer, so we are modifying our launch tower and launch pad so

⁵⁷ *Hearing on Military Space Launch and the Use of Russian-Made Rocket Engines Before the S. Comm. on Armed Services*, 114th Cong. 5 (2016) (statement of Hon. Deborah Lee James, Secretary of the Air Force), available at https://fas.org/irp/congress/2016_hr/engines.pdf.

⁵⁸ *Compare* National Defense Authorization Act for Fiscal Year 2016, Pub. L. No. 114-92, § 1608, 129 Stat. 726, 1100-01 (2015) *with* Press Release, Dep't of Defense, Release No. CR-187-18, Contracts for September 27, 2018 (Sept. 27, 2018), <https://dod.defense.gov/News/Contracts/Contract-View/Article/1647166/>. Note, this total only reflects the unclassified Agency contribution to ELC; classified ELC contributions for NRO are not public.

platforms can go up and down, because normally they're fixed. You design your rocket and then you build a pad to fit your rocket, that's how it's always been done.

[The vertical integration facility] is where all these platforms are, and there's holes in them so you can walk around them and do your work. So those are all being made to be backwards compatible, so you can fly a Vulcan, then you can fly an Atlas and go back and forth. So that's kind of a neat engineering problem for our teams, because I'm not sure I can point to an integration facility that is designed to go back and forth between different-sized rockets, so it's kind of a unique thing to do.

Why did you decide to modify the pad versus getting a second pad for the rocket?

The pad is capable of flying both, and *obviously, that saves a bunch of money.* The vertical integration facility, it was cheaper to modify that to go backwards compatibility, like I just described, than to build a new one⁵⁹

128. ULA may be right that its LSA approach "saves a bunch of money," but most of the money it is saving is ULA's, because those facilities and sustainment costs were not free to the Government or taxpayers who continue to pay for those facilities.

129. The Agency did not include the significant Government dollars paid to ULA (and that will continue to be paid to ULA) for the launch pads and related infrastructure in the ULA Total Government Investment the Agency calculated for the LSA evaluation and selection decision, and the Agency fails to confront this inequity in denying SpaceX's objection to the LSA awards.⁶⁰ (Debriefing Slides at 20, Ex. O; Agreements Officer's Decision at 5-6, Ex. R.) Rather than explain the rationale for not calculating the Total Evaluated Prices and Total Government

⁵⁹ Jacqueline Klimas, *Lockheed-Boeing Space Launch Venture Seeks to Maintain Edge*, Politico (May 4, 2018), <https://www.politico.com/story/2018/05/04/lockheed-boeing-space-launch-venture-568498> (emphasis added); see also United Launch Alliance, *Developing Vulcan Centaur: The Strategic Partnerships Powering ULA's Next-Generation Vulcan Centaur Rocket* (Apr. 8, 2019), https://www.ulalaunch.com/docs/default-source/evolution/190408_ulapanel_all_compressed.pdf.

⁶⁰ The Agency budgeted \$737.273 million for ULA's ELC in FY 2017 and \$918.609 million in FY 2018—these amounts do not include the other 25% of ELC costs paid by the NRO. Air Force, DoD FY2018 Budget Estimates, Justification Book Volume 1 of 1 at 105 (May 2017), available at <https://www.saffm.hq.af.mil/Portals/84/documents/Air%20Force%20Space%20Procurement%20FY18.pdf?ver=2017-05-23-155547-107>.

Investment in an equal manner by including ULA's significant ELC payments in the calculation, the Agency recasts SpaceX's argument as an untimely solicitation challenge.

130. SpaceX, however, does not challenge the ground rules; SpaceX challenges the inequitable application of those rules. By ignoring ULA's inability to operate without massive taxpayer subsidies and ULA's decision to leverage facilities and infrastructure paid for with those dollars, the Agency reveals that it did not evaluate the offerors on an equal basis to the favor of ULA and the competitive prejudice of SpaceX.

131. Had the Agency equally included the taxpayer dollars the Agency paid to build and maintain the launch infrastructure that ULA proposed to leverage for the LSA, then ULA's Total Evaluated Price would have been significantly higher than the Total Evaluated Price reported to the selection official, rendering ULA's proposed cost unreasonable and unaffordable.

132. Second, the Agency overstated SpaceX's Total Evaluated Price by [REDACTED] by adding the costs of vertical integration options for both the Eastern and Western Range launch complexes. (Debriefing Slides at 16, Ex. O.) But the Phase 2 RFP expressly states that there is no need for West Coast vertical integration during the entire performance period, making clear that only one of SpaceX's proposed options would conceivably be exercised. (Phase 2 RFP, Att. 1 at 23, Ex. U.) Absent the improper inclusion of the [REDACTED] option for West Coast vertical integration, SpaceX's Total Evaluated Price would have been lower than ULA's.

133. The Agency's addition of the costs of both options [REDACTED] to SpaceX's Total Evaluated Price reflects another prejudicial error: the Agency's discussions with SpaceX were misleading and not meaningful. In discussions, the Agency directed SpaceX to separate the vertical integration costs from its proposed costs as "options," leading SpaceX to understand incorrectly that the Agency did not equate the options to the proposed price. But for this

misdirection to differentiate the options, SpaceX would have lowered its proposed price. *See Q Integrated Co., LLC v. United States*, 126 Fed. Cl. 124, 146 (2016) (holding that agency "had an obligation to disclose information" reducing protester's chance of receiving contract award and its failure to do so was prejudicial); *Raytheon Co. v. United States*, 121 Fed. Cl. 135, 166 (2015) (holding that agency silence misled protester and that "it was the [Agency's] duty to ensure that all three contractors were competing on a level playing field").

134. Third, the Agency focused its Investment Cost evaluation entirely on the Total Government Investment associated with each LSA proposal, without considering the relative Industry Cost Share and Total Non-Government Investment associated with each LSA proposal contrary to the LSA Solicitation.

135. The LSA Solicitation instructed each offeror to "provide the projected total costs to complete the EELV Launch System prototype, including all scope proposed in the SOW" and to "identify the proposed dollar amounts between Non-Government and Government funding sources." (LSA Solicitation at 12, Ex. A.)

136. The Agency stated that it would evaluate each offeror's proposed Investment Cost against five criteria: (1) Total Government Investment, (2) Total Non-Government Investment, (3) Total Combined Investment, (4) Industry Cost Share and (5) Time Phasing of Government Investment. (*Id.* at 25.) The Total Government Investment represents "the total dollar amount of Government investment requested by the Offeror" and the Industry Cost Share represents "the proportion of the Combined Total Investment that will be funded by Non-Government sources." (*Id.*)

137. Based on the stated criteria, SpaceX proposed an [REDACTED] Industry Cost Share (i.e., SpaceX proposed to fund nearly [REDACTED] of its LSA solution). Specifically, SpaceX proposed to

contribute [REDACTED] in Total Non-Government Investment in its LSA solution, leaving the Government to contribute [REDACTED] of the Total Investment Cost, for [REDACTED] in Total Government Investment. (Debriefing Slides at 8, Ex. O.)

