

Calendar No. 686

115TH CONGRESS }
2d Session }

SENATE

{ REPORT
115-397 }

SPACE FRONTIER ACT OF 2018

R E P O R T

OF THE

COMMITTEE ON COMMERCE, SCIENCE, AND
TRANSPORTATION

ON

S. 3277



NOVEMBER 29, 2018.—Ordered to be printed

U.S. GOVERNMENT PUBLISHING OFFICE

89-010

WASHINGTON : 2018

SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED FIFTEENTH CONGRESS

SECOND SESSION

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SPACE FRONTIER ACT OF 2018

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Mr. THUNE, from the Committee on Commerce, Science, and
Transportation, submitted the following

R E P O R T

[To accompany S. 3277]

[Including cost estimate of the Congressional Budget Office]

The Committee on Commerce, Science, and Transportation, to which was referred the bill (S. 3277) to reduce regulatory burdens and streamline processes related to commercial space activities, and for other purposes, having considered the same, reports favorably thereon with an amendment (in the nature of a substitute) and recommends that the bill (as amended) do pass.

PURPOSE OF THE BILL

The purpose of S. 3277, the Space Frontier Act of 2018, is to reduce regulatory burdens and streamline processes related to commercial space activities, and for other purposes.

BACKGROUND AND NEEDS

COMMERCIAL SPACE LAUNCH ACT

On January 25, 1984, President Reagan stated in his State of the Union address that the market for space transportation could surpass the Government's capacity to develop it, and that companies interested in putting payloads into space must have access to private sector launch services.¹ President Reagan issued Executive Order 12465 that designated the Department of Transportation

¹President Reagan's State of the Union address, January 25, 1984 (<http://www.presidency.ucsb.edu/ws/?pid=40205>).

(DOT) to take the lead on encouraging and facilitating commercial space activities by the private sector.²

Soon thereafter, Congress passed the Commercial Space Launch Act in 1984 (CSLA),³ which designates the DOT to oversee commercial space activities, issue launch licenses for such activities, and encourage the commercialization of space by the private sector. In addition to codifying the DOT's role and laying out the licensure process to ensure the safety of launches, the CSLA provides authority for the Government to indemnify launch providers from third-party claims, subject to additional appropriations and after a launch provider's insurance is exhausted, if an accident occurs. The CSLA has been amended several times, most notably in 1988,⁴ 2004,⁵ and 2015.⁶

U.S. COMMERCIAL SPACE LAUNCH COMPETITIVENESS ACT

The U.S. Commercial Space Launch Competitiveness Act (CSLCA) was enacted in November 2015. The CSLCA includes several provisions that provide necessary updates to the CSLA to ensure stability for the continued development of a growing U.S. commercial space industry. For example, the CSLCA extends the existing liability indemnification regime for the commercial space transportation industry through September 30, 2025. The CSLCA also extends the existing industry learning period for human spaceflight (i.e., a regulatory moratorium to allow the industry time to mature before additional regulations can be imposed) through October 1, 2023. Other notable provisions include the following: extending of the International Space Station (ISS) until 2024; defining Government Astronaut; streamlining the Federal Aviation Administration (FAA) launch licensure process; clarifying asteroid resource and space resource rights; and requiring several reports to find solutions on a number of related commercial space issues.

ROLES OF FEDERAL AGENCIES

The commercial space industry interfaces with several Federal agencies with diverse roles. The Federal regulation of commercial launch licensing is primarily the responsibility of the DOT, but as companies sell capacity to Government customers, they engage the requirements of several Federal agencies, including the National Aeronautics and Space Administration (NASA) and the Department of Defense (DOD).⁷ Other Federal agencies, such as the Department of Commerce (DOC) and the Federal Communications Commission (FCC), oversee compliance with regulatory functions within those agencies' expertise (i.e., Earth imaging satellites and licensure of spectrum frequencies, respectively). The CSLCA re-

²Executive Order 12465 (<https://www.archives.gov/federal-register/codification/executive-order/12465.html>).

³Commercial Space Launch Act (P.L. 98-575) (<https://www.princeton.edu/~ota/disk2/1985/8513/851316.PDF>).

⁴Commercial Space Launch Act Amendments of 1988 (P.L. 100-657) (<http://www.gpo.gov/fdsys/pkg/STATUTE-102/pdf/STATUTE-102-Pg3900.pdf>).

⁵Commercial Space Launch Amendments Act of 2004 (P.L. 108-492) (https://www.faa.gov/about/office_org/headquarters_offices/ast/media/PL108-492.pdf).

⁶U.S. Commercial Space Launch Competitiveness Act (P.L. 114-90) (<https://www.gpo.gov/fdsys/pkg/PLAW-114publ90/pdf/PLAW-114publ90.pdf>).

⁷Congressional Research Service, "Commercial Space Industry Launches a New Phase." December 2016. (<http://www.crs.gov/Reports/R44708?source=search&guid=de8947bbe5b24c9f8ca7dbe08f95f87e&index=1>)

quires several reports to examine whether these roles and responsibilities could be consolidated, restructured, or managed more efficiently.

The Office of Commercial Space Transportation (or AST, which is its current internal designation as a component of the FAA) was established by the CSLA as part of the Office of the Secretary of Transportation. In 1995, the AST was transferred to the FAA as a space-only line of business with responsibility for licensing commercial space launches in a way that would ensure compliance with applicable international obligations of the United States, and to protect public health and safety, and the national security and foreign policy interests of the United States.⁸ In furtherance of this mission, the AST issues licenses and permits for commercial launch and reentry activities within the United States or as carried out by U.S. citizens in other countries, as well as the operation of launch and reentry sites within the United States. By contrast, while NASA has funded some development of commercial space vehicles, it does not act as a regulatory agency with respect to commercial space launch activities.

The DOC oversees the Office of Space Commerce, which promotes the U.S. commercial space industry's economic growth and technological advancement, and focuses on various sectors of the space commerce industry, including satellite navigation and various entrepreneurial activities.⁹ The DOC (through the National Oceanic and Atmospheric Administration) is also responsible for licensing commercial remote sensing activities (e.g., for imaging satellites). An increase in commercial remote sensing license applications (a result of a quickly maturing industry) has led to lengthy delays with processing such licenses. Applications frequently get stuck in an ineffective interagency consultation process, which has in turn caused the DOC to often fail to meet its statutory requirement to act within 120 days on Earth observation satellite license applications.

THE OUTER SPACE TREATY

The Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, also known as the Outer Space Treaty (Treaty),¹⁰ celebrated its 50th anniversary in 2017. The United States signed the Treaty on January 27, 1967. The purpose of the Treaty is to establish general principles for the peaceful exploration and use of outer space, including the Moon and other celestial bodies, but it grants State Parties significant discretion as to the implementation of its obligations. There has been ongoing debate about how various articles of the Treaty should be interpreted regarding U.S. compliance with international obligations. Specifically, as innovative, non-traditional commercial space activity grows, including satellite servicing, space resources mining, commercial habitats, on-orbit manufacturing, and lunar exploration and devel-

⁸ 51 U.S.C. §50901.

⁹ Department of Commerce, Office of Space Commerce (<http://www.space.commerce.gov/about/mission/>).

¹⁰ The Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, signed at Washington, London, Moscow January 27, 1967 (18 U.S.T. 2410).

opment, there is much discussion on Article VI of the Treaty, which requires governments to authorize and continually supervise the activities of nongovernmental entities.¹¹ At the time the Treaty was drafted, most activities in space were conceived of as only State actions. Yet, under Article VI of the Treaty, nongovernmental space activities are permitted, and each State Party to the Treaty is responsible for authorization and continuing supervision of all of its national space activities, including those of both governmental and nongovernmental entities.

SPACE POLICY DIRECTIVE-2

On May 24, 2018, President Trump signed Space Policy Directive-2 (SPD-2), Streamlining Regulations on Commercial Use of Space.¹² SPD-2 sets forth Executive branch policy on commercial space regulations. SPD-2 directs the DOT to update its regulatory system for managing launch and reentry activity and replace prescriptive requirements with performance-based criteria; requires the DOC to review and streamline commercial remote sensing regulations and create a “one-stop shop” for administering and regulating commercial space flight activities; requires Federal agencies to report on improving U.S. global competitiveness through space radio frequency spectrum policies, regulation, and activities at the International Telecommunication Union and other multilateral forums; and requires the National Space Council¹³ to review export licensing regulations affecting commercial space flight activity and deliver recommendations to the President.

SUMMARY OF PROVISIONS

S. 3277 would build upon the CSLCA by streamlining and reforming the regulatory framework for commercial space launch and nongovernmental Earth observation operations. The intent of this measure is to provide stability and clarity to the commercial space sector in order to promote the industry and maintain U.S. leadership in space.

If enacted, S. 3277 would do the following:

- Streamline launch and reentry regulations at the DOT by requiring the DOT to issue a notice of proposed rulemaking, by February 1, 2019, creating technology-neutral performance requirements that apply to both expendable and reusable launch and reentry vehicles.
- Repeal the existing legal framework for nongovernmental Earth observation regulations (formerly commercial remote sensing) and create a new, more transparent framework at the DOC that would focus on managing risk to national security, preventing harmful interference to other space activities, and promoting the leadership, industrial innovation, and international competitiveness of the United States.

¹¹Article VI of Outer Space Treaty available at (<https://www.state.gov/t/isn/5181.htm#treaty>)

¹²The White House, Space Policy Directive-2, Streamlining Regulations on Commercial Use of Space (<https://www.whitehouse.gov/presidential-actions/space-policy-directive-2-streamlining-regulations-commercial-use-space/>).

¹³The National Space Council is a body within the Executive Office of the President of the United States that is tasked with advising and assisting the President regarding national space policy and strategy.

- Authorize the DOT, in the absence of comprehensive regulatory reform, to continue to use the launch and reentry payload review process to authorize nongovernmental space activities that are related to an application for launch or reentry, but not subject to authorization under other Federal law.
- Change the reporting structure at the AST by creating a new position of Assistant Secretary for Commercial Space Transportation at the DOT, who also shall serve as the Associate Administrator for Commercial Space Transportation at the FAA.
- Extend authorization for full and complete utilization of the ISS through at least 2030 (current law states 2024) and support maintaining a National Laboratory in space to benefit the scientific community and promote space commerce.
- Direct NASA to designate an official at each NASA Center to serve as an advocate for small business and provide guidance to small businesses on how to participate in public-private opportunities with NASA.
- Broaden public-private partnership opportunities by allowing NASA to accept in-kind contributions toward certain types of property lease payments related to space sector infrastructure development and by extending NASA's enhanced use lease authority.

LEGISLATIVE HISTORY

S. 3277 was introduced on July 25, 2018, by Senator Cruz (for himself and Senators Nelson and Markey) and was referred to the Committee on Commerce, Science, and Transportation of the Senate. On August 1, 2018, the Committee met in open Executive Session and, by voice vote, ordered S. 3277 reported favorably with an amendment (in the nature of a substitute).

The Subcommittee on Space, Science, and Competitiveness has held three hearings in the 115th Congress examining key issues addressed in the legislation as follows:

- Reopening the American Frontier: Reducing Regulatory Barriers and Expanding American Free Enterprise in Space (April 26, 2017).
- Reopening the American Frontier: Exploring How the Outer Space Treaty Will Impact American Commerce and Settlement in Space (May 23, 2017).
- Reopening the American Frontier: Promoting Partnerships Between Commercial Space and the U.S. Government to Advance Exploration and Settlement (July 13, 2017).

RELATED LEGISLATION

On June 7, 2017, similar legislation to S. 3277, H.R. 2809, the American Space Commerce Free Enterprise Act, was introduced by Representative Smith of Texas (for himself and Representatives Babin, Bridenstine, Perlmutter, Rohrabacher, Hultgren, Weber, Higgins, and Kilmer). Representatives Lamborn, Dunn, Calvert, Coffman, Soto, McCarthy, and Bera are also cosponsors of that bill. The purpose of that bill is to provide for the authorization and supervision of nongovernmental space activities by expanding the au-

thorities of the Office of Space Commerce within the DOC to include supervision of commercial space activity. That bill was referred to the Committee on Science, Space, and Technology of the House of Representatives, which marked up that bill on June 8, 2017. On April 24, 2018, that bill was reported and immediately placed on the House of Representatives calendar, and on a motion to suspend the rules, H.R. 2809 passed in the House of Representatives via voice vote.

ESTIMATED COSTS

In accordance with paragraph 11(a) of rule XXVI of the Standing Rules of the Senate and section 403 of the Congressional Budget Act of 1974, the Committee provides the following cost estimate, prepared by the Congressional Budget Office:

S. 3277—Space Frontier Act of 2018

Summary: S. 3277 would direct the Department of Transportation (DOT) and the National Oceanic and Atmospheric Administration (NOAA) to streamline the permitting processes for commercial space transportation and commercial activities for observing the earth. The bill also would require the National Aeronautics and Space Administration (NASA) to continue operations of the International Space Station (ISS) through 2030. CBO estimates that implementing S. 3277 would cost \$34 million over the 2019–2023 period, assuming appropriation of the necessary amounts.