138. SpaceX thus proposed the most advantageous Industry Cost Share, i.e., the lowest proportion of the Total Investment Cost to be funded by Government sources. SpaceX's proposed Investment Cost would thus afford the Agency the greatest return on the lowest percentage of investment by the Government.

139. Rather than evaluate proposed investment costs according to the five equally-weighted criteria set forth in the LSA Solicitation, the Agency mechanically ranked offerors based solely on which had the lowest, second lowest and third lowest "overall total Government investment" (as miscalculated by the Agency) and made the award decision on that basis. (Portfolio Recommendation at 26, 29-31, Ex. D); *but see Isratex, Inc. v. United States*, 25 Cl. Ct. 223, 230 (1992) (holding that "plaintiff could assume that the subfactors would be equally weighed" where solicitation did not specify otherwise).

140. Equally prejudicial, the Agency never advised SpaceX during discussions that the Agency (i) had changed the evaluation to consider and weigh only the Total Government Investment, and (ii) had apparent concerns that its funding limitations would not permit an award both to SpaceX and ULA. Instead, the Agency assured SpaceX during discussions that the Agency "did not find any reasonableness issues" with SpaceX's proposal (Evaluation Notice 333 at 2, Ex. T), and later rejected SpaceX's proposal as "unaffordable given the Government's funding limitations." (Portfolio Recommendation at 29, Ex. D.) Consequently, the Agency's investment cost discussions were misleading and not meaningful to SpaceX's competitive prejudice.

141. The Agreements Officer's Decision wrongly claims that "the SSA did not place improper emphasis on Total Government Investment in making the award decision." (Agreements Officer's Decision at 6, Ex. R.) This statement ignores the plain language of the Portfolio Recommendation, which rated offerors according to the Total Government Investment (i.e., the overall Government cost investment) without considering the other four factors, and the fact that the SSA agreed with the Portfolio Recommendation. (Portfolio Recommendation at 26, Ex. D; Award Decision at 9, Ex. I.)

142. Because the LSA Solicitation did not advise offerors that the most important criteria for assessing each offeror's proposed Investment Cost was the Total Government Investment, it was an error for the Agency to treat it as such without first amending the LSA Solicitation and permitting offerors to submit updated proposals consistent with the revised weighting of the five criteria. *See Info Scis. Corp. v. United States*, 73 Fed. Cl. 70, 114 (2006) (granting judgment in favor of unsuccessful offeror because agency evaluation violated terms of the solicitation).

143. But for these anticompetitive errors in the Agency's Investment Cost evaluation and discussions that were misleading and not meaningful, the Agency would have calculated a significantly higher evaluated price for ULA, a lower price for SpaceX, and SpaceX would have proposed a lower price to account for the inclusion of vertical integration, all of which would have altered the competitive landscape, giving SpaceX a substantial chance of receiving an LSA award.⁶¹

⁶¹ The common elements in the systems proposed by the three LSA awardees raises another issue with the award decision under the Investment Cost factor. The Agency either has permitted ULA to spread the development costs of its proposed solution across three proposals (thus understating the total development costs for ULA and the percentage of Government investment), or the Agency has included the same costs in more than one LSA, thus overstating the total costs for the portfolio. With an inflated assumption about the costs of the portfolio awarded, the SSA was not able to

144. Finally, when determining the best value, and given that the LSA Solicitation allowed flexibility for the Agency to fund less than what an offeror proposed, it was an error for the Agency to focus only on funding three awards completely, without giving any consideration to how that portfolio of awardees, if successful, would impact the ultimate cost to the Government of obtaining launch services. In so doing, the Agency failed to consider its statutory mandate to prioritize "lower[ing] the costs of launching a national security space system." 10 U.S.C. § 2273.

145. SpaceX embodies the statutory mandate of lowering costs and self-sufficiency, whereas ULA represents the opposite. It is indisputable that, even without the benefit of significant Government subsidies, SpaceX has offered launch service pricing far less expensive than ULA with its annual billion dollar subsidy. Had the Agency considered how its portfolio would impact the future cost of launch services, it would have recognized that investing in SpaceX was far more likely to result in the type of savings that Congress directed the Agency to prioritize, than creating a portfolio of three LSAs that excludes SpaceX.

WHEREFORE, SpaceX respectfully requests that the Court grant judgment in favor of SpaceX on Count I and (a) declare that the LSA awards violate the requirement for competitive procedures because the Agency based the awards on an Investment Cost evaluation that was unequal and deviated from the stated requirements and also resulted from misleading and not meaningful discussions; (b) enjoin any further investment by the Government under the LSAs and any further performance by ULA, Blue Origin, and Northrop under the LSAs; (c) reopen the competition, engage in meaningful discussions, and evaluate Investment Cost consistent with the LSA Solicitation and equally treat all offerors against those ground rules, and make a new award

make an accurate and fully informed decision about which combination of awardees was the most advantageous, including the prospect of a fourth award.

decision, or revise the LSA Solicitation and reopen the competition and make a new award decision; and (d) provide such other relief as the Court deems just and appropriate.

**COUNT II: THE AGENCY BASED THE LSA AWARDS ON AN UNEQUAL RISK
ASSESSMENT THAT CONTRAVENES THE LSA SOLICITATION AND THE
AGENCY'S ACTUAL NEEDS**

146. SpaceX incorporates paragraphs 1 through 145 of the Complaint by reference.

147. This Court must set aside any agency action that is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law" or "without observance of procedure required by law." 5 U.S.C. § 706(2)(A), (D); 28 U.S.C. § 1491(b)(4).

148. "[A] contracting agency must treat all offerors equally, evaluating proposals evenhandedly against common requirements and evaluation criteria." *Banknote Corp. of Am. v. United States*, 56 Fed. Cl. 377, 383 (2003), *aff'd*, 365 F.3d 1345 (Fed. Cir. 2004); *CW Gov't Travel, Inc. v. United States*, 110 Fed. Cl. 462, 490 (2013). "Moreover, agencies must apply the stated evaluation factors in a fair and evenhanded manner across competing proposals." *PlanetSpace, Inc. v. United States*, 92 Fed. Cl. 520, 536 (Fed. Cl. 2010).

149. The fundamental requirement to evaluate offerors equally against stated ground rules is not limited to competitions subject to the CICA, but necessarily extends to any competition subject to "competitive procedures," such as the LSA competition. *See* 10 U.S.C. § 2371b(b)(2). Moreover, affording disparate treatment to offerors competing under the same ground rules in the same competition is arbitrary and capricious behavior that must be set aside under the APA standard. 5 U.S.C. § 706.