Enacting S. 3277 would affect direct spending by extending NASA’s authority to enter into enhanced-use lease agreements; therefore, pay-as-you-go procedures apply. CBO expects NASA would use that extension to enter into agreements with third parties to construct and renovate energy production, launch, and other specialized facilities. CBO estimates that enacting the bill would increase direct spending by \$30 million over the 2019–2028 period. The bill would not affect revenues.

CBO estimates that enacting S. 3277 would not increase net direct spending by more than \$2.5 billion or on-budget deficits by more than \$5 billion in any of the four consecutive 10-year periods beginning in 2029.

S. 3277 would impose intergovernmental and private-sector mandates, as defined in the Unfunded Mandates Reform Act (UMRA). CBO estimates that the total cost of complying with the mandates would fall well below the annual thresholds established in UMRA for intergovernmental and private-sector mandates (\$80 million and \$160 million in 2018, respectively, adjusted annually for inflation).

Estimated cost to the Federal Government: The estimated budgetary effect of S. 3277 is shown in the following table. The costs of the legislation fall within budget functions 250 (general science, space, and technology), 300 (natural resources and environment), and 400 (transportation).

	By fiscal year, in millions of dollars—						
	2018	2019	2020	2021	2022	2023	2019–2023
INCREASES IN SPENDING SUBJECT TO APPROPRIATION							
Regulation of Commercial Space Transportation:							
Estimated Authorization Level	0	6	6	6	6	7	31
Estimated Outlays	0	4	6	6	6	7	29
Regulation of Earth Observation Activities:							
Estimated Authorization Level	0	1	1	1	1	1	5
Estimated Outlays	0	1	1	1	1	1	5
Total:							
Estimated Authorization Level	0	7	7	7	7	8	36
Estimated Outlays	0	5	7	7	7	8	34
INCREASES IN DIRECT SPENDING							
Estimated Budget Authority	0	1	2	3	4	4	4
Estimated Outlays ^a	0	*	1	2	3	3	9

* = less than \$500,000

^a. CBO estimates that enacting S. 3277 would increase direct spending by \$30 million over the 2019–2028 period

Basis of estimate: For this estimate, CBO assumes that S. 3277 will be enacted in 2019 and that the necessary amounts will be appropriated each year. Estimated outlays are based on historical spending patterns for the affected activities.

Spending subject to appropriation

In total, CBO estimates that implementing the bill would cost \$34 million over the 2019–2023 period.

Regulation of Commercial Space Transportation. DOT regulates activities related to commercial space transportation by issuing permits and licenses to entities that launch or reenter commercial space vehicles or that operate related facilities and by overseeing the safety of those activities.

Title I would require DOT to streamline and expedite those regulatory activities. In particular, the bill would reduce, from 180 days to 90 days, the timeframe for reviewing applications for permits or licenses submitted by existing permittees or licensees. The bill also would direct DOT to issue, by February 1, 2019, a draft rule to revise existing regulations and to establish, in consultation with the Department of Defense and NASA, a streamlined regulatory regime for commercial space transportation. Title I also would specify a variety of administrative and reporting requirements.

Using information from the DOT, CBO estimates that implementing title I would cost \$29 million over the 2019–2023 period, primarily for additional staff and computer systems that would be needed to meet the bill's requirement to complete reviews of certain applications for permits and licenses in half the amount of time currently allowed. That estimate reflects an annual increase of about 25 percent over the amount of funding provided in 2018 for those purposes (\$22 million, which supports about 100 full time staff).

Regulation of Earth Observation Activities. Title II would change how NOAA oversees the licensing of private entities that collect data from space to be processed into imagery of the earth. The bill would add technical requirements to the licensing process, shorten the timeline for NOAA's license review, and require NOAA to notify the Congress within one business day if it fails to respond to

a license applicant within 120 days. NOAA also would be required to promulgate new regulations to implement those changes.

Using information from NOAA and because of the expedited timeline and technical nature of the licensing review process under the bill, CBO expects NOAA would need four new employees with specialized technical capabilities to implement title II as well as additional resources to promulgate the required regulations. Those employees would help meet the expedited timeline under the bill for processing license applications and the requirement for more technical reviews of those applications. Therefore, CBO estimates that implementing title II would cost \$1 million a year, or \$5 million over the 2019–2023 period. In 2018, NOAA allocated about \$1 million to such licensing activities.

Other Costs. Title III would direct NASA to conduct various activities to promote public-private partnership opportunities with small businesses. Using information on existing activities under the agency’s Office of Small Business Programs, and based on the costs of similar tasks, CBO estimates implementing that provision would cost less than \$500,000 over the 2019–2023 period.

Current law requires NASA to operate the International Space Station through 2024. The bill would extend that authorization through 2030. Based on the costs to operate the ISS in recent years, CBO estimates that continuing those operations would cost about \$4 billion annually beyond 2024, assuming the appropriation of the necessary amounts.

Direct spending

Current law authorizes NASA to lease its underused property to nonfederal entities and to retain and spend any payments from those lease agreements for property maintenance and capital improvements without further appropriation. The authority for NASA to enter into such enhanced-use lease (EUL) agreements expires on December 31, 2018. S. 3277 would extend that authority through December 31, 2020. The bill also would permit NASA to accept in-kind consideration under EUL agreements in the form of industrial infrastructure and business facilities for civil space and national security purposes. (Under current law, NASA’s authority to accept in-kind consideration is limited to facilities for producing renewable energy.)

In the past, NASA has used its EUL authority to lease out buildings and land for nonfederal purposes—for example, providing office space to entities with educational or research missions. In some cases, NASA has allowed limited reuse or redevelopment of those properties; those arrangements result in no significant net costs to the agency.¹ CBO expects that some of the EUL agreements NASA would enter into over the 2019–2020 period would be similar in nature to those previous transactions. Based on NASA’s leasing activity in recent years, CBO estimates that the agency would enter into eight additional EUL agreements over the 2019–2020 period with average annual payments to the federal government totaling \$225,000 per lease. CBO expects that those lease payments, which would be recorded in the budget as reductions in direct spending,

¹ More information on NASA’s current lease agreements is included in National Aeronautics and Space Administration, Report on NASA’s Enhanced Use Leasing for Fiscal Year 2017 (May 2018).

would be offset by an expenditure soon thereafter, so that there would be no net effect on the deficit.

In addition, CBO expects that some of those agreements would contain terms for third parties to construct and renovate energy production, launch, and other specialized facilities.² While NASA could use other authorities to enter into similar agreements with third parties, CBO expects the EUL extension and expansion of in-kind consideration under S. 3277 would accelerate and increase the likelihood of such transactions. CBO also expects that some of those projects would be governmental in nature because they would be located on federal land and subject to NASA control, and because NASA or other federal agencies such as the Department of Defense would be major users of the services supported by those facilities. Thus, in CBO's view, the costs of developing and constructing facilities in that manner are governmental transactions that should be recorded in the budget.³

Based on proposed leasing plans and costs for similar facilities, CBO estimates that under EUL agreements that would be finalized over the 2019–2020 period, third parties would invest a total of about \$200 million in energy production, launch, and other specialized facilities. The budgetary effects of governmental transactions financed by third parties would depend on the extent and nature of federal support. In CBO's view, transactions supported entirely with equity from private entities should have no net effect on the federal budget because the cost of those activities would be fully offset by income from nonfederal sources.

However, CBO expects that some of those third parties would recover at least a portion of their investments in specialized facilities that are used by NASA or other federal agencies through contracts with the federal government—for example, to launch satellites or other federal payloads into space. In addition, based on the experience of NASA and other agencies that have the authority to accept certain forms of in-kind consideration under EUL agreements, CBO expects that expanding allowable in-kind consideration could result in the renovation or construction of facilities for exclusive use by the federal government. CBO considers such financing on behalf of the federal government for government activities to be similar to an agency using federal borrowing authority to improve its physical infrastructure and treats the costs of such transactions as direct spending. As such, the full cost of such long-term commitments that obligate the government to make payments in future years should be recorded in the budget upfront.⁴

In 2016, NASA reported a backlog of about \$1.6 billion worth of maintenance and improvement projects across five locations where

²NASA recently announced plans to use its EUL authority to enter into an agreement with SpaceX to construct launch support facilities. For more information, see National Aeronautics and Space Administration, "NEPA Documents," *Draft Environmental Assessment for Space Exploration Technologies Operations Area on Kennedy Space Center* (April 11, 2018), <https://go.usa.gov/xPpx>.

³For more information on the criteria for identifying governmental activities, see Congressional Budget Office, *How CBO Determines Whether to Classify an Activity as Governmental When Estimating Its Budgetary Effects* (June 2017), www.cbo.gov/publication/52803.

⁴For more information on the budgetary treatment of third-party financing, see Congressional Budget Office, *Third-Party Financing of Federal Projects* (June 2005), www.cbo.gov/publication/16554.

it currently leases out space.⁵ CBO expects that NASA would use its EUL authority to facilitate such transactions over the 2019–2020 period. Based on the federal government’s potential share of benefits from any new projects (which CBO estimates would average 30 percent over the lifetime of those projects), we estimate that NASA would use the EUL authority under S. 3277 to finance the construction of facilities valued at about \$35 million—equivalent to roughly 2.5 percent of its maintenance backlog at those locations. Based on historical spending patterns for similar activities, CBO estimates that direct spending would increase by \$30 million over the 2019–2028 period for those projects.

Uncertainty

CBO aims to produce estimates that generally reflect the middle of a range of the most likely budgetary outcomes that would result if the legislation was enacted.

For legislation that would direct agencies to carry out certain activities, CBO’s estimate of spending subject to appropriation is based on costs and historical spending patterns for similar activities. CBO cannot foresee with certainty the amount of additional resources DOT, NOAA, and NASA would require to modify and expand existing activities under the bill. CBO also cannot predict potential shifts in NASA’s projects, priorities, and timelines or major infrastructure needs for the ISS that may affect the amount and pace of future spending for ISS operations.

In addition, if enacted, direct spending under S. 3277 could be higher or lower than CBO’s estimate because of the following three sources of uncertainty.

- First, CBO cannot precisely predict the extent to which the agency would use the EUL extension under S. 3277 instead of its other alternative financing and leasing authorities to facilitate the construction of specialized facilities. In such cases, CBO has adopted a convention of assuming a 50 percent chance of an agency using its discretion under the bill.
- Second, CBO cannot foresee with certainty the value of third parties’ investments in such facilities. Generally, investments of higher value would increase the potential for direct spending.
- Finally, CBO cannot predict with certainty whether or how the federal government would use facilities constructed by third parties under EUL agreements. If the federal government is the primary user of the services provided by those facilities, and thus, serves as the main source from which third parties recover their investments, the government’s share of indirect financing for and benefits from those projects would be higher, resulting in greater direct spending. However, if the federal government makes little or no use of the services provided by such facilities, the resulting net effect on direct spending could be insignificant or negligible. CBO expects that expanding NASA’s authority to accept in-kind consideration could increase the potential for projects where the government is a primary or exclusive user.

⁵National Aeronautics and Space Administration, *Deferred Maintenance Assessment Report FY16 NASA-Wide Standardized Deferred Maintenance Parametric Estimate* (September 30, 2016), <https://go.usa.gov/xPxd2> (PDF, 1.8 MB).

Because of those uncertainties, the budgetary effects of enacting S. 3277 could differ significantly from those provided in CBO’s cost estimate.

Pay-As-You-Go considerations: The Statutory Pay-As-You-Go Act of 2010 establishes budget-reporting and enforcement procedures for legislation affecting direct spending or revenues. The net changes in outlays that are subject to those pay-as-you-go procedures are shown in the following table.

CBO ESTIMATE OF PAY-AS-YOU-GO EFFECTS FOR S. 3277, AS ORDERED REPORTED BY THE SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION ON AUGUST 1, 2018

	By fiscal year, in millions of dollars—												
	2018	2019	2020	2021	2022	2023	2024	2025	2025	2027	2028	2018–2023	2018–2028
	NET INCREASE IN THE DEFICIT												
Statutory Pay-As-You-Go Impact	0	0	1	2	3	3	4	4	4	4	5	9	30

Increase in long-term direct spending and deficits: CBO estimates that enacting S. 3277 would not increase net direct spending by more than \$2.5 billion or on-budget deficits by more than \$5 billion in any of the four consecutive 10-year periods beginning in 2029.