150. The Agency deviated from the risk paradigm in the LSA Solicitation and the Agency's actual needs by giving predominant, disproportionate weight in the best value comparative assessment to risks associated with Category C launch capabilities. SpaceX proposed

the least risky solution for the Agency's most numerous and imminent needs (Category A and B payload launch capabilities), and the evaluation irrationally favored the offerors that present the greatest risk to those needs.

151. The LSA Solicitation contemplates a risk assessment based on the quantity and timing of the mission needs. To inform each offeror's proposed EELV Approach, the Agency identified the reference orbits in Table 10 and the Significant EELV Dates in Table 13 of the LSA Solicitation. Of the nine reference orbits listed in the LSA Solicitation, seven fall under Category A/B payloads that have an ILC date of April 2022. (*See* LSA Solicitation at 27, 29, Ex. A.)

152. Importantly, only two Category C payload orbits are referenced in the LSA Solicitation Tables (one tentative and one firm), and they are scheduled to launch years later than the other categories (ILC dates in September 2025 and October 2026). (*Id.* at 29.) Thus, the LSA Solicitation specifies that all but a minimal number of missions, including all launches before at least September 2025, will involve only Category A/B payloads.

153. The Agency, however, skewed its risk assessment under the most important EELV Approach factor arbitrarily in favor of offerors that purportedly present lower Category C risk, even though those offerors present significantly greater risk for the Category A/B payload launches that comprise most of the reference orbits and the Agency's greatest and nearest-in-time needs. Consequently, the Agency broke from the stated criteria and unreasonably made its LSA investment decisions based on unwarranted risks assessed to SpaceX for the fewest and most distant future Category C missions. Equally significant, the Agency ignored the fact that SpaceX offered the best value solution for the Agency's vastly more numerous and imminent Category A and B payload mission needs.

154. Of the competing offerors, only SpaceX offered a proven commercial launch system already capable of launching all Category A/B payloads. But the Agency irrationally and unequally assigned a lesser risk to conceptual launch system designs that have no proven ability to launch *any* payloads (Category A/B or C), relative to the already-operational SpaceX approach, which has essentially no risk regarding the ability to launch Category A/B payloads.

155. In the debriefing, the Agency acknowledged that the stated LSA Solicitation evaluation process does not prioritize Category C missions or otherwise indicate that the evaluation of Category C risks would drive the Agency's investment decisions. Yet, during the debriefing the Agency stated what was not in the LSA Solicitation: that the Agency had in fact considered the offerors' proposals for meeting the Category C payload missions to be the "absolute . . . driving factor" of the EELV Approach evaluation. (Debriefing Audio File at approx. 35:15 through 36:50 ("The other overarching goal has to [INAUDIBLE] the missions effectiveness is to get off the Delta IV Heavy because [INAUDIBLE] beyond these three purchases that we are doing sole source for the Delta IV Heavy, if we can't get off the Delta IV Heavy we have to decide between launching fewer missions [INAUDIBLE] on the Delta IV Heavy, or finding a replacement for it and launching as many missions as we actually want to do. So it was an absolute, like, driving factor in this RFP . . .").)

156. Neither the LSA Solicitation announced nor the Agreements Officer's Decision addressed the Category C payload approach as a "driving factor." To the contrary, the Agency agreed in the Agreements Officer's Decision that the evaluation criteria did not advise offerors that the Agency intended to weigh more heavily, or even equally, potential risks related to the offerors' solutions for launching Category C payloads relative to the solutions for launching Category A/B payloads. (Agreements Officer's Decision at 4-5, Ex. R.) Instead, the EELV Approach factor

required the Agency to evaluate each offeror's ability to "support up to five NSS launches per year" and "to meet all EELV reference orbits" in the LSA Solicitation, all but two of which fall under Payload Category A/B and with those two exceptions scheduled for launch no earlier than September 2025.

157. "It is black letter law that agencies must evaluate offerors' proposals based on the evaluation criteria stated in the solicitation." *Lab. Corp. of America Holdings v. United States*, 116 Fed. Cl. 643, 650 (2014) (holding that agency decision lacked rational basis when it adopted a "'critical element' in scoring proposals" and "the predominant differentiator," but solicitation did not indicate that agency would evaluate offerors on that basis). Here, however, the Agency's risk assessment under the most important factor flipped the implicit importance of capabilities, giving greatest emphasis to the few (if any) distant Payload Category C missions and least emphasis to the largest number of and most imminent Payload Category A/B missions.

158. Had the Agency properly weighed the risks inherent in the competing solutions based on the mission needs in the LSA Solicitation (both in quantity and time), the Agency would have determined that investment in SpaceX's Falcon 9 and Falcon Heavy best meets the requirements for "rapid, responsive, and reliable" services at lower cost and acceptable risk levels. 10 U.S.C. § 2273.

159. Alternatively, had SpaceX known that the "absolute . . . driving factor" of this competition and the Agency's investment decision was the Category C payload capability, SpaceX would have proposed differently. The law requiring "competitive procedures" does not permit the Agency to announce its needs in the LSA Solicitation and then evaluate in a manner inconsistent with those stated needs. *Dubinsky v. United States*, 43 Fed. Cl. 243, 259 (1999) ("making offerors

aware of the rules of the game in which they seek to participate is fundamental to fairness and open competition").

160. The competitive harm to SpaceX from the Agency having inflated the weight of Category C risk beyond what the LSA Solicitation contemplated was magnified by the Agency's failure to account equally for the significant Category A/B risk of the remaining offerors.

161. The Agency recognized that ULA's schedule to meet the Category A/B certification flight reflected a very narrow margin before the first scheduled mission—truncated significantly more than the margin SpaceX proposed. (Award Decision at 3, Ex. I.) Blue Origin also proposed an "insufficient schedule margin for the last Category A/B certification flight," as did Northrop. (*Id.* at 4, 5.) Yet, the Agency failed to weigh these risks of timely and successfully developing a Category A/B launch system properly in the EELV Approach evaluation, assigning each competitor a more favorable Low or Moderate risk rating than the rating SpaceX received. (*Id.* at 3-5.)

162. The Agency's reliance upon ULA, Northrop and Blue Origin and their narrow scheduling margins is fraught with peril. The weaknesses the Agency noted for each awardee—that "may adversely affect their ability to meet the Government launch requirements" or "potentially cause disruption of schedule, increased cost, or degradation of performance"—have program-wide implications and should have been weighed as such in the evaluation and LSA award decision. (*Id.* at 2-6.) A development delay for each of the awardees would have a cascading effect across a significant number of missions, jeopardizing not just the few later-in-time Payload Category C launches, but also the near-term Payload Category A/B launches, which again constitute the vast majority of EELV missions (and the orbits referenced in the LSA Solicitation).