Mandates: S. 3277 would impose intergovernmental and private-sector mandates, as defined in UMRA. The bill would require entities that launch and operate earth observation satellites to submit technical information about their satellites, including plans to mitigate orbital debris, to NOAA when applying for licenses. The requirements would affect both private space companies, such as Space X, as well as public entities, such as universities that conduct research. Using information from NOAA and companies in the space industry about the costs of complying with current regulations, CBO estimates that the incremental cost of complying with the mandates in the bill in total would fall well below the annual thresholds established in UMRA for intergovernmental and private-sector mandates (\$80 million and \$160 million in 2018, respectively, adjusted annually for inflation).

Previous CBO Estimate: On September 7, 2018, CBO transmitted a cost estimate for H.R. 5503, the National Aeronautics and Space Administration Authorization Act of 2018, as ordered reported by the House Committee on Science, Space, and Technology on April 13, 2018. CBO estimates that implementing H.R. 5503 would increase direct spending by \$25 million over the 2019–2028 period and spending subject to appropriation by \$21.1 billion over the 2019–2023 period. H.R. 5503 would authorize the appropriation of funds in 2019 for NASA activities. Both bills would extend NASA’s authority to enter into EUL agreements; however, S. 3277 also would expand NASA’s authority to accept in-kind consideration under such agreements. CBO estimates that provision would increase the potential for direct spending; accordingly, the estimates of direct spending under the two pieces of legislation differ.

Estimate prepared by: Federal Costs: Janani Shankaran (National Aeronautics and Space Administration), Megan Carroll (Department of Transportation), Robert Reese (National Oceanic and Atmospheric Administration); Mandates: Jon Sperl.

Estimate Reviewed by: Kim P. Cawley, Chief, Natural and Physical Resources Cost Estimates Unit; Susan Willie, Chief, Public and Private Mandates; H. Samuel Papenfuss, Deputy Assistant Director for Budget Analysis; Theresa Gullo, Assistant Director for Budget Analysis.

REGULATORY IMPACT STATEMENT

In accordance with paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee provides the following evaluation of the regulatory impact of the legislation, as reported:

NUMBER OF PERSONS COVERED

The bill would cover a person that applies for a commercial space launch or reentry license or experimental permit with the DOT; a person that applies for a license to conduct nongovernmental Earth observation activities with the DOC; and a person interested in conducting nongovernmental space activities that are related to an application for a license or permit with the DOT, but are not subject to authorization under other Federal law. Most all of these persons are already subject to governmental regulations of some type in relation to the covered activities.

ECONOMIC IMPACT

The bill is intended to have a positive economic impact with respect to the commercial space launch and reentry sector, the nongovernmental Earth observation sector, and the emerging nongovernmental space activity sector. Specifically, this bill is intended to streamline and reduce the requirements and time necessary for an applicant to obtain a launch or reentry license or experimental permit from the DOT, a license to conduct nongovernmental Earth observation activities from the DOC, or authorization to conduct a nongovernmental space activity. By updating and reforming these processes, the intent of this bill is to provide clarity and stability to the commercial space sector and to promote the industry.

PRIVACY

The bill would not impact the personal privacy of individuals since the bill affects private companies and the Federal Government.

PAPERWORK

The bill is intended to decrease the amount of paperwork requirements for the following: applicants for commercial space launch or reentry licenses or experimental permits with the DOT; applicants who apply for licenses to conduct nongovernmental Earth observation activities with the DOC; and private companies interested in conducting nongovernmental space activities that are related to applications for licenses or permits with the DOT and are not subject to authorization under other Federal law. Under the bill, the regulatory regime for commercial space launch activities and nongovernmental Earth observation activities would be updated and streamlined, thus reducing the amount of paperwork required by applicants for licenses.

CONGRESSIONALLY DIRECTED SPENDING

In compliance with paragraph 4(b) of rule XLIV of the Standing Rules of the Senate, the Committee provides that no provisions contained in the bill, as reported, meet the definition of congressionally directed spending items under the rule.

SECTION-BY-SECTION ANALYSIS

Section 1. Short title; table of contents.

This section would provide that the bill may be cited as the “Space Frontier Act of 2018.” This section also would provide a table of contents for the bill.

Section 2. Definitions.

This section would provide definitions for key terms used throughout the legislation.

TITLE I—STREAMLINING OVERSIGHT OF LAUNCH AND REENTRY
ACTIVITIES*Section 101. Oversight of nongovernmental space activities.*

This section would state that it is the policy of the United States to provide oversight and continuing supervision of nongovernmental space activities in a manner that encourages the fullest commercial use of space. Further, this section would state that it is the sense of Congress that it is in the national interest of the United States to have increased activity and new applications of technology that could help grow the space economy, to promote nongovernmental activities and supervise those activities through light-touch regulation, and to conduct these activities in a manner that fully protects U.S. national security assets, NASA human spaceflight and exploration systems, U.S. Government satellites, and other Federal assets that serve the public interest.

Section 102. Office of Commercial Space Transportation.

This section would create the position of Assistant Secretary for Commercial Space Transportation at the DOT, who also would serve as the Associate Administrator for Commercial Space Transportation at the FAA. The Assistant Secretary for Commercial Space Transportation would report directly to the Secretary of Transportation. This would ensure that the Secretary of Transportation has a clear connection to the Office of Commercial Space Transportation and can prioritize the needs of that office appropriately. While it is the Committee’s intent to elevate the visibility and importance of commercial space functions within the DOT, the Committee notes that, beyond the establishment of the new Assistant Secretary position, the section places no additional requirements on the Secretary of Transportation pertaining to the organization of commercial space functions within the DOT.

Section 103. Use of existing authorities.

This section would direct the DOT to use all existing authorities, including waivers and safety approvals, to promote the efficient use of resources and reduce the regulatory burden for commercial space launch or reentry license or experimental permit applicants while

still prioritizing public health and safety. The Committee notes that in some instances the use of such authorities may reduce risks to public health and safety and directs the Secretary of Transportation to expedite approvals in those instances. The Committee encourages the DOT to make use of other existing tools, such as FAA Guidance or Advisory Circulars, if those tools would further reduce the regulatory burden for commercial space launch or reentry license or experimental permit applicants. While the Committee is committed to comprehensive regulatory reform, in the interim, this section would provide assurance for the commercial space sector by providing for the DOT to continue to use the launch and reentry payload review process to authorize nongovernmental space activities that are related to an application for a license or permit under chapter 509 of title 51, United States Code, and are not subject to authorization under other Federal law. It is not the Committee's intent with this section to broaden the DOT's authority; rather, the Committee encourages the Secretary of Transportation to continue the existing practice of using the payload review process to coordinate an intergovernmental review of proposed commercial space activities that fall outside other authorization regimes. The Committee notes that this approach, while likely not a permanent solution to the issue of providing authorization and supervision of nongovernmental activities in space, has been successful in past cases and should continue to provide at least one avenue for U.S. Government approval of nongovernmental space activities while Congress and the administration continue to evaluate the need for any expansion of agency authorities.

Additionally, this section would reduce the period of time the DOT has to issue a license for previously licensed or currently licensed applicants from 180 days to 90 days. The existing period of 180 days would continue to apply for an applicant who does not currently hold a license or has never held one.

This section also would define "nongovernmental space activity" as a space activity conducted by a person other than an employee of the U.S. Government or a Government contractor or subcontractor performing the space activity for the Government. Finally, this section would make improvements to the process for issuing safety approvals and would allow for the DOT to issue a single license or permit for an operator to conduct launch and reentry activities at multiple launch or reentry sites.

Section 104. Experimental permits.

This section would direct the DOT to use all existing authorities, including waivers and safety approvals, to expedite the processing of licensing approvals for experimental and reentry launch permits while still prioritizing public health and safety.

Section 105. Space-related advisory rulemaking committees.

This section would state that the Federal Advisory Committee Act does not apply to such space-related rulemaking committees under the DOT's jurisdiction as the Secretary of Transportation designates. This would provide the same flexibility to space-related rulemaking committees that aviation rulemaking committees have, which may expedite rulemakings for which there is stakeholder consensus.

Section 106. Government-developed space technology.

This section would strike conflicting language in law stating that the DOT must encourage the use of Government-developed space technology in its promotion of the U.S. private sector to provide launch vehicles, reentry vehicles, and associated services. The Committee recognizes that the DOT cannot establish technology-neutral launch and reentry regulations while, at the same time, promoting the use of Government-developed space technology. This section would express that the appropriate role of the Government is to facilitate the use of Government-developed space technology by the private sector, but not penalize potential licensees who choose not to utilize Government-developed space technology. It is not the intent of the Committee to limit the use of any Government-developed space technology.

Section 107. Regulatory reform.

This section would state that Congress finds that the regulatory environment faced by the commercial space launch sector has been an impediment to innovation in small-class launch technologies, reusable launch and reentry vehicles, and other launch and reentry technologies. Further, the section would direct the DOT to issue a notice of proposed rulemaking, by February 1, 2019, to establish requirements that do the following: apply to both expendable and reusable launch and reentry vehicles; are neutral with regard to specific launch and reentry technologies; protect the safety of the public; establish high-level performance requirements and encourage industry technical standards that conform to the same; and encourage collaboration between the commercial launch and reentry sector and the DOT regarding establishment of these rules. The Committee notes the rulemaking deadline is consistent with ongoing administration efforts to reform launch and reentry regulations. The section would require the DOT to consult with the DOD, NASA, and appropriate members of the commercial space launch and reentry sector when conducting the rulemaking. Finally, this section would require the DOT to submit a report within 60 days of the date of enactment to the appropriate committees of Congress detailing the progress made toward the requirements of this section.

Section 108. Secretary of Transportation oversight and coordination of commercial launch and reentry operations.

This section would direct the DOT to consolidate or modify requirements for launch and reentry licensing across all Federal agencies into a single application set that satisfies those requirements and expedites the coordination of commercial launch and reentry services. The Committee remains concerned with overlap and duplication of requirements between the DOD and FAA for commercial launch operations occurring from Federal ranges, despite the direction given in section 1617 of the National Defense Authorization Act for Fiscal Year 2016¹⁴ to eliminate such duplicative requirements. The Committee further notes that section 1606 of the John S. McCain National Defense Authorization Act for Fiscal Year

¹⁴ 51 U.S.C. 50918 note.

2019¹⁵ prohibits the Secretary of Defense from imposing requirements on a launch licensee that overlap with or duplicate the requirements of the Secretary of Transportation. The Committee understands and appreciates the role of the Secretary of Defense in protecting the safety and security of defense installations, including those that support commercial launch activity, and encourages the Secretary of Defense and Secretary of Transportation to continue to work diligently to harmonize and consolidate their requirements into a single set of non-duplicative requirements for launch licensees. This section would also repeal section 113 of the CSLCA,¹⁶ which is redundant law.

Section 109. Study on joint use of spaceports.

This section would direct the DOT, in consultation with the DOD, to conduct a study of the current Federal process to provide or permit the joint use of U.S. military installations for licensed nongovernmental space launch and reentry activities, space-related activities, and space transportation services by U.S. commercial providers. In conducting this study, the DOT would be directed to specifically take into account improvements that could be made to the current process, means to facilitate the ability for a military installation to request that the DOT consider that military installation for nongovernmental activities, the feasibility of increasing the number of military installations that can provide or permit nongovernmental space-related activities, and the importance of the use of safety approvals at these sites.

TITLE II—STREAMLINING OVERSIGHT OF NONGOVERNMENTAL EARTH
OBSERVATION ACTIVITIES

Section 201. Nongovernmental Earth observation activities.

This section would repeal the existing legal framework for nongovernmental Earth observation regulations (formerly private remote sensing) and create a new, more transparent, framework at DOC that focuses on managing risk to national security, preventing harmful interference to other space activities, and promoting the leadership, industrial innovation, and international competitiveness of the United States. This section would direct the DOC to issue or deny a license for nongovernmental Earth observation activities with 120 days of receipt of a complete application. The section also would direct the DOC to submit a copy of any notification of denial to the appropriate committees of Congress. Further, this section would provide for a streamlined 90-day process for other Federal agencies to review applications, as appropriate, and would state that non-responsiveness by another Federal agency would be treated as that agency's assent to the application. Non-concurrence by a Federal agency or department would have to be signed by the head of the non-concurring agency or department. The Committee notes that the DOC is not authorized to overrule another Federal agency or department as it pertains to interagency consultations on licensing decisions. Rather, if the heads of any two agencies disagree over a determination, the disagreement would be adjudicated by the President. This section would prohibit the DOC from deny-

¹⁵P.L. 115-232; 132 Stat. 1636.

¹⁶P.L. 114-90; 129 Stat. 704.

ing an application in order to protect any existing Earth observation activity from competition or denying an application based solely on the technology's capabilities if those capabilities are already commercially available.

This section also would authorize the DOC to waive requirements for a nongovernmental Earth observation activity, or for a type or class of nongovernmental Earth observation activity, if the DOC decides that granting a waiver is consistent with the purposes of the chapter. The Committee notes that the definition of "Earth observation activity" in this chapter would exclude imaging devices intended for purposes other than Earth observation, such as cameras on launch or reentry vehicles or spacecraft that are intended to view separation events or other vehicle functions. This section also would direct the DOC to establish standards for determining the de minimis Earth observation activities that would be eligible for a waiver not later than 120 days after the date of enactment of the Act. The Committee intends for the Secretary of Transportation to define classes of missions and capabilities that pose little risk and therefore could qualify for a waiver of some or all requirements under this chapter. Examples could include devices only capable of imaging the Earth at low resolutions, or certain classes of university or student missions.

Finally, this section would require the DOC to report to Congress on the progress in implementing this section, including a list of all applications received or pending in the previous calendar year, the status of the applications, a list of all applications for which the DOC missed relevant deadlines, and a description of all actions taken by the Secretary of Transportation under the administrative authority granted in this section.

TITLE III—MISCELLANENOUS

Section 301. Promoting fairness and competitiveness for NASA partnership opportunities.

This section would state that it is the sense of Congress that equitable access to NASA assets and services on a reimbursable and noninterference basis is advantageous in enabling the U.S. commercial space industry. This section also would direct NASA to provide opportunities for the participation of small businesses in planning public-private partnerships, and within 90 days of the date of enactment, make public a list of all NASA assets, services, and capabilities that are or will be available for public-private partnership opportunities.

Section 302. Lease of non-excess property.

This section would grant NASA the authority to accept in-kind consideration toward enhanced use lease payments for the purposes of developing space sector industrial infrastructure and business facilities that NASA determines would advance national security interests or civil space capabilities. Currently, NASA may only accept in-kind contributions toward leases of NASA property for the purposes of developing renewable energy facilities. This section would also extend the current sunset date for NASA's authority to enter into enhanced use leases from December 31, 2018, to December 31, 2020.

Section 303. Sense of Congress on maintaining a National Laboratory in space.

This section would state that it is the sense of Congress that the ISS benefits the scientific community; promotes commerce in space; fosters stronger relationships between NASA, other Federal agencies, the private sector, and academia; advances science, technology, engineering, and mathematics education; and advances human knowledge and international cooperation. This section also would express the sense of Congress that, after the ISS is decommissioned, the United States should maintain a National Laboratory in space, using appropriate accommodations for different types of ownership and operational structures. This section also would state that NASA should continue to support fundamental science research on future platforms.

Section 304. Continuation of the ISS.

This section would amend U.S. policy so that ISS operations are supported through 2030.

Section 305. United States policy on orbital debris.

This section would express the sense of Congress that existing guidelines for the mitigation of orbital debris may not be adequate to ensure long-term usability of the space environment for all users and that the United States should continue to exercise a leadership role in developing orbital debris prevention standards that can be used by all space-faring nations. This section would also state that it is the policy of the United States to have consistent standards across Federal agencies that minimize the risks from orbital debris in order to protect the following: public health and safety; humans in space; the national security interests of the United States; the safety of property; space objects from interference; and the foreign policy interests of the United States.

CHANGES IN EXISTING LAW

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new material is printed in italic, existing law in which no change is proposed is shown in roman):

TITLE 49. TRANSPORTATION

SUBTITLE I. DEPARTMENT OF TRANSPORTATION

CHAPTER 1. ORGANIZATION.

§ 102. Department of Transportation

(a) The Department of Transportation is an executive department of the United States Government at the seat of Government.

(b) The head of the Department is the Secretary of Transportation. The Secretary is appointed by the President, by and with the advice and consent of the Senate.

(c) The Department has a Deputy Secretary of Transportation appointed by the President, by and with the advice and consent of the Senate. The Deputy Secretary—

(1) shall carry out duties and powers prescribed by the Secretary; and

(2) acts for the Secretary when the Secretary is absent or unable to serve or when the office of Secretary is vacant.

(d) The Department has an Under Secretary of Transportation for Policy appointed by the President, by and with the advice and consent of the Senate. The Under Secretary shall provide leadership in the development of policy for the Department, supervise the policy activities of Assistant Secretaries with primary responsibility for aviation, international, and other transportation policy development and carry out other powers and duties prescribed by the Secretary. The Under Secretary acts for the Secretary when the Secretary and the Deputy Secretary are absent or unable to serve, or when the offices of Secretary and Deputy Secretary are vacant.

(e) ASSISTANT SECRETARIES; GENERAL COUNSEL.—

(1) APPOINTMENT.—The Department has **[6]** 7 Assistant Secretaries and a General Counsel, including—

(A) an Assistant Secretary for Aviation and International Affairs, an Assistant Secretary for Governmental Affairs, an Assistant Secretary for Research and Technology, *Assistant Secretary for Commercial Space Transportation*, and an Assistant Secretary for Transportation Policy, who shall each be appointed by the President, with the advice and consent of the Senate;

(B) an Assistant Secretary for Budget and Programs who shall be appointed by the President;

(C) an Assistant Secretary for Administration, who shall be appointed by the Secretary, with the approval of the President; and

(D) a General Counsel, who shall be appointed by the President, with the advice and consent of the Senate.

(2) DUTIES AND POWERS.—The officers set forth in paragraph (1) shall carry out duties and powers prescribed by the Secretary. An Assistant Secretary or the General Counsel, in the order prescribed by the Secretary, acts for the Secretary when the Secretary, Deputy Secretary, and Under Secretary of Transportation for Policy are absent or unable to serve, or when the offices of the Secretary, Deputy Secretary, and Under Secretary of Transportation for Policy are vacant.

* * * * *

SUBTITLE II. GENERAL PROGRAM AND POLICY PROVISIONS

CHAPTER 201. NATIONAL AERONAUTICS AND SPACE PROGRAM

SUBCHAPTER III. GENERAL ADMINISTRATIVE PROVISIONS

§ 20145. Lease of non-excess property

(a) IN GENERAL.—The Administrator may enter into a lease under this section with any person or entity (including another department or agency of the Federal Government or an entity of a State or local government) with regard to any non-excess real property and related personal property under the jurisdiction of the Administrator.

(b) **[CASH CONSIDERATION]** *CONSIDERATION*.—

(1) FAIR MARKET VALUE.—

(A) *IN GENERAL.*—A person or entity entering into a lease under this section shall provide cash consideration for the lease at fair market value as determined by the Administrator.

[(B) Notwithstanding subparagraph (A), the Administrator may accept in-kind consideration for leases entered into for the purpose of developing renewable energy production facilities.]

(B) *IN-KIND CONSIDERATION.*—*Notwithstanding subparagraph (A), the Administrator may accept in-kind consideration for leases entered into for the purpose of developing—*

- (i) *renewable energy production facilities; and*
- (ii) *space sector industrial infrastructure and business facilities that the Administrator determines would advance national security interests or civil space capabilities.*

(2) *UTILIZATION.*—

(A) *IN GENERAL.*—The Administrator may utilize amounts of cash consideration received under this subsection for a lease entered into under this section to cover the full costs to the Administration in connection with the lease. These funds shall remain available until expended.

(B) *CAPITAL REVITALIZATION AND IMPROVEMENTS.*—Of any amounts of cash consideration received under this subsection that are not utilized in accordance with subparagraph (A)—

(i) 35 percent shall be deposited in a capital asset account to be established by the Administrator, shall be available for maintenance, capital revitalization, and improvements of the real property assets and related personal property under the jurisdiction of the Administrator, and shall remain available until expended; and

(ii) the remaining 65 percent shall be available to the respective center or facility of the Administration engaged in the lease of nonexcess real property, and shall remain available until expended for maintenance, capital revitalization, and improvements of the real property assets and related personal property at the respective center or facility subject to the concurrence of the Administrator.

(C) *NO UTILIZATION FOR DAILY OPERATING COSTS.*—Amounts utilized under subparagraph (B) may not be utilized for daily operating costs.

(c) *ADDITIONAL TERMS AND CONDITIONS.*—The Administrator may require such terms and conditions in connection with a lease under this section as the Administrator considers appropriate to protect the interests of the United States.

(d) *RELATIONSHIP TO OTHER LEASE AUTHORITY.*—The authority under this section to lease property of the Administration is in addition to any other authority to lease property of the Administration under law.

(e) *LEASE RESTRICTIONS.*—

(1) *NO LEASE BACK OR OTHER CONTRACT.*—The Administration is not authorized to lease back property under this section

during the term of the out-lease or enter into other contracts with the lessee respecting the property.

(2) CERTIFICATION THAT OUT-LEASE WILL NOT HAVE NEGATIVE IMPACT ON MISSION.—The Administration is not authorized to enter into an out-lease under this section unless the Administrator certifies that the out-lease will not have a negative impact on the mission of the Administration.

(f) REPORTING REQUIREMENTS.—The Administrator shall submit an annual report by January 31st of each year. The report shall include the following:

(1) VALUE OF ARRANGEMENTS AND EXPENDITURES OF REVENUES.—Information that identifies and quantifies the value of the arrangements and expenditures of revenues received under this section.

(2) AVAILABILITY AND USE OF FUNDS FOR OPERATING PLAN.—The availability and use of funds received under this section for the Administration's operating plan.

(g) SUNSET.—The authority to enter into leases under this section shall expire **[December 31, 2018]** *December 31, 2020*. The expiration under this subsection of authority to enter into leases under this section shall not affect the validity or term of leases or the Administration's retention of proceeds from leases entered into under this section before the expiration of the authority.

SUBTITLE V. PROGRAMS TARGETING COMMERCIAL OPPORTUNITIES

CHAPTER 509. COMMERCIAL SPACE LAUNCH ACTIVITIES

§ 50901. Findings and purposes

(a) * * *

(b) PURPOSES.—The purposes of this chapter are—

(1) to promote economic growth and entrepreneurial activity through use of the space environment for peaceful purposes;

(2) to encourage the United States private sector to provide launch vehicles, reentry vehicles, and associated services by—

(A) simplifying and expediting the issuance and transfer of commercial licenses;

(B) facilitating **[and encouraging]** the use of Government-developed space technology; and

(C) promoting the continuous improvement of the safety of launch vehicles designed to carry humans, including through the issuance of regulations, to the extent permitted by this chapter;

(3) to provide that the Secretary of Transportation is to oversee and coordinate the conduct of *all* commercial launch and reentry operations, issue permits and commercial licenses and transfer commercial licenses authorizing those operations, and protect the public health and safety, safety of property, and national security and foreign policy interests of the United States; and

(4) to facilitate the strengthening and expansion of the United States space transportation infrastructure, including the enhancement of United States launch sites and launch-site support facilities, and development of reentry sites, with Government, State, and private sector involvement, to support the full range of United States space-related activities.

§ 50902. Definitions

In this chapter—

- (1) “citizen of the United States” means—
 - (A) an individual who is a citizen of the United States;
 - (B) an entity organized or existing under the laws of the United States or a State; or
 - (C) an entity organized or existing under the laws of a foreign country if the controlling interest (as defined by the Secretary of Transportation) is held by an individual or entity described in subclause (A) or (B) of this clause.
- (2) “crew” means any employee of a licensee or transferee, or of a contractor or subcontractor of a licensee or transferee, who performs activities in the course of that employment directly relating to the launch, reentry, or other operation of or in a launch vehicle or reentry vehicle that carries human beings.
- (3) “executive agency” has the same meaning given that term in section 105 of title 5.
- (4) “government astronaut” means an individual who—
 - (A) is designated by the National Aeronautics and Space Administration under section 20113(n);
 - (B) is carried within a launch vehicle or reentry vehicle in the course of his or her employment, which may include performance of activities directly relating to the launch, reentry, or other operation of the launch vehicle or reentry vehicle; and
 - (C) is either—
 - (i) an employee of the United States Government, including the uniformed services, engaged in the performance of a Federal function under authority of law or an Executive act; or
 - (ii) an international partner astronaut.
- (5) “international partner astronaut” means an individual designated under Article 11 of the International Space Station Intergovernmental Agreement, by a partner to that agreement other than the United States, as qualified to serve as an International Space Station crew member.
- (6) “International Space Station Intergovernmental Agreement” means the Agreement Concerning Cooperation on the International Space Station, signed at Washington January 29, 1998 (TIAS 12927).
- (7) “launch” means to place or try to place a launch vehicle or reentry vehicle and any payload or human being from Earth—
 - (A) in a suborbital trajectory;
 - (B) in Earth orbit in outer space; or
 - (C) otherwise in outer space,
 including activities involved in the preparation of a launch vehicle or payload for launch, when those activities take place at a launch site in the United States.
- (8) “launch property” means an item built for, or used in, the launch preparation or launch of a launch vehicle.
- (9) “launch services” means—
 - (A) activities involved in the preparation of a launch vehicle, payload, crew (including crew training), government astronaut, or space flight participant for launch; and

(B) the conduct of a launch.