WHEREFORE, SpaceX respectfully requests that the Court grant judgment in favor of SpaceX on Count II and (a) declare the LSA award decision violates the requirement for competitive procedures because the Agency based the awards on an EELV Approach risk assessment at odds with both the stated criteria and the Agency's actual needs, and reflected unequal treatment of the offerors; (b) enjoin any further investment by the Government under the LSAs and any further performance by ULA, Blue Origin, and Northrop under the LSAs; (c) reevaluate the LSA proposals in accordance with the stated evaluation criteria and the Agency's needs and make a new award decision, or revise the LSA Solicitation and reopen the competition and make a new award decision; and (d) provide such other relief as the Court deems just and appropriate.

COUNT III: THE AGENCY BASED THE LSA AWARDS ON AN ARBITRARY AND UNEQUAL EELV APPROACH EVALUATION

163. SpaceX incorporates paragraphs 1 through 162 of the Complaint by reference.

164. When using competitive procedures to invest Government dollars in a private company, an agency must evaluate proposals and make the award decision based only on the solicitation's stated criteria. An "agency's failure to follow its own selection process embodied in the [s]olicitation is . . . a prejudicial violation of a procurement procedure established for the benefit of offerors." *Hunt Bldg. Co., Ltd. v. United States*, 61 Fed. Cl. 243, 277 (2004); *see also OTI Am., Inc. v. United States*, 68 Fed. Cl. 646, 654–55 (2005) ("It is hornbook law that agencies must evaluate proposals and make awards based on the criteria stated in the solicitation.... [T]he government may not rely upon undisclosed evaluation criteria in evaluating proposals.").

165. The Agency's evaluation of SpaceX under the most important EELV Approach factor deviates from the stated LSA Solicitation criteria and misstates the contents of SpaceX's proposal.

166. The Agency found that SpaceX's payload integration approach met all LSA Solicitation requirements, and rated SpaceX's proposed launch system solution Outstanding under the EELV Approach factor, reflecting an "exceptional approach and understanding of the requirements." (Award Decision at 6, Ex. I.) The evaluators identified seven technical strengths. (Final Evaluation at 15-16, Ex. J.)

167. The discrepant risk evaluation, which assessed SpaceX a prejudicial High risk rating based on two significant weakness findings that contravene the LSA Solicitation and one weakness finding that misstates SpaceX's proposed approach, failed to comply with the competitive procedures required by law.

168. First, the Agency improperly assigned a significant weakness to SpaceX's proposal because SpaceX did not tailor its Category C launch system to the Government's current payload integration practices and infrastructure:

[REDACTED]

(*Id.* at 17.)

169. This evaluation finding contravenes the LSA Solicitation, which did not require offerors to adopt current Government concept of operations for payload integration but rather advised offerors that the Agency sought to "leverage industry's ongoing efforts to develop new and/or upgraded commercial launch systems," and that the Agency would "tailor[]" the public-private agreements "to each launch service provider's needs in order to enable commercial launch systems to meet all NSS requirements." (LSA Solicitation at 1, Ex. A (emphasis added).)

170. To remedy this significant error, the Agency must reevaluate SpaceX's proposal based on the stated criteria and award SpaceX an LSA contract or revise the LSA Solicitation so that SpaceX can fairly compete for an LSA award. If the Agency considered its existing Category C payload processing procedures, concept of operations, and infrastructure critical to its objectives, then the Agency had an obligation to amend the LSA Solicitation to include these procedures in the requirements so that SpaceX could compete fairly against the ground rules employed by the evaluators but not stated in the LSA Solicitation. As this Court has recognized, "making offerors aware of the rules of the game in which they seek to participate is fundamental to fairness and open competition." *Dubinsky*, 43 Fed. Cl. at 259.

171. Second, the Agency's assessment of a significant weakness for SpaceX's proposal to [REDACTED] also deviated from the LSA Solicitation and ignored SpaceX's proposal. (Final Evaluation at 17-18, Ex. J.)

172. The Agency specifically removed any requirement that offerors [REDACTED] by LSA Solicitation Amendment 2. (*Compare* LSA Solicitation at [REDACTED] Ex. A *with* LSA Solicitation, Amend. 2 at [REDACTED] Ex. G.) The Agency further confirmed that "the Air Force does not require [REDACTED]" (Response to Industry Comment [REDACTED] Ex. F.) The Agreements Officer's Decision reaffirmed this and specifically stated that "the Government did not require [REDACTED] as evidenced by the fact that SpaceX was not found to be deficient for proposing to [REDACTED] [REDACTED]" (Agreements Officer's Decision at 3, Ex. R.)

173. Nevertheless, the Agency contends that it was reasonable to rate SpaceX's approach High risk for not proposing what the LSA Solicitation did not require. Not so. The LSA Solicitation defines a significant weakness as "a flaw that appreciably increases the risk of

unsuccessful agreement performance." (LSA Solicitation at 22 (emphasis added), Ex. A.) The LSA Solicitation thus limits the assessment of risk to those proposal flaws that will impact the LSA performance, i.e., whether any risk exists to the offeror completing the development and certification of its EELV launch system. The Agency cannot reasonably advise offerors that they need not [REDACTED] and then assess a High risk for not proposing to do so. In essence, the Agency asserts that it may assess a weakness against SpaceX for failing to do something that the LSA Solicitation did not require. This is the definition of evaluating an offeror based upon unstated criteria contrary to the competitive process.

174. In any event, SpaceX specifically committed to [REDACTED]
[REDACTED]
[REDACTED] (Final Updated Proposal, SOW at § 2.7.1.2, Ex. L.)

175. To remedy this prejudicial error, the Agency must either remove the significant weakness and find SpaceX's solution Low risk under the EELV Approach factor and provide SpaceX an LSA award, or reopen the competition and revise the LSA Solicitation to reflect the Agency's actual requirements.

176. Third, the Agency improperly assigned SpaceX a weakness upon the mistaken belief that SpaceX [REDACTED]
[REDACTED]
[REDACTED] (Final Evaluation at 17-18, Ex. J.)

177. Contrary to this finding, SpaceX's proposal specifically states that [REDACTED]
[REDACTED]

[REDACTED] (SpaceX Category C Integrated Master Schedule, Unique ID #596, Ex. E; Final Updated Technical Proposal (Excerpts) at III-42, Ex. M.)

178. But for the Agency's failure to properly employ the legally-mandated competitive procedures, SpaceX would have received an LSA.