(10) “launch site” means the location on Earth from which a launch takes place (as defined in a license the Secretary issues or transfers under this chapter) and necessary facilities at that location.

(11) “launch vehicle” means—

(A) a vehicle built to operate in, or place a payload or human beings in, outer space; and

(B) a suborbital rocket.

(12) “nongovernmental space activity” means a space activity of a person other than—

(A) the United States Government; or

(B) a Government contractor or subcontractor if the Government contractor or subcontractor is performing the space activity for the Government.

~~[(12)]~~(13) “obtrusive space advertising” means advertising in outer space that is capable of being recognized by a human being on the surface of the Earth without the aid of a telescope or other technological device.

~~[(13)]~~(14) “payload” means an object that a person undertakes to place in outer space by means of a launch vehicle or reentry vehicle, including components of the vehicle specifically designed or adapted for that object.

~~[(14)]~~(15) except in section 50904(c), “permit” means an experimental permit issued under section 50906.

~~[(15)]~~(16) “person” means an individual and an entity organized or existing under the laws of a State or country.

~~[(16)]~~(17) “reenter” and “reentry” mean to return or attempt to return, purposefully, a reentry vehicle and its payload or human beings, if any, from Earth orbit or from outer space to Earth.

~~[(17)]~~(18) “reentry services” means—

(A) activities involved in the preparation of a reentry vehicle and payload, crew (including crew training), government astronaut, or space flight participant, if any, for reentry; and

(B) the conduct of a reentry.

~~[(18)]~~(19) “reentry site” means the location on Earth to which a reentry vehicle is intended to return (as defined in a license the Secretary issues or transfers under this chapter).

~~[(19)]~~(20) “reentry vehicle” means a vehicle designed to return from Earth orbit or outer space to Earth, or a reusable launch vehicle designed to return from Earth orbit or outer space to Earth, substantially intact.

(21) “space activity” has the meaning given the term in section 60101 of this title.

~~[(20)]~~(22) “space flight participant” means an individual, who is not crew or a government astronaut, carried within a launch vehicle or reentry vehicle.

(23) “space object” has the meaning given the term in section 60101 of this title.

~~[(21)]~~(24) “State” means a State of the United States, the District of Columbia, and a territory or possession of the United States.

[(22)](25) unless and until regulations take effect under section 50922(c)(2), “suborbital rocket” means a vehicle, rocket-propelled in whole or in part, intended for flight on a suborbital trajectory, and the thrust of which is greater than its lift for the majority of the rocket-powered portion of its ascent.

[(23)](26) “suborbital trajectory” means the intentional flight path of a launch vehicle, reentry vehicle, or any portion thereof, whose vacuum instantaneous impact point does not leave the surface of the Earth.

[(24)](27) “third party” means a person except—

(A) the United States Government or the Government’s contractors or subcontractors involved in launch services or reentry services;

(B) a licensee or transferee under this chapter;

(C) a licensee’s or transferee’s contractors, subcontractors, or customers involved in launch services or reentry services;

(D) the customer’s contractors or subcontractors involved in launch services or reentry services; or

(E) crew, government astronauts, or space flight participants.

[(25)](28) “United States” means the States of the United States, the District of Columbia, and the territories and possessions of the United States.

§ 50903. General authority

(a) GENERAL.—The Secretary of Transportation shall carry out this chapter.

(b) FACILITATING COMMERCIAL LAUNCHES AND REENTRIES.—In carrying out this chapter, the Secretary shall—

(1) *consistent with this chapter, authorize, license, and oversee the conduct of all commercial launch and reentry operations, including any commercial launch or commercial reentry at a Federal range;*

[(1)](2) encourage, facilitate, and promote commercial space launches and reentries by the private sector, including those involving space flight participants; and

[(2)](3) take actions to facilitate private sector involvement in commercial space transportation activity, and to promote public-private partnerships involving the United States Government, State governments, and the private sector to build, expand, modernize, or operate a space launch and reentry infrastructure.

(c) SAFETY.—In carrying out the responsibilities under subsection (b), the Secretary shall encourage, facilitate, and promote the continuous improvement of the safety of launch vehicles designed to carry humans, and the Secretary may, consistent with this chapter, promulgate regulations to carry out this subsection.

(d) EXECUTIVE AGENCY ASSISTANCE.—When necessary, the head of an executive agency shall assist the Secretary in carrying out this chapter.

(e) *FACA.—The Federal Advisory Committee Act (5 U.S.C. App.) does not apply to such space-related rulemaking committees under the Secretary’s jurisdiction as the Secretary shall designate.*

§ 50904. Restrictions on launches, operations, and reentries

(a) REQUIREMENT.—A license issued or transferred under this chapter, or a permit, is required for the following:

(1) for a person to launch a launch vehicle or to operate a launch site or reentry site, or to reenter a reentry vehicle, in the United States.

(2) for a citizen of the United States (as defined in section 50902(1)(A) or (B) of this title) to launch a launch vehicle or to operate a launch site or reentry site, or to reenter a reentry vehicle, outside the United States.

(3) for a citizen of the United States (as defined in section 50902(1)(C) of this title) to launch a launch vehicle or to operate a launch site or reentry site, or to reenter a reentry vehicle, outside the United States and outside the territory of a foreign country unless there is an agreement between the United States Government and the government of the foreign country providing that the government of the foreign country has jurisdiction over the launch or operation or reentry.

(4) for a citizen of the United States (as defined in section 50902(1)(C) of this title) to launch a launch vehicle or to operate a launch site or reentry site, or to reenter a reentry vehicle, in the territory of a foreign country if there is an agreement between the United States Government and the government of the foreign country providing that the United States Government has jurisdiction over the launch or operation or reentry.

(1) Notwithstanding this subsection, a permit shall not authorize a person to operate a launch site or reentry site.

(b) COMPLIANCE WITH PAYLOAD REQUIREMENTS.—The holder of a license or permit under this chapter may launch or reenter a payload only if the payload complies with all requirements of the laws of the United States related to launching or reentering a payload.

(c) PREVENTING LAUNCHES AND REENTRIES.—The Secretary of Transportation shall establish whether all required licenses, authorizations, and permits required for a payload have been obtained. If no license, authorization, or permit is required, the Secretary may prevent the launch or reentry if the Secretary decides the launch or reentry would jeopardize the public health and safety, safety of property, or national security or foreign policy interest of the United States.

(d) SINGLE LICENSE OR PERMIT.—The Secretary of Transportation shall ensure that only 1 license or permit is required from the Department of Transportation to conduct activities involving crew, government astronauts, or space flight participants, including launch and reentry, for which a license or permit is required under this chapter. The Secretary shall ensure that all Department of Transportation regulations relevant to the licensed or permitted activity are satisfied.

(e) MULTIPLE SITES.—*The Secretary may issue a single license or permit for an operator to conduct launch services and reentry services at multiple launch sites or reentry sites.*

§ 50905. License applications and requirements

(a) APPLICATIONS.—

[(1) A person may apply to the Secretary of Transportation for a license or transfer of a license under this chapter in the

form and way the Secretary prescribes. Consistent with the public health and safety, safety of property, and national security and foreign policy interests of the United States, the Secretary, not later than 180 days after accepting an application in accordance with criteria established pursuant to subsection (b)(2)(D), shall issue or transfer a license if the Secretary decides in writing that the applicant complies, and will continue to comply, with this chapter and regulations prescribed under this chapter. The Secretary shall inform the applicant of any pending issue and action required to resolve the issue if the Secretary has not made a decision not later than 120 days after accepting an application in accordance with criteria established pursuant to subsection (b)(2)(D). The Secretary shall transmit to the Committee on Science of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a written notice not later than 30 days after any occurrence when the Secretary has not taken action on a license application within the deadline established by this subsection.】

(1) IN GENERAL.—

(A) APPLICATIONS.—A person may apply to the Secretary of Transportation for a license or transfer of a license under this chapter in the form and way the Secretary prescribes.

(B) DECISIONS.—Consistent with the public health and safety, safety of property, and national security and foreign policy interests of the United States, the Secretary, not later than the applicable deadline described in subparagraph (C), shall issue or transfer a license if the Secretary decides in writing that the applicant complies, and will continue to comply, with this chapter and regulations prescribed under this chapter.

(C) APPLICABLE DEADLINE.—The applicable deadline described in this subparagraph shall be—

(i) for an applicant that was or is a holder of any license under this chapter, not later than 90 days after accepting an application in accordance with criteria established pursuant to subsection (b)(2)(E); and

(ii) for a new applicant, not later than 180 days after accepting an application in accordance with criteria established pursuant to subsection (b)(2)(E).

(D) NOTICE TO APPLICANTS.—The Secretary shall inform the applicant of any pending issue and action required to resolve the issue if the Secretary has not made a decision not later than—

(i) for an applicant described in subparagraph (C)(i), 60 days after accepting an application in accordance with criteria established pursuant to subsection (b)(2)(E); and

(ii) for an applicant described in subparagraph (C)(ii), 120 days after accepting an application in accordance with criteria established pursuant to subsection (b)(2)(E).

(E) NOTICE TO CONGRESS.—The Secretary shall transmit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space,

and Technology of the House of Representatives a written notice not later than 30 days after any occurrence when the Secretary has not taken action on a license application within an applicable deadline established by this subsection.

(2) *PROCEDURES FOR SAFETY APPROVALS.*—In carrying out paragraph (1), the Secretary may establish procedures for safety approvals of launch vehicles, reentry vehicles, safety systems, processes, services, *software*, or personnel (including approval procedures for the purpose of protecting the health and safety of crew, government astronauts, and space flight participants, to the extent permitted by subsections (b) and (c)) that may be used in conducting licensed commercial space launch or reentry activities. *Such safety approvals may be issued simultaneously with a license under this chapter.*

* * * * *

(d) *PROCEDURES AND TIMETABLES.*—The Secretary shall establish procedures and timetables that expedite review of a license or permit application and reduce the regulatory burden for an applicant.

(e) *USE OF EXISTING AUTHORITIES.*—

(1) *IN GENERAL.*—*The Secretary—*

(A) shall use existing authorities, including waivers and safety approvals, as appropriate, to make more efficient use of resources and reduce the regulatory burden for an applicant under this section; and

(B) may use the launch and reentry payload review process to authorize nongovernmental space activities that are related to an application for a license or permit under this chapter and are not subject to authorization under other Federal law.

(2) *EXPEDITING SAFETY APPROVALS.*—*The Secretary shall expedite the processing of safety approvals that would reduce risks to health or safety during launch and reentry.*

§ 50906. Experimental permits

(a) A person may apply to the Secretary of Transportation for an experimental permit under this section in the form and manner the Secretary prescribes. Consistent with the protection of the public health and safety, safety of property, and national security and foreign policy interests of the United States, the Secretary, not later than 120 days after receiving an application pursuant to this section, shall issue a permit if the Secretary decides in writing that the applicant complies, and will continue to comply, with this chapter and regulations prescribed under this chapter. The Secretary shall inform the applicant of any pending issue and action required to resolve the issue if the Secretary has not made a decision not later than 90 days after receiving an application. The Secretary shall transmit to the Committee on Science of the House of Representatives and Committee on Commerce, Science, and Transportation of the Senate a written notice not later than 15 days after any occurrence when the Secretary has failed to act on a permit within the deadline established by this section.

(b) In carrying out subsection (a), the Secretary may establish procedures for safety approvals of launch vehicles, reentry vehicles, safety systems, processes, services, or personnel that may be used

in conducting commercial space launch or reentry activities pursuant to a permit.

(c) In order to encourage the development of a commercial space flight industry, the Secretary may when issuing permits use the authority granted under section 50905(b)(2)(C).

(d) The Secretary may issue a permit only for reusable suborbital rockets or reusable launch vehicles that will be launched into a suborbital trajectory or reentered under that permit solely for—

- (1) research and development to test design concepts, equipment, or operating techniques;
- (2) showing compliance with requirements as part of the process for obtaining a license under this chapter; or
- (3) crew training for a launch or reentry using the design of the rocket or vehicle for which the permit would be issued.

(e) Permits issued under this section shall—

- (1) authorize an unlimited number of launches and reentries for a particular suborbital rocket or suborbital rocket design, or for a particular reusable launch vehicle or reusable launch vehicle design, for the uses described in subsection (d); and
- (2) specify the type of modifications that may be made to the suborbital rocket or launch vehicle without changing the design to an extent that would invalidate the permit.

(f) Permits shall not be transferable.

(g) The Secretary may issue a permit under this section notwithstanding any license issued under this chapter. The issuance of a license under this chapter may not invalidate a permit issued under this section.

(h) No person may operate a reusable suborbital rocket or reusable launch vehicle under a permit for carrying any property or human being for compensation or hire.

(i) For the purposes of sections 50907, 50908, 50909, 50910, 50912, 50914, 50917, 50918, 50919, and 50923 of this chapter—

- (1) a permit shall be considered a license;
- (2) the holder of a permit shall be considered a licensee;
- (3) a vehicle operating under a permit shall be considered to be licensed; and
- (4) the issuance of a permit shall be considered licensing.

(1) This subsection shall not be construed to allow the transfer of a permit.

(j) *USE OF EXISTING AUTHORITIES.*—

(1) *IN GENERAL.*—*The Secretary shall use existing authorities, including waivers and safety approvals, as appropriate, to make more efficient use of resources and reduce the regulatory burden for an applicant under this section.*

(2) *EXPEDITING SAFETY APPROVALS.*—*The Secretary shall expedite the processing of safety approvals that would reduce risks to health or safety during launch and reentry.*

§ 50921. Office of Commercial Space Transportation

(a) *ASSOCIATE ADMINISTRATOR FOR COMMERCIAL SPACE TRANSPORTATION.*—*The Assistant Secretary for Commercial Space Transportation shall serve as the Associate Administrator for Commercial Space Transportation.*

(b) *AUTHORIZATION OF APPROPRIATIONS.*—*There are authorized to be appropriated to the Secretary of Transportation for the activities*

of the Office of the Associate Administrator for Commercial Space Transportation—

- (1) \$ 11,941,000 for fiscal year 2005;
- (2) \$ 12,299,000 for fiscal year 2006;
- (3) \$ 12,668,000 for fiscal year 2007;
- (4) \$ 13,048,000 for fiscal year 2008; and
- (5) \$ 13,440,000 for fiscal year 2009.

SUBTITLE VI. EARTH OBSERVATIONS

CHAPTER 601. LAND REMOTE SENSING POLICY

SUBCHAPTER I. GENERAL

§ 60101. Definitions

In this chapter:

(1) **COST OF FULFILLING USER REQUESTS.**—The term “cost of fulfilling user requests” means the incremental costs associated with providing product generation, reproduction, and distribution of unenhanced data in response to user requests and shall not include any acquisition, amortization, or depreciation of capital assets originally paid for by the United States Government or other costs not specifically attributable to fulfilling user requests.

(2) **DATA CONTINUITY.**—The term “data continuity” means the continued acquisition and availability of unenhanced data which are, from the point of view of the user—

(A) sufficiently consistent (in terms of acquisition geometry, coverage characteristics, and spectral characteristics) with previous Landsat data to allow comparisons for global and regional change detection and characterization; and

(B) compatible with such data and with methods used to receive and process such data.

(3) **DATA PREPROCESSING.**—The term “data preprocessing”—

(A) may include—

(i) rectification of system and sensor distortions in land remote sensing data as it is received directly from the satellite in preparation for delivery to a user;

(ii) registration of such data with respect to features of the Earth; and

(iii) calibration of spectral response with respect to such data; but

(B) does not include conclusions, manipulations, or calculations derived from such data, or a combination of such data with other data.

(4) **EARTH OBSERVATION ACTIVITY.**—*The term “Earth observation activity” means a space activity the primary purpose of which is to collect data that can be processed into imagery of the Earth.*

~~(4)~~(5) **LAND REMOTE SENSING.**—The term “land remote sensing” means the collection of data which can be processed into imagery of surface features of the Earth from an unclassified satellite or satellites, other than an operational United States Government weather satellite.

[(5)](6) LANDSAT PROGRAM MANAGEMENT.—The term “Landsat Program Management” means the integrated program management structure—

(A) established by, and responsible to, the Administrator and the Secretary of Defense pursuant to section 60111(a) of this title; and

(B) consisting of appropriate officers and employees of the Administration, the Department of Defense, and any other United States Government agencies the President designates as responsible for the Landsat program.

[(6)](7) LANDSAT SYSTEM.—The term “Landsat system” means Landsats 1, 2, 3, 4, 5, and 6, and any follow-on land remote sensing system operated and owned by the United States Government, along with any related ground equipment, systems, and facilities owned by the United States Government.

[(7)](8) LANDSAT 6 CONTRACTOR.—The term “Landsat 6 contractor” means the private sector entity which was awarded the contract for spacecraft construction, operations, and data marketing rights for the Landsat 6 spacecraft.

[(8)](9) LANDSAT 7.—The term “Landsat 7” means the follow-on satellite to Landsat 6.

[(9)](10) NATIONAL SATELLITE LAND REMOTE SENSING DATA ARCHIVE.—The term “National Satellite Land Remote Sensing Data Archive” means the archive established by the Secretary of the Interior pursuant to the archival responsibilities defined in section 60142 of this title.

[(10)](11) NONCOMMERCIAL PURPOSES.—The term “non-commercial purposes” means activities undertaken by individuals or entities on the condition, upon receipt of unenhanced data, that—

(A) such data shall not be used in connection with any bid for a commercial contract, development of a commercial product, or any other non-United States Government activity that is expected, or has the potential, to be profit-making;

(B) the results of such activities are disclosed in a timely and complete fashion in the open technical literature or other method of public release, except when such disclosure by the United States Government or its contractors would adversely affect the national security or foreign policy of the United States or violate a provision of law or regulation; and

(C) such data shall not be distributed in competition with unenhanced data provided by the Landsat 6 contractor.

(12) NONGOVERNMENTAL EARTH OBSERVATION ACTIVITY.—*The term “nongovernmental Earth observation activity” means an Earth observation activity of a person other than—*

(A) the United States Government; or

(B) a Government contractor or subcontractor if the Government contractor or subcontractor is performing the activity for the Government.

(13) ORBITAL DEBRIS.—*The term “orbital debris” means any space object that is placed in space or derives from a space ob-*

ject placed in space by a person, remains in orbit, and no longer serves any useful function or purpose.

(14) *PERSON.*—The term “person” means a person (as defined in section 1 of title 1) subject to the jurisdiction or control of the United States.

[(11)](15) *SECRETARY.*—The term “Secretary” means the Secretary of Commerce.

(16) *SPACE ACTIVITY.*—

(A) *IN GENERAL.*—The term “space activity” means any activity that is conducted in space.

(B) *INCLUSIONS.*—The term “space activity” includes any activity conducted on a celestial body, including the Moon.

(C) *EXCLUSIONS.*—The term “space activity” does not include any activity that is conducted entirely on board or within a space object and does not affect another space object.

(17) *SPACE OBJECT.*—The term “space object” means any object, including any component of that object, that is launched into space or constructed in space, including any object landed or constructed on a celestial body, including the Moon.

[(12)](18) *UNENHANCED DATA.*—The term “unenhanced data” means land remote sensing signals or imagery products that are unprocessed or subject only to data preprocessing.

(18) *UNENHANCED DATA.*—The term “unenhanced data” means signals or imagery products from Earth observation activities that are unprocessed or subject only to data preprocessing.

[(13)](19) *UNITED STATES GOVERNMENT AND ITS AFFILIATED USERS.*—The term “United States Government and its affiliated users” means—

(A) United States Government agencies;

(B) researchers involved with the United States Global Change Research Program and its international counterpart programs; and

(C) other researchers and international entities that have signed with the United States Government a cooperative agreement involving the use of Landsat data for non-commercial purposes.

SUBCHAPTER III. LICENSING OF PRIVATE REMOTE SENSING SPACE SYSTEMS

§ 60121. General licensing authority

[(a)] *LICENSING AUTHORITY OF SECRETARY.*—

[(1)] *IN GENERAL.*—In consultation with other appropriate United States Government agencies, the Secretary is authorized to license private sector parties to operate private remote sensing space systems for such period as the Secretary may specify and in accordance with the provisions of this subchapter.

[(2)] *LIMITATION WITH RESPECT TO SYSTEM USED FOR OTHER PURPOSES.*—In the case of a private space system that is used for remote sensing and other purposes, the authority of the Secretary under this subchapter shall be limited only to the remote sensing operations of such space system.

[(b) COMPLIANCE WITH LAW, REGULATIONS, INTERNATIONAL OBLIGATIONS, AND NATIONAL SECURITY.—

[(1) IN GENERAL.—No license shall be granted by the Secretary unless the Secretary determines in writing that the applicant will comply with the requirements of this chapter, any regulations issued pursuant to this chapter, and any applicable international obligations and national security concerns of the United States.

[(2) LIST OF REQUIREMENTS FOR COMPLETE APPLICATION.—The Secretary shall publish in the Federal Register a complete and specific list of all information required to comprise a complete application for a license under this subchapter. An application shall be considered complete when the applicant has provided all information required by the list most recently published in the Federal Register before the date the application was first submitted. Unless the Secretary has, within 30 days after receipt of an application, notified the applicant of information necessary to complete an application, the Secretary may not deny the application on the basis of the absence of any such information.

[(c) DEADLINE FOR ACTION ON APPLICATION.—The Secretary shall review any application and make a determination thereon within 120 days of the receipt of such application. If final action has not occurred within such time, the Secretary shall inform the applicant of any pending issues and of actions required to resolve them.

[(d) IMPROPER BASIS FOR DENIAL.—The Secretary shall not deny such license in order to protect any existing licensee from competition.

[(e) REQUIREMENT TO PROVIDE UNENHANCED DATA.—

[(1) DESIGNATION OF DATA.—The Secretary, in consultation with other appropriate United States Government agencies and pursuant to paragraph (2), shall designate in a license issued pursuant to this subchapter any unenhanced data required to be provided by the licensee under section 60122(b)(3) of this title.

[(2) PRELIMINARY DETERMINATION.—The Secretary shall make a designation under paragraph (1) after determining that—

[(A) such data are generated by a system for which all or a substantial part of the development, fabrication, launch, or operations costs have been or will be directly funded by the United States Government; or

[(B) it is in the interest of the United States to require such data to be provided by the licensee consistent with section 60122(b)(3) of this title, after considering the impact on the licensee and the importance of promoting widespread access to remote sensing data from United States and foreign systems.

[(3) CONSISTENCY WITH CONTRACT OR OTHER ARRANGEMENT.—A designation made by the Secretary under paragraph (1) shall not be inconsistent with any contract or other arrangement entered into between a United States Government agency and the licensee.]

【§ 60122. Conditions for operation

【(a) LICENSE REQUIRED FOR OPERATION.—No person that is subject to the jurisdiction or control of the United States may, directly or through any subsidiary or affiliate, operate any private remote sensing space system without a license pursuant to section 60121 of this title.

【(b) LICENSING REQUIREMENTS.—Any license issued pursuant to this subchapter shall specify that the licensee shall comply with all of the requirements of this chapter and shall—

【(1) operate the system in such manner as to preserve the national security of the United States and to observe the international obligations of the United States in accordance with section 60146 of this title;

【(2) make available to the government of any country (including the United States) unenhanced data collected by the system concerning the territory under the jurisdiction of such government as soon as such data are available and on reasonable terms and conditions;

【(3) make unenhanced data designated by the Secretary in the license pursuant to section 60121(e) of this title available in accordance with section 60141 of this title;

【(4) upon termination of operations under the license, make disposition of any satellites in space in a manner satisfactory to the President;

【(5) furnish the Secretary with complete orbit and data collection characteristics of the system, and inform the Secretary immediately of any deviation; and

【(6) notify the Secretary of any significant or substantial agreement the licensee intends to enter with a foreign nation, entity, or consortium involving foreign nations or entities.

【(c) ADDITIONAL LICENSING REQUIREMENTS FOR LANDSAT 6 CONTRACTOR.—In addition to the requirements of subsection (b), any license issued pursuant to this subchapter to the Landsat 6 contractor shall specify that the Landsat 6 contractor shall—

【(1) notify the Secretary of any value added activities (as defined by the Secretary by regulation) that will be conducted by the Landsat 6 contractor or by a subsidiary or affiliate; and

【(2) if such activities are to be conducted, provide the Secretary with a plan for compliance with section 60141 of this title.】

【§ 60123. Administrative authority of Secretary

【(a) FUNCTIONS.—In order to carry out the responsibilities specified in this subchapter, the Secretary may—

【(1) grant, condition, or transfer licenses under this chapter;

【(2) seek an order of injunction or similar judicial determination from a district court of the United States with personal jurisdiction over the licensee to terminate, modify, or suspend licenses under this subchapter and to terminate licensed operations on an immediate basis, if the Secretary determines that the licensee has substantially failed to comply with any provisions of this chapter, with any terms, conditions, or restrictions of such license, or with any international obligations or national security concerns of the United States;

[(3) provide penalties for noncompliance with the requirements of licenses or regulations issued under this subchapter, including civil penalties not to exceed \$10,000 (each day of operation in violation of such licenses or regulations constituting a separate violation);

[(4) compromise, modify, or remit any such civil penalty;

[(5) issue subpoenas for any materials, documents, or records, or for the attendance and testimony of witnesses for the purpose of conducting a hearing under this section;

[(6) seize any object, record, or report pursuant to a warrant from a magistrate based on a showing of probable cause to believe that such object, record, or report was used, is being used, or is likely to be used in violation of this chapter or the requirements of a license or regulation issued thereunder; and

[(7) make investigations and inquiries and administer to or take from any person an oath, affirmation, or affidavit concerning any matter relating to the enforcement of this chapter.