WHEREFORE, SpaceX respectfully requests that the Court grant judgment in favor of SpaceX on Count III and (a) declare the LSA award decision violates the requirement for competitive procedures because the Agency based the awards on an EELV Approach factor evaluation that deviated from the stated criteria and SpaceX's proposed approach, and held the offerors to different standards; (b) enjoin any further investment by the Government under the LSAs and any further performance by ULA, Blue Origin, and Northrop under the LSAs; (c) reevaluate SpaceX's proposal in accordance with the stated evaluation criteria and award SpaceX an LSA contract, or revise the LSA Solicitation and reopen the competition and make a new award decision; and (d) provide such other relief as the Court deems just and appropriate.

COUNT IV: THE AGENCY BASED THE LSA AWARDS ON A FLAWED AND UNEQUAL EVALUATION UNDER THE SCHEDULE SUBFACTOR

179. SpaceX incorporates paragraphs 1 through 178 of the Complaint by reference.

180. This Court must set aside any agency action that is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law" or "without observance of procedure required by law." 5 U.S.C. § 706(2)(A), (D).

181. In the schedule evaluation, the Agency attributed a significant weakness to SpaceX's solution for Category C payloads based on the same evaluation errors made in the EELV Approach factor evaluation.

182. Specifically, the evaluators raised the following concerns: (i) [REDACTED]

[REDACTED]

[REDACTED] (ii) completion of the Starship certification and "the Government's use of the [Starship] is dependent [REDACTED]; and (iii) the potential future [REDACTED] (Final Evaluation at 43, Ex. J.)

183. The Agency improperly based each of these concerns on either a misreading of SpaceX's proposed approach or on an unstated criterion that conflicts with the LSA Solicitation.

184. First, contrary to the evaluation, SpaceX's proposal clearly states that [REDACTED] [REDACTED] and will afford SpaceX [REDACTED] schedule margin, far surpassing the schedule margin provided by the three awardees for their Payload Category A/B and Payload Category C capabilities. (SpaceX Category C Integrated Master Schedule, Unique ID #596; Final Updated Technical Proposal (Excerpts) at III-42, Ex. M.)

185. Second, SpaceX's proposal also contradicts the Agency's second stated rationale, providing expressly that the third Starship certification flight [REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
(Final Updated Technical Proposal (Excerpts) at III-43, Ex. M (emphasis added).)

186. Finally, it was irrational to assess a significant weakness to SpaceX under the Schedule subfactor for not adopting the Government's current Category C concept of operations and infrastructure because the LSA Solicitation did not require such, but rather encouraged offerors to propose and leverage their commercial solutions. (LSA Solicitation at 1, Ex. A.)

187. The evaluators also misreported to the selection official that "the Starship would complete development in 2026," rendering SpaceX late for the purported "1 Sept 2025 need date."

(Final Evaluation at 42, Ex. J.) Based on this finding, the SSA wrongly concluded that the greater capability the Government would receive from the small Government investment percentage proposed by SpaceX was outweighed by risk because "there is significant likelihood that [SpaceX] will not meet Government timelines, so the investment will not result in needed capability for Category C in 2025." (Award Decision at 9, Ex. I.)

188. Notably, however, the evaluators based their developmental timeline predictions not on the supporting information SpaceX provided, but on the eleven years it took for "development of the Space shuttle, . . . between the start of 1971 and the end of 1981." (Final Evaluation at 42, Ex. J.) This reliance on the decades-old Space Shuttle experience as a benchmark to assess the realism of SpaceX's proposed schedule lacks a rational basis.

189. SpaceX, a modern aerospace company, uses development technology and capabilities that were barely beyond science fiction in the early 1970s and that enable far more accurate, in-depth analysis and faster development. For example, modern engineers employ much more advanced computer aided design and analysis methods, including three-dimensional computational fluid dynamics ("CFD"), to enable design and test cycles orders of magnitude faster than possible in 1971. These are key capabilities for launch vehicle design. The first practically-applicable CFD had only just been realized at the start of Shuttle development. Today, SpaceX engineers employ far more powerful analysis methods for rapid design iteration. (*See, e.g.*, Final Updated Technical Proposal (Excerpts) at III-16 to III-17, Ex. M.) Miniaturized electronics and more capable flight computers also eliminate many of the restrictions and challenges that made computer hardware and software such a challenging aspect of the Space Shuttle development.

190. Like the awardees, SpaceX is building on lessons learned and actual technology developed during other launch vehicle development programs, including the Shuttle program. For

example, the Shuttle provided valuable lessons [REDACTED]

[REDACTED] The ability to learn from prior programs will only accelerate Starship's development timeline in comparison to earlier development programs.

191. The Starship vehicle configuration is also considerably simpler than that of the Space Shuttle. Starship has fewer [REDACTED] than the Shuttle did. Starship also has a [REDACTED] than that of the Shuttle. This results in lower relative complexity of design, test, and manufacture—obvious and material facts that the evaluation ignores.⁶²

192. Finally, SpaceX has a proven record of developing a launch vehicle and a spacecraft in less than half the 11 years used for the Shuttle. Specifically, SpaceX needed only [REDACTED] to develop the Dragon spacecraft and less than that to develop the Falcon 9 launch vehicle, much more recent and relevant development efforts than the Space Shuttle.⁶³ (See, e.g., Final Updated Proposal (Excerpts), EELV Approach at II-3, Ex. P; Final Updated Technical Proposal (Excerpts) at III-60, Ex. M.) SpaceX demonstrated the ability to recover the first stage of its Falcon 9 within

⁶² This may be illustrated by the stark difference in development cost. SpaceX projects Starship development costs at [REDACTED], which the Agency found reasonable. Based on the initial development commitment of \$5.15 billion in 1971 dollars for the Space Shuttle development, the non-recurring cost of that program would have been approximately \$31.7 billion in 2017 dollars. See Humboldt Mandell, *Space Shuttle Cost Analysis: A Success Story?*, ICEAA Annual Conference at 4 (June 10-24, 2014), <http://www.iceaaonline.com/ready/wp-content/uploads/2014/06/BA-9-Handout-Space-Shuttle-Cost-Analysis-A-Success-Story.pdf>.

⁶³ Of note, ULA's Vulcan launch vehicle and Blue Origin's BE-4 engine already have been under development for longer than it took SpaceX to develop and fly the Falcon 9, and ULA recently announced the first flight of Vulcan is still not anticipated until at least 2021. Jeff Foust, *ULA Now Planning First Launch of Vulcan in 2021*, Space News (Oct. 25, 2018), <https://spacenews.com/ula-now-planning-first-launch-of-vulcan-in-2021/>. This confirms that SpaceX can develop and fly launch vehicles significantly faster than its current competitors, let alone in comparison to 1970s era development efforts.

[REDACTED] of its first launch, has successfully recovered 30 boosters to date, and reflowed these almost 20 times. (Final Updated Proposal (Excerpts), EELV Approach at II-3, Ex. P.) SpaceX has also completed more than 70 successful launches using the Falcon 9 and Falcon Heavy and berthed its Dragon spacecraft with the International Space Station 17 times.