[(b) REVIEW OF AGENCY ACTION.—Any applicant or licensee that makes a timely request for review of an adverse action pursuant to paragraph (1), (3), (5), or (6) of subsection (a) shall be entitled to adjudication by the Secretary on the record after an opportunity for any agency hearing with respect to such adverse action. Any final action by the Secretary under this subsection shall be subject to judicial review under chapter 7 of title 5.]

[(§ 60124. Regulatory authority of Secretary

[(The Secretary may issue regulations to carry out this subchapter. Such regulations shall be promulgated only after public notice and comment in accordance with the provisions of section 553 of title 5.)]

[(§ 60125. Agency activities

[(a) LICENSE APPLICATION AND ISSUANCE.—A private sector party may apply for a license to operate a private remote sensing space system which utilizes, on a space-available basis, a civilian United States Government satellite or vehicle as a platform for such system. The Secretary, pursuant to this subchapter, may license such system if it meets all conditions of this subchapter and—

[(1) the system operator agrees to reimburse the Government in a timely manner for all related costs incurred with respect to such utilization, including a reasonable and proportionate share of fixed, platform, data transmission, and launch costs; and

[(2) such utilization would not interfere with or otherwise compromise intended civilian Government missions, as determined by the agency responsible for such civilian platform.

[(b) ASSISTANCE.—The Secretary may offer assistance to private sector parties in finding appropriate opportunities for such utilization.

[(c) AGREEMENTS.—To the extent provided in advance by appropriation Acts, any United States Government agency may enter into agreements for such utilization if such agreements are consistent with such agency's mission and statutory authority, and if such remote sensing space system is licensed by the Secretary before commencing operation.

[(d) APPLICABILITY.—This section does not apply to activities carried out under subchapter IV.]

[(e) EFFECT ON FCC AUTHORITY.—Nothing in this subchapter shall affect the authority of the Federal Communications Commission pursuant to the Communications Act of 1934 (47 U.S.C. 151 et seq.).]

【§ 60126. Annual reports

[(a) IN GENERAL.—The Secretary shall submit a report to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives not later than 180 days after the date of enactment of the U.S. Commercial Space Launch Competitiveness Act, and annually thereafter, on—

[(1) the Secretary’s implementation of section 60121, including—

[(A) a list of all applications received in the previous calendar year;

[(B) a list of all applications that resulted in a license under section 60121;

[(C) a list of all applications denied and an explanation of why each application was denied, including any information relevant to the interagency adjudication process of a licensing request;

[(D) a list of all applications that required additional information; and

[(E) a list of all applications whose disposition exceeded the 120 day deadline established in section 60121(c), the total days overdue for each application that exceeded such deadline, and an explanation for the delay;

[(2) all notifications and information provided to the Secretary under section 60122; and

[(3) a description of all actions taken by the Secretary under the administrative authority granted by paragraphs (4), (5), and (6) of section 60123(a).]

[(b) CLASSIFIED ANNEXES.—Each report under subsection (a) may include classified annexes as necessary to protect the disclosure of sensitive or classified information.

[(c) SUNSET.—The reporting requirement under this section terminates effective September 30, 2020.】

*SUBCHAPTER III—AUTHORIZATION OF
NONGOVERNMENTAL EARTH OBSERVATION ACTIVITIES*

§ 60121. Purposes

The purposes of this subchapter are—

(1) to prevent, to the extent practicable, harmful interference to space activities by nongovernmental Earth observation activities;

(2) to manage risk and prevent harm to United States national security; and

(3) to promote the leadership, industrial innovation, and international competitiveness of the United States.

§ 60122. General authority

(a) *IN GENERAL.*—The Secretary shall carry out this subchapter.

(b) *FUNCTIONS.*—In carrying out this subchapter, the Secretary shall consult with—

- (1) the Secretary of Defense;
- (2) the Secretary of State;
- (3) the Director of National Intelligence; and
- (4) the head of such other Federal department or agency as the Secretary considers necessary.

§ 60123. Administrative authority of Secretary

(a) *FUNCTIONS.*—In order to carry out the responsibilities specified in this subchapter, the Secretary may—

- (1) grant, condition, or transfer licenses under this chapter;
- (2) seek an order of injunction or similar judicial determination from a district court of the United States with personal jurisdiction over the licensee to terminate, modify, or suspend licenses under this subchapter and to terminate licensed operations on an immediate basis, if the Secretary determines that the licensee has substantially failed to comply with any provisions of this chapter, with any terms, conditions, or restrictions of such license, or with any international obligations or national security concerns of the United States;
- (3) provide penalties for noncompliance with the requirements of licenses or regulations issued under this subchapter, including civil penalties not to exceed \$10,000 (each day of operation in violation of such licenses or regulations constituting a separate violation);
- (4) compromise, modify, or remit any such civil penalty;
- (5) issue subpoenas for any materials, documents, or records, or for the attendance and testimony of witnesses for the purpose of conducting a hearing under this section;
- (6) seize any object, record, or report pursuant to a warrant from a magistrate based on a showing of probable cause to believe that such object, record, or report was used, is being used, or is likely to be used in violation of this chapter or the requirements of a license or regulation issued thereunder; and
- (7) make investigations and inquiries and administer to or take from any person an oath, affirmation, or affidavit concerning any matter relating to the enforcement of this chapter.

(b) *REVIEW OF AGENCY ACTION.*—Any applicant or licensee that makes a timely request for review of an adverse action pursuant to paragraph (1), (3), (5), or (6) of subsection (a) shall be entitled to adjudication by the Secretary on the record after an opportunity for any agency hearing with respect to such adverse action. Any final action by the Secretary under this subsection shall be subject to judicial review under chapter 7 of title 5.

§ 60124. Authorization to conduct nongovernmental Earth observation activities

(a) *REQUIREMENT.*—No person may conduct any nongovernmental Earth observation activity without an authorization issued under this subchapter.

(b) *WAIVERS.*—

(1) *IN GENERAL.*—The Secretary may waive a requirement under this subchapter for a nongovernmental Earth observation activity, or for a type or class of nongovernmental Earth observation activities, if the Secretary decides that granting a waiver is consistent with section 60121.

(2) *STANDARDS.*—Not later than 120 days after the date of enactment of the Space Frontier Act of 2018, the Secretary shall establish standards for determining the *de minimis* Earth observation activities that would be eligible for a waiver under paragraph (1).

(c) *APPLICATION.*—

(1) *IN GENERAL.*—A person seeking an authorization under this subchapter shall submit an application to the Secretary at such time, in such manner, and containing such information as the Secretary may require for the purposes described in section 60121, including—

(A) a description of the proposed Earth observation activity, including—

(i) a physical and functional description of each space object;

(ii) the orbital characteristics of each space object, including altitude, inclination, orbital period, and estimated operational lifetime; and

(iii) a list of the names of all persons that have or will have direct operational or financial control of the Earth observation activity;

(B) a plan to prevent orbital debris consistent with the 2001 United States Orbital Debris Mitigation Standard Practices or any subsequent revision thereof; and

(C) a description of the capabilities of each instrument to be used to observe the Earth in the conduct of the Earth observation activity.

(2) *APPLICATION STATUS.*—Not later than 14 days after the date of receipt of an application, the Secretary shall make a determination whether the application is complete or incomplete and notify the applicant of that determination, including, if incomplete, the reason the application is incomplete.

(d) *REVIEW.*—

(1) *IN GENERAL.*—Not later than 120 days after the date that the Secretary makes a determination under subsection (c)(2) that an application is complete, the Secretary shall review all information provided in that application and, subject to the provisions of this subsection, notify the applicant in writing whether the application was approved or denied.

(2) *APPROVALS.*—The Secretary shall approve an application under this subsection if the Secretary determines that—

(A) the Earth observation activity is consistent with the purposes described in section 60121; and

(B) the applicant is in compliance, and will continue to comply, with this subchapter, including regulations.

(3) *DENIALS.*—

(A) *IN GENERAL.*—If an application under this subsection is denied, the Secretary—

(i) shall include in the notification under paragraph (1)—

(I) a reason for the denial; and

(II) a description of each deficiency, including guidance on how to correct the deficiency;

(ii) shall sign the notification under paragraph (1);

(iii) may not delegate the duty under clause (ii); and

(iv) shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives a copy of the notification.

(B) *INTERAGENCY REVIEW.*—If, during the review of an application under paragraph (1), the Secretary consults with the head of another Federal department or agency and that head of another Federal department or agency does not support approving the application—

(i) that head of another Federal department or agency—

(I) not later than 90 days after the date of the consultation, shall notify the Secretary, in writing, of the reason for withholding support, including a description of each deficiency and guidance on how to correct the deficiency;

(II) shall sign the notification under subclause (I); and

(III) may not delegate the duty under subclause (II); and

(ii) the Secretary shall include the notification under clause (i) in the notification under paragraph (1), including classified information if the applicant has the required security clearance for that classified information.

(C) *INTERAGENCY ASSENTS.*—If the head of another Federal department or agency does not notify the Secretary under subparagraph (B)(i)(I) within the time specified in that subparagraph, that head of another Federal department or agency shall be deemed to have assented to the application.

(D) *INTERAGENCY DISSENTS.*—If, during the review of an application under paragraph (1), a head of a Federal department or agency described in subparagraph (B) disagrees with the Secretary or the head of another Federal department or agency described in subparagraph (B) with respect to a deficiency under this subsection, the Secretary shall submit the matter to the President, who shall resolve the dispute before the applicable deadline under paragraph (1).

(E) *DEFICIENCIES.*—The Secretary shall—

(i) provide each applicant under this paragraph with a reasonable opportunity—

(I) to correct each deficiency identified under subparagraph (A)(i)(II); and

(II) to resubmit a corrected application for reconsideration; and

(ii) not later than 30 days after the date of receipt of a corrected application under clause (i)(II), make a determination, in consultation with each head of another

Federal department or agency that submitted a notification under subparagraph (B), whether to approve the application or not.

(F) IMPROPER BASIS FOR DENIAL.—

(i) COMPETITION.—The Secretary shall not deny an application under this subsection in order to protect any existing Earth observation activity from competition.

(ii) CAPABILITIES.—The Secretary shall not, to the maximum extent practicable, deny an application under this subsection based solely on the capabilities of the Earth observation activity if those capabilities are commercially available.

(4) DEADLINE.—If the Secretary does not notify an applicant in writing before the applicable deadline under paragraph (1), the Secretary shall, not later than 1 business day after the date of the applicable deadline, notify the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives of the status of the application, including the reason the deadline was not met.

(5) EXPEDITED REVIEW PROCESS.—Subject to paragraph (2), the Secretary may modify the requirements under this subsection, as the Secretary considers appropriate, to expedite the review of an application that seeks to conduct an Earth observation activity that is substantially similar to an Earth observation activity already licensed under this subchapter.

(e) ADDITIONAL REQUIREMENTS.—An authorization issued under this subchapter shall require the authorized person—

(1) to be in compliance with this subchapter;

(2) to notify the Secretary of any significant change in the information contained in the application; and

(3) to make available to the government of any country, including the United States, unenhanced data collected by the Earth observation system concerning the territory under the jurisdiction of that government as soon as such data are available and on reasonable commercial terms and conditions.

(f) CONDITIONS.—Prior to making any change to a condition of an authorization under this subchapter, the Secretary shall—

(1) provide notice of the reason for the change, including, if applicable, a description of any deficiency and guidance on how to correct the deficiency; and

(2) provide a reasonable opportunity to correct a deficiency identified under paragraph (1).

§ 60125. Annual reports

(a) IN GENERAL.—Not later than 180 days after the date of enactment of the Space Frontier Act of 2018, and annually thereafter, the Secretary shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives a report on the progress in implementing this subchapter, including—

(1) a list of all applications received or pending in the previous calendar year and the status of each such application;

(2) notwithstanding paragraph (4) of section 60124(d), a list of all applications, in the previous calendar year, for which the Secretary missed the deadline under paragraph (1) of that section, including the reasons the deadline was not met; and

(3) a description of all actions taken by the Secretary under the administrative authority granted under section 60123.

(b) *CLASSIFIED ANNEXES.*—Each report under subsection (a) may include classified annexes as necessary to protect the disclosure of sensitive or classified information.

(c) *CESSATION OF EFFECTIVENESS.*—This section ceases to be effective September 30, 2021.

§ 60126. Regulations

The Secretary shall promulgate regulations to implement this subchapter.

§ 60127. Relationship to other executive agencies and laws

(a) *EXECUTIVE AGENCIES.*—Except as provided in this subchapter or chapter 509, or any activity regulated by the Federal Communications Commission under the Communications Act of 1934 (47 U.S.C. 151 et seq.), a person is not required to obtain from an executive agency a license, approval, waiver, or exemption to conduct a nongovernmental Earth observation activity.

(b) *RULE OF CONSTRUCTION.*—This subchapter does not affect the authority of—

(1) the Federal Communications Commission under the Communications Act of 1934 (47 U.S.C. 151 et seq.); or

(2) the Secretary of Transportation under chapter 509 of this title.

(c) *NONAPPLICATION.*—This subchapter does not apply to any space activity the United States Government carries out for the Government.

SUBCHAPTER V. GENERAL PROVISIONS

§ 60147. Consultation

[(a) *CONSULTATION WITH SECRETARY OF DEFENSE.*—The Secretary and the Landsat Program Management shall consult with the Secretary of Defense on all matters under this chapter affecting national security. The Secretary of Defense shall be responsible for determining those conditions, consistent with this chapter, necessary to meet national security concerns of the United States and for notifying the Secretary and the Landsat Program Management promptly of such conditions.

[(b) *CONSULTATION WITH SECRETARY OF STATE.*—

[(1) *IN GENERAL.*—The Secretary and the Landsat Program Management shall consult with the Secretary of State on all matters under this chapter affecting international obligations. The Secretary of State shall be responsible for determining those conditions, consistent with this chapter, necessary to meet international obligations and policies of the United States and for notifying promptly the Secretary and the Landsat Program Management of such conditions.

[(2) *INTERNATIONAL AID.*—Appropriate United States Government agencies are authorized and encouraged to provide re-

remote sensing data, technology, and training to developing nations as a component of programs of international aid.

[(3) REPORTING DISCRIMINATORY DISTRIBUTION.—The Secretary of State shall promptly report to the Secretary and Landsat Program Management any instances outside the United States of discriminatory distribution of Landsat data.]

[(c) STATUS REPORT.—The Landsat Program Management shall, as often as necessary, provide to Congress complete and updated information about the status of ongoing operations of the Landsat system, including timely notification of decisions made with respect to the Landsat system in order to meet national security concerns and international obligations and policies of the United States Government.]

[(d) REIMBURSEMENTS.—If, as a result of technical modifications imposed on a licensee under subchapter III on the basis of national security concerns, the Secretary, in consultation with the Secretary of Defense or with other Federal agencies, determines that additional costs will be incurred by the licensee, or that past development costs (including the cost of capital) will not be recovered by the licensee, the Secretary may require the agency or agencies requesting such technical modifications to reimburse the licensee for such additional or development costs, but not for anticipated profits. Reimbursements may cover costs associated with required changes in system performance, but not costs ordinarily associated with doing business abroad.]

§ 60147. Consultation

(a) CONSULTATION WITH SECRETARY OF DEFENSE.—*The Landsat Program Management shall consult with the Secretary of Defense on all matters relating to the Landsat Program under this chapter that affect national security. The Secretary of Defense shall be responsible for determining those conditions, consistent with this chapter, necessary to meet national security concerns of the United States and for notifying the Landsat Program Management of such conditions.*

(b) CONSULTATION WITH SECRETARY OF STATE.—

(1) IN GENERAL.—*The Landsat Program Management shall consult with the Secretary of State on all matters relating to the Landsat Program under this chapter that affect international obligations. The Secretary of State shall be responsible for determining those conditions, consistent with this chapter, necessary to meet international obligations and policies of the United States and for notifying the Landsat Program Management of such conditions.*

(2) INTERNATIONAL AID.—*Appropriate United States Government agencies are authorized and encouraged to provide remote sensing data, technology, and training to developing nations as a component of programs of international aid.*

(3) REPORTING DISCRIMINATORY DISTRIBUTION.—*The Secretary of State shall promptly report to the Landsat Program Management any instances outside the United States of discriminatory distribution of Landsat data.*

(c) STATUS REPORT.—*The Landsat Program Management shall, as often as necessary, provide to Congress complete and updated information about the status of ongoing operations of the Landsat sys-*

tem, including timely notification of decisions made with respect to the Landsat system in order to meet national security concerns and international obligations and policies of the United States Government.

SUBTITLE VII. ACCESS TO SPACE CHAPTER 709. INTERNATIONAL SPACE STATION

§

70907. MAINTAINING USE THROUGH AT LEAST [2024] 2030.—

(a) POLICY.—The Administrator shall take all necessary steps to ensure that the International Space Station remains a viable and productive facility capable of potential United States utilization through at least September 30, [2024] 2030.

(b) NASA ACTIONS.—In furtherance of the policy under subsection (a), the Administrator shall ensure, to the extent practicable, that the International Space Station, as a designated national laboratory—

(1) remains viable as an element of overall exploration and partnership strategies and approaches;

(2) is considered for use by all NASA mission directorates, as appropriate, for technically appropriate scientific data gathering or technology risk reduction demonstrations; and

(3) remains an effective, functional vehicle providing research and test bed capabilities for the United States through at least September 30, [2024] 2030.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AUTHORIZATION ACT OF 2010

[Public Law 111–267]

SEC. 501. CONTINUATION OF THE INTERNATIONAL SPACE STATION.

[42 U.S.C. 18351]

(a) POLICY OF THE UNITED STATES.—It shall be the policy of the United States, in consultation with its international partners in the ISS program, to support full and complete utilization of the ISS through at least [2024] 2030.

(b) NASA ACTION.—In furtherance of the policy set forth in subsection (a), NASA shall—

(1) pursue international, commercial, and intragovernmental means to maximize ISS logistics supply, maintenance, and operational capabilities, reduce risks to ISS systems sustainability, and offset and minimize United States operations costs relating to the ISS;

(2) utilize, to the extent practicable, the ISS for the development of capabilities and technologies needed for the future of human space exploration beyond low-Earth orbit; and

(3) utilize, if practical and cost effective, the ISS for Science Mission Directorate missions in low-Earth orbit.

SEC. 503. MAINTENANCE OF THE UNITED STATES SEGMENT AND ASSURANCE OF CONTINUED OPERATIONS OF THE INTERNATIONAL SPACE STATION.

[42 U.S.C. 18353]

(a) IN GENERAL.—The Administrator shall take all actions necessary to ensure the safe and effective operation, maintenance, and

maximum utilization of the United States segment of the ISS through at least September 30, ~~2024~~ 2030.

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SEC. 504. MANAGEMENT OF THE ISS NATIONAL LABORATORY.

[42 U.S.C. 18354]

(a)

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(d) **RESEARCH CAPACITY ALLOCATION AND INTEGRATION OF RESEARCH PAYLOADS.—**

(1) **ALLOCATION OF ISS RESEARCH CAPACITY.—**As soon as practicable after the date of the enactment of this Act, but not later than October 1, 2011, ISS national laboratory managed experiments shall be guaranteed access to, and utilization of, not less than 50 percent of the United States research capacity allocation, including power, cold stowage, and requisite crew time onboard the ISS through at least September 30, ~~2024~~ 2030. Access to the ISS research capacity includes provision for the adequate upmass and downmass capabilities to utilize the ISS research capacity, as available. The Administrator may allocate additional capacity to the ISS national laboratory should such capacity be in excess of NASA research requirements.

(2) **ADDITIONAL RESEARCH CAPABILITIES.—**If any NASA research plan is determined to require research capacity onboard the ISS beyond the percentage allocated under paragraph (1), such research plan shall be prepared in the form of a requested research opportunity to be submitted to the process established under this section for the consideration of proposed research within the capacity allocated to the ISS national laboratory. A proposal for such a research plan may include the establishment of partnerships with non-NASA institutions eligible to propose research to be conducted within the ISS national laboratory capacity. Until at least September 30, ~~2024~~ 2030, the official or employee designated under subsection (b) may grant an exception to this requirement in the case of a proposed experiment considered essential for purposes of preparing for exploration beyond low-Earth orbit, as determined by joint agreement between the organization with which the Administrator enters into a cooperative agreement under subsection (a) and the official or employee designated under subsection (b).

(3) **RESEARCH PRIORITIES AND ENHANCED CAPACITY.—**The organization with which the Administrator enters into the cooperative agreement shall consider recommendations of the National Academies Decadal Survey on Biological and Physical Sciences in Space in establishing research priorities and in developing proposed enhancements of research capacity and opportunities for the ISS national laboratory.

(4) **RESPONSIBILITY FOR RESEARCH PAYLOAD.—**NASA shall retain its roles and responsibilities in providing research payload physical, analytical, and operations integration during pre-flight, post-flight, transportation, and orbital phases essential to ensure safe and effective flight readiness and vehicle integration of research activities approved and prioritized by the organization with which the Administrator enters into the co-

operative agreement and the official or employee designated under subsection (b).

U.S. COMMERCIAL SPACE LAUNCH COMPETITIVENESS ACT

[Public Law 114–90; 129 Stat. 704]

[SEC. 113. STREAMLINE COMMERCIAL SPACE LAUNCH ACTIVITIES.

[(a) SENSE OF CONGRESS.—It is the sense of Congress that eliminating duplicative requirements and approvals for commercial launch and reentry operations will promote and encourage the development of the commercial space sector.

[(b) REAFFIRMATION OF POLICY.—Congress reaffirms that the Secretary of Transportation, in overseeing and coordinating commercial launch and reentry operations, should—

[(1) promote commercial space launches and reentries by the private sector;

[(2) facilitate Government, State, and private sector involvement in enhancing U.S. launch sites and facilities;

[(3) protect public health and safety, safety of property, national security interests, and foreign policy interests of the United States; and

[(4) consult with the head of another executive agency, including the Secretary of Defense or the Administrator of the National Aeronautics and Space Administration, as necessary to provide consistent application of licensing requirements under chapter 509 of title 51, United States Code.

[(c) REQUIREMENTS.—

[(1) IN GENERAL.—The Secretary of Transportation under section 50918 of title 51, United States Code, and subject to section 50905(b)(2)(C) of that title, shall consult with the Secretary of Defense, the Administrator of the National Aeronautics and Space Administration, and the heads of other executive agencies, as appropriate—

[(A) to identify all requirements that are imposed to protect the public health and safety, safety of property, national security interests, and foreign policy interests of the United States relevant to any commercial launch of a launch vehicle or commercial reentry of a reentry vehicle; and

[(B) to evaluate the requirements identified in subparagraph (A) and, in coordination with the licensee or transferee and the heads of the relevant executive agencies—

[(i) determine whether the satisfaction of a requirement of one agency could result in the satisfaction of a requirement of another agency; and

[(ii) resolve any inconsistencies and remove any outmoded or duplicative requirements or approvals of the Federal Government relevant to any commercial launch of a launch vehicle or commercial reentry of a reentry vehicle.

[(2) REPORTS.—Not later than 180 days after the date of enactment of this Act, and annually thereafter until the Secretary of Transportation determines no outmoded or duplicative requirements or approvals of the Federal Government exist, the Secretary of Transportation, in consultation with the

Secretary of Defense, the Administrator of the National Aeronautics and Space Administration, the commercial space sector, and the heads of other executive agencies, as appropriate, shall submit to the Committee on Commerce, Science, and Transportation of the Senate, the Committee on Science, Space, and Technology of the House of Representatives, and the congressional defense committees a report that includes the following:

[(A) A description of the process for the application for and approval of a permit or license under chapter 509 of title 51, United States Code, for the commercial launch of a launch vehicle or commercial reentry of a reentry vehicle, including the identification of—

[(i) any unique requirements for operating on a United States Government launch site, reentry site, or launch property; and

[(ii) any inconsistent, outmoded, or duplicative requirements or approvals.

[(B) A description of current efforts, if any, to coordinate and work across executive agencies to define interagency processes and procedures for sharing information, avoiding duplication of effort, and resolving common agency requirements.

[(C) RECOMMENDATIONS FOR LEGISLATION THAT MAY FURTHER.—(i) streamline requirements in order to improve efficiency, reduce unnecessary costs, resolve inconsistencies, remove duplication, and minimize unwarranted constraints; and

[(ii) consolidate or modify requirements across affected agencies into a single application set that satisfies the requirements identified in paragraph (1)(A).

[(3) DEFINITIONS.—For purposes of this subsection—

[(A) any applicable definitions set forth in section 50902 of title 51, United States Code, shall apply;

[(B) the terms “launch”, “reenter”, and “reentry” include landing of a launch vehicle or reentry vehicle; and

[(C) the terms “United States Government launch site” and “United States Government reentry site” include any necessary facility, at that location, that is commercially operated on United States Government property.]¹⁷

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¹⁷This amendment repeals a redundant provision in the law. Nothing in this Act, or the amendments made by this Act, may be construed to affect section 1617 of the National Defense Authorization Act for Fiscal Year 2016 (51 U.S.C. 50918 note).