193. SpaceX is not only using common processes and hardware between Falcon 9, Falcon Heavy, Dragon, and Starship, [REDACTED]

[REDACTED] Starship design is well underway with experienced professionals building on their successes. In addition, while a host of subcontractors developed most of the Shuttle's systems, SpaceX is developing Starship in house. SpaceX's experienced team, together with SpaceX's lack of reliance on major subcontractors, constitute additional distinguishing features from the Shuttle program, making it a particularly inappropriate comparison for schedule estimation. Again, the Agency failed to consider any of these obvious and material facts in its evaluation, rendering the schedule risk assessment arbitrary and capricious.

194. The weakness assigned to SpaceX's proposal under the Schedule subfactor—risk of development delays for launch systems capable of launching Category A/B payloads by 1 April 2022 from Cape Canaveral or Vandenberg—also lacks reason because it conflicts with SpaceX's proposal and the Agency's cost evaluation.

195. The technical evaluators concluded that SpaceX's vertical integration option would not provide for Agency validation [REDACTED] which the evaluators deemed [REDACTED] (Final Evaluation at 38, Ex. J.)

196. The evaluators based this finding on a misreading of SpaceX's Model Agreement. According to the evaluators, under SpaceX's proposed approach the Agency can exercise the vertical integration option for LC-39A only if SpaceX receives a launch services contract under

the Phase 2 RFP that contract requires vertical integration. (*Id.* at 37.) But the Model Agreement's terms expressly permit [REDACTED] (Final Updated Proposal (Excerpts), Model Agreement at § II.B.6.d, Ex. N.) To this end, SpaceX's proposal states [REDACTED] [REDACTED] to provide greater schedule confidence." (Final Updated Technical Proposal (Excerpts) at III-76, Ex. M.)

197. Given that the Agency included the costs of both vertical integration projects in the Total Evaluated Price of SpaceX's proposed approach, the Agency could have exercised the East Coast option and funded the LC-39A vertical integration project sooner than April 1, 2020 in order to address the Agency's schedule concerns. Having elected not to do so, it was unfair to assess a weakness to SpaceX's proposed approach when this option was available and would not require "close Government monitoring." (Award Decision at 7, Ex. I.) SpaceX cannot reasonably be burdened with both an evaluated risk and the cost of the option to overcome that risk.

198. Finally, the evaluation of SpaceX's proposal against the LSA Solicitation schedule criterion was not only irrational, it was also unequal to the detriment of SpaceX, assured access to space and the EELV program.

199. The Agency improperly favored ULA's purported leveraging of legacy hardware when it gave ULA a Low risk rating under the Schedule subfactor (and a commensurate Low risk under the EELV Approach). ULA "received a Low risk rating with no weaknesses due to an approach that leverage[d] heritage designs and experience executing NSS launches." (Portfolio Recommendation at 21, Ex. D (emphasis added).) The plain language of the Portfolio Recommendation reveals that the most important, and only identified reason ULA received a Low risk rating is that ULA purportedly is leveraging its legacy hardware and experience.

200. It is difficult to understand how the Agency concluded that ULA's Vulcan leverages legacy systems because the Vulcan is completely different from the Atlas V. As the chart below shows, the two launch vehicles use completely different first stage engines and propellants, side boosters, second stage engines, structures, and software, and they have different dimensions and performance characteristics.⁶⁴

Atlas V and Vulcan Centaur – Some of Their Differences

	Atlas	Vulcan
Propulsion		
1 st Stage Engine	1x RD-180	2x BE-4 engines
1 st Stage Propellant	Kerosene/Liquid Oxygen (LOX)	LNG / LOX
Cryogenic 1 st Stage Fuel	No	Yes
1 st Stage Hydrazine Bottle	Yes	No
Solid Side Booster	0-5x AJ-60; GEM 63	0-6x GEM 63XL
2 nd Stage Engine	1-2x RL10A-4; or 1x RL10C-1	2x RL10C-X
Vehicle Dimensions		
Length	58.3 m – 62.2 m	58.3 m
Diameter	3.81 m	5.4 m
Mass	334,500 kg – 590,000 kg	Up to 546,700 kg
Structures		

⁶⁴ See, e.g., Ed Kyle, *ULA Announces Vulcan*, Space Launch Report (Sept. 29, 2018), <https://www.spacelaunchreport.com/vulcan.html>; United Launch Alliance, *Developing Vulcan Centaur: The Strategic Partnerships Powering ULA's Next-Generation Vulcan Centaur Rocket* (Apr. 8, 2019), https://www.ulalaunch.com/docs/default-source/evolution/190408_ulapanel_all_compressed.pdf; Eric Berger, *Getting Vulcan Up to Speed: Part One of Our Interview with Tory Bruno*, Ars Technica (Dec. 11, 2018), <https://arstechnica.com/science/2018/12/talking-rockets-with-tory-bruno-vulcan-the-moon-and-hat-condiments/>; United Launch Alliance, *Rocket Rundown: A Fleet Overview* (Apr. 2018), <https://www.ulalaunch.com/docs/default-source/rockets/atlas-v-and-delta-iv-technical-summary.pdf>; John Elbon, United Launch Alliance, *Engineering Limitless Possibilities* (Oct. 24, 2018), https://www.ulalaunch.com/docs/default-source/commercial-space/elbon-von-braun-symposium_compressed.pdf; United Launch Alliance, *Atlas V Launch Services User's Guide Revision 11* (March 2010), <https://www.ulalaunch.com/docs/default-source/rockets/atlasvusersguide2010.pdf>; Rich DeRoy & John Reed, United Launch Alliance, *Vulcan, Aces and Beyond: Providing Launch Services for Tomorrow's Spacecraft* (AAS 16-052), [https://www.ulalaunch.com/docs/default-source/evolution/vulcan-aces-and-beyond-providing-launch-services-for-tomorrows-spacecraft-\(american-astronomical-society-2016\).pdf](https://www.ulalaunch.com/docs/default-source/evolution/vulcan-aces-and-beyond-providing-launch-services-for-tomorrows-spacecraft-(american-astronomical-society-2016).pdf); United Launch Alliance, *Atlas V*, <https://www.ulalaunch.com/rockets/atlas-v>; Vulcan, Gunter's Space Page, https://space.skyrocket.de/doc_lau/vulcan.htm; Press Release, United Launch Alliance, *United Launch Alliance Selects L3 Technologies to Design Next-Generation Avionics System* (Dec. 4, 2017), <https://www.ulalaunch.com/about/news-detail/2018/01/09/united-launch-alliance-selects-l3-technologies-to-design-next-generation-avionics-systems>.

	Atlas	Vulcan
Build Pattern	Orthogrid	Isogrid
Dual GTO Capability	No	Yes
Fairing Boattail	Yes	No
2 nd Stage Tank	3.05 m	5.4 m

201. The Vulcan thus clearly comprises almost entirely new components and systems—often acquired from entirely new subcontractors like Blue Origin and Northrop—and the Agency's own award document acknowledges that receiving timely certifications for new systems in a compressed time period is risky. (Award Decision at 3, Ex. I ("The Offeror's proposal only has *approximately* 10 months margin, which is less than required based on the Government's historic experience. Any anomalies or outstanding certification liens have the potential to result in delays to the Government's ILC.") (emphasis in original).)

202. At the same time, SpaceX did not receive the same credit for leveraging legacy Falcon 9 and Falcon Heavy hardware or for its own string of successful NSS launches. In short, if the sole reason ULA received a Low risk rating is owed to leveraging its legacy hardware and experience, SpaceX's risk rating should reflect the same assessment. But SpaceX did not receive a Low risk rating.

203. The Portfolio Recommendation also states that a Low risk schedule typically has a 14 month margin between the last certification flight and the ILC need date. (Portfolio Recommendation at 12, Ex. D.)

204. As noted above, SpaceX offered [REDACTED] of schedule margin yet was deemed Moderate risk.

205. Although ULA proposed approximately 10 months of margin between the last Category A/B certification flight and the required ILC date of April 2022 for its developmental launch vehicle, four months less than the typical Low risk schedule, the Agency deemed ULA's

proposed approach Low risk, purportedly because ULA has experience executing NSS launches. (Award Decision at 3, Ex. I; Portfolio Recommendation at 21, Ex. D.) SpaceX, however received no such credit for its NSS launch experience. Equally troubling, although the Agency evaluators used a flawed benchmark (the Shuttle) for assessing SpaceX's development schedule, the evaluators did not draw on ULA's own history of taking seven years to develop the Atlas V and Delta IV vehicles, a simpler development effort involving an existing vehicle compared to the development of the new Vulcan rocket. Seven years from ULA's October 2018 LSA award would extend well past the April 2022 ILC deadline for category A/B missions.

206. Blue Origin proposed 11 months of margin between the last Category A/B certification flight and the required ILC date of April 2022 for its developmental launch vehicle, and the Agency deemed Blue Origin's proposed approach Moderate risk even though Blue Origin has no experience whatsoever putting any kind of satellites into orbit, let alone performing national security missions. (Portfolio Recommendation at 25, Ex. D.)

207. Northrop proposed only 7 months of margin between the last Category A/B certification flight and the required ILC date of April 2022 for its developmental launch vehicle, and the Agency deemed Northrop's proposed approach Moderate risk even though Northrop has no EELV experience. (*Id.* at 12.)

208. The record does not explain these disparate results. In fact, even when given the opportunity to explain a rationale for assessing a higher risk to SpaceX despite having a greater proposed margin of time between Category A/B launches and Category C, the Agreements Officer could not do so. (*See generally* Agreements Officer's Decision, Ex. R.)

209. The Agency's approach to schedule risk here is unreasonable, unequal, and irresponsible. It is unreasonable because the Agency is opting to dismiss its own evaluation criteria

concerning the reasonable margin of time between launches. It is unequal because the Agency is eliminating the one offeror that has reasonably proposed a margin [REDACTED], and the Agency has held SpaceX to higher standard than the other offerors. Finally, it is irresponsible because the Agency is introducing undue risk and uncertainty to the EELV program, as evidenced by the Agency's decision to permit the LSA awardees to use the Atlas V—Russian engines and all—as a back-up launch vehicle when their developmental rockets are inevitably not ready in time for Phase 2 RFP Competition (undercutting a key stated Agency goal of the LSA Solicitation).

210. In short, the awardees' proposed LSA solutions present greater schedule risk for most of the missions, all scheduled and near term, while the Agency saddled SpaceX with unwarranted risk related to (at most) two unscheduled missions in the distant future. Yet, the Agency found the awardees presented the lesser risk under the Schedule subfactor and overall, an unreasonable and unequal result. *See CliniComp Int'l, Inc. v. United States*, 117 Fed. Cl. 722, 741 (2014) ("Such uneven treatment 'goes against the standard of equality and fair-play that is a necessary underpinning of the federal government's procurement process and amounts to an abuse of the agency's discretion.'").

WHEREFORE, SpaceX respectfully requests that the Court grant judgment in favor of SpaceX on Count IV and (a) declare the LSA award decision violates the requirement for competitive procedures because the Agency based the awards on an Schedule subfactor evaluation that deviated from the stated requirements, ignored SpaceX's proposed approach, and held the offerors to disparate standards; (b) enjoin any further investment by the Government under the LSAs and any further performance by ULA, Blue Origin, and Northrop under the LSAs; (c) reevaluate the LSA proposals in accordance with the stated evaluation criteria and on an equal

basis and make a new award decision; and (d) provide such other relief as the Court deems just and appropriate.

COUNT V: THE LSA AWARD DECISION VIOLATES THE ASSURED ACCESS TO SPACE REQUIREMENTS

211. SpaceX incorporates paragraphs 1 through 210 of the Complaint by reference.

212. This Court will grant relief where an offeror demonstrates that the agency's conduct in connection with a procurement or proposed procurement violates applicable statutes or regulations. *See* 28 U.S.C. § 1491(b)(4); 5 U.S.C. § 706(2)(A), (D); *Banknote Corp. of Am., Inc. v. United States*, 365 F.3d 1345, 1351 (Fed. Cir. 2004); *Palantir USG, Inc. v. United States*, 904 F.3d 980 (Fed. Cir. 2018) (affirming decision sustaining protest for failure to follow U.S. Code commercial item provision).

213. The LSA evaluation and selection decision thwarts Congress's mandate for assured access to space.

214. Section 2273 of title 10 requires the Secretary of Defense to sustain the availability of at least two space launch vehicles (or families of space launch vehicles) capable of delivering the NSS payloads, a robust space launch infrastructure and industrial base, and the availability of rapid, responsive and reliable space launches to improve responsiveness, lower costs, and maintain acceptable risks. 10 U.S.C. § 2773(b).

215. As revealed by a long history of Congressional hearings, legislation, and the clear terms of the LSA Solicitation, the entire purpose of the LSA competition was to ensure the Agency has at least two providers of domestic and commercial launch services. (LSA Solicitation at 26, Ex. A.)

216. Despite the stated goal to ensure access to two domestic commercial launch service providers, the Agency eliminated from its LSA portfolio the only bidder that can reasonably be identified as a domestic, commercial launch provider.

217. SpaceX is the only offeror with existing launch vehicles that have a meaningful share of the commercial launch market (indeed the greatest share of any family of launch vehicles) and do not rely on Russian engines. None of the other offerors proposed a launch vehicle that is even operational, let alone commercially available. As the Agency recognized in its evaluation, SpaceX "is the only provider proposing use of a launch vehicle currently flying missions today, and has demonstrated their ability to accommodate more than three times the Government requirement in a given year." (Final Evaluation at 5, Ex. J.)

218. Contrary to the stated purpose of the LSA Solicitation and the mandate of the FY 2018 NDAA,⁶⁵ the Agency chose to invest in development of new, Government-specific launch solutions. (LSA Solicitation at 1, Ex. A.) Two of the three selected contractors—ULA and Northrop—are historic government contractors with little to no material commercial launch experience. The other one—Blue Origin—has no orbital launch experience whatsoever.

219. In other words, the Agency set out, as Congress directed, to invest in a portfolio of commercial launch providers that could satisfy the urgent need to provide launch services without relying on Russian engines. Yet, based on a flawed and unequal evaluation, the Agency decided to invest in every offeror except the one company that provides commercial launch services without Russian engines. The Agency selected a portfolio of concepts, which the offerors

⁶⁵ National Defense Authorization Act for Fiscal Year 2018, Pub. L. No. 115-91, § 1605, 131 Stat. 1283, 1724 (2017).

promised to develop to the Government's specifications based on Government investment of hundreds of millions of dollars.

220. Despite the glaring irrationality of this approach and its divergence from Congress's direction, the Agency's contemporaneously documented award decision never recognizes this issue nor the stated purpose of the LSA Solicitation: the "goal of the EELV acquisition strategy is to leverage commercial launch solutions in order to have at least two domestic, commercial launch service providers that also meet NSS requirements, including the launch of the heaviest and most complex payloads." (LSA Solicitation at 1, Ex. A.).

221. Although the award decision never addresses the issue, the Agreements Officer's post-award explanation of what the Agency believes it means to "leverage commercial launch solutions" is baffling: despite the LSA Solicitation's express and repeated focus on leveraging commercial launch systems, the Agreements Officer's Decision refused to recognize any difference between a commercial launch system and a Government launch system. (Agreements Officer's Decision at 3, Ex. R ("I reject the false distinction between 'commercial' and 'Government-specific' launch systems in SpaceX's objection.").) This refusal to distinguish between commercial and Government-specific launch systems raises the question of how the LSA Solicitation's reference to "commercial launch solutions" satisfies the Congressional mandate approving the funding for the LSA acquisition.

222. The Agency's award decision also fails to account equally for one of the most problematic risks associated with ULA's proposed EELV Approach: ULA's launch system relies on critical components still being developed by the two other LSA awardees, Blue Origin and Northrop.

223. ULA and Blue Origin rely on a common first-stage engine (BE-4) and ULA and Northrop rely on the same solid side booster system and upper stage (RL10) engine. Consequently, whatever risks were identified with regard to development of those components must also be attributed to ULA. In addition, there is further risk associated with ULA's lack of oversight and control regarding the development and integration of those key components into the system ULA proposes. This failure to account fully for ULA's risks renders the evaluation unequal and prejudicial to SpaceX.

224. Blue Origin's LSA proposal was assessed multiple significant weaknesses and Moderate risk ratings, but none of those concerns were attributed to ULA, despite ULA's dependence on Blue Origin's performance. (*See* Portfolio Recommendation at 7-10, Ex. D.) And, even leaving aside the specific risks assigned to Blue Origin's proposed system, ULA's dependence on coordinating its solution with this third-party competitor presents an additional measure of risk that deserved consideration yet received none.

225. In addition, the ULA and Northrop launch systems both depend on solid side boosters being developed by Northrop, further multiplying ULA's reliance on a competitor's efforts. Added to this amalgamation, both ULA and Northrop depend on significantly upgraded RL10 engines from Aerojet Rocketdyne for their upper stages. Thus, while the evaluators praised ULA for "an approach that leverages heritage designs"—a finding which itself finds no record support—the evaluators ignored the risks associated with ULA's reliance on the development efforts of two of its competitors that ULA will not control. (Portfolio Recommendation at 21, Ex. D.)

226. The Agency justifies accepting this risk on the grounds that the LSA Solicitation did not expressly prohibit such an approach, and the current Government approach has relied on a

common propulsion system (the Delta IV and Atlas V use the same second stage engine): "I have determined that the risk associated with two Offerors relying on a single engine development does not warrant a different portfolio outcome. . . . [T]he Government did not include an RFP evaluation criteria related to the use of common engines as part of the overall portfolio selection because it was not considered critical in assessing the design approaches or the likelihood of achieving the Government's objectives." (Award Decision at 9, Ex. I.) The Agreements Officer's Decision reaches the same conclusion quoting directly from the LSA award decision. (Agreements Officer's Decision at 5, Ex. R.) Both rationales are contrary to the competitive procedures requirement.

227. The first results in an unequal evaluation in which the Agency assigned the most risk to SpaceX's proposed solution based on unstated criteria and ignores the fact that the LSA Solicitation required the Agency to consider risk of the EELV Approach and Schedule risk. The second ignores the fact that selecting multiple contractors with common systems undermines the primary LSA Solicitation goal (and Congress's mandate) of maintaining assured access to space because a failure involving the common system could ground multiple providers.

228. ULA and Blue Origin both require that Blue Origin—which to date has never performed an orbital launch—successfully develop the BE-4, and likewise, ULA and Northrop both require that Northrop successfully develop the GEM 63XL solid side booster. If the development of either the critical path BE-4 or GEM 63XL encounters problems (and propulsion systems are among the most challenging and highest risk systems in rocket development), then two of three providers in which the Government intends to invest hundreds of millions of dollars will be unavailable for launch.

229. For this reason, the LSA award decision is also at odds with the LSA Solicitation's objective, and Congress's mandate, "to ensure that there are two reliable sources for all national security launches." (LSA Solicitation at 2, Ex. A.)

WHEREFORE, SpaceX respectfully requests that the Court grant judgment in favor of SpaceX on Count V and (a) declare the LSA award decision violates the Congress's mandate for assured access to space by not investing in the only domestic, commercial offeror and instead investing only in those providers that create the greatest risk by relying on development of common components and systems; (b) enjoin any further investment by the Government under the LSAs and any further performance by ULA, Blue Origin, and Northrop under the LSAs; (c) reevaluate the LSA proposals in accordance with the stated evaluation criteria and the Agency's needs and make a new award decision; and (d) provide such other relief as the Court deems just and appropriate.

VIII. PRAYER FOR RELIEF

SpaceX, accordingly, respectfully requests that this Court:

- A. Order the declaratory and injunctive relief set forth above; and
- B. Provide such other and further relief as the Court deems just and proper.

Dated: May 17, 2019

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CERTIFICATE OF SERVICE

I hereby certify that on this 17th day of May 2019, I caused a true and correct copy of the foregoing Complaint to be served by electronic delivery on:

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