

COMMERCIAL SPACE TRANSPORTATION REUSABLE LAUNCH VEHICLE MISSION LICENSING REGULATIONS

14 CFR Part 431

Effective November 2000

And

COMMERCIAL SPACE TRANSPORTATION REENTRY OF A VEHICLE OTHER THAN A REUSABLE LAUNCH VEHICLE LICENSING REGULATIONS

14 CFR Part 435

Effective November 2000

OMB Control Number 2120-0643

This supporting statement is an update to prior justification statements. Hence, it presents cost information that replaces prior estimates of the burden to industry and the federal government associated with the collection of information supporting the launch license and renewal application process for commercial RLVs.

A. Justification

1. Explain the circumstances that make collection of information necessary. Identify any legal or administrative requirements that necessitate the collection. The data is necessary for a U.S. citizen to apply for and obtain a reusable launch vehicle (RLV) mission license or a reentry license for activities by commercial or non-federal entities (that are not done by or for the U.S. Government) as defined and required by 51 U.S.C. 509, formerly known as the Commercial Space Launch Act of 1984, as amended. The information is needed in order to demonstrate to the FAA Office of Commercial Space Transportation (FAA/AST) that the proposed activity meets applicable public safety, national security, and foreign policy interests of the United States.

The FAA issued the final rule for Commercial Space Transportation Reusable Launch Vehicle and Reentry Licensing Regulations in 2000. Related to these, a final rule for Human Space Flight Requirements for Crew and Space Flight Participants was issued in 2007.

This information collection activity supports the Department of Transportation's strategic goal on safety. This goal is to promote the public health and safety by working toward the elimination of transportation-related deaths, injuries, and property damage.

2. Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection.

The information to be collected includes data required for performing a safety review, which includes a technical assessment to determine if the applicant launches or reenters an RLV or a reentry vehicle to a designated site without jeopardizing public health and safety and the safety of property. Applying for a license is voluntary. US companies seeking to perform a launch or reentry of a reusable launch vehicle can apply for a license. Foreign companies performing an RLV launch or reentry in the US can also apply for a license. The collection of information consists of disclosures by the companies seeking a license. The collection frequency is as needed. Information collected by the FAA is not disclosed because it is proprietary. This information collection requirement is intended for incorporating acquired data into the license, which then becomes binding on the launch and/or reentry operator. The rule contains provisions for two types of licenses for reusable launch vehicles (RLV): mission-specific license and reentry operator license, and two types of licenses for reentry of reentry vehicles (RV) other than RLV: reentry-specific license and reentry operator license.

Under the policy review and approval process, an applicant is required to submit information that enables FAA/AST to summarize the application requirements identifying foreign ownership of the vehicle. FAA/AST determines, before issuing a license, if issuance of an RLV mission license would jeopardize the foreign policy or national security interests of the U.S.

In accordance with the requirements of the National Environmental Policies Act, 42 U.S.C. § 4321, et. seq., (NEPA), the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA, 40 CFR Parts 1500-1508, and the DOT's Procedures for Considering Environmental Impacts, DOT Order 5610.1C, applicants are required to submit environmental information concerning proposed RLVs and reentry vehicles that are not currently described in the environmental impact statements, as well as payloads that may have significant environmental impacts in the event of a launch accident.

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g. permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also describe any consideration of using information technology to reduce burden.

AST maintains a website to improve public access to information about the licensing process. Applicants can start the application process by filling out contact information at:

https://www.faa.gov/space/streamlined_licensing_process/licensing_process/.

Information on how to contact the FAA is located at:

https://www.faa.gov/space/streamlined_licensing_process/licensing_process/media/Pre-Application_Initial_Contact_Information_final.pdf.

Applicants seeking information on the application requirements or process can send information requests using:

https://www.faa.gov/contact_faa/?returnPage=M%2FVQ%2DLJV%3C%248PXO%28%20%2FGZ5UB%29N6N9%25%2FG%24%209ZA%5E9G%2A%2E%2DC%28%2E%5C%3FF%40%2FL%27%5EBC%2AF%40B%21%293%0A3BH%2E9%5B4I4%22%25%5FJ%26%3FVA5QZ%2EN9R9D%20%20%20%0A&mailto=7%2A3%29%3CH%2BK45Y%24%5DNXP%3CFZQOII3A%5D%2D%21D%25%2C%20%0A&subject=L5FU2ONZ%2E28ABJ%280%2FW%2AYSD%2C32I9%29%2BDD%20%25%5EA%5E6E%5DRNCHV%5C%3FCLU%5C6%2A%5EAKZGG%40%40%20%0A

Applicants can submit application material electronically. Application material submitted is not made available to the public on the FAA website because it is proprietary. The FAA does publish a list of licensed launches at:

https://www.faa.gov/data_research/commercial_space_data/launches/

However, due to the highly sensitive and proprietary nature of information collected, license applicants generally choose to submit their information through secure mail or couriers. Also, no new applications are allowed under parts 431 or 435, and therefore the number of paperwork submissions will remain very low and will consist of license modifications or license renewals.

4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purposes described in Item 2 above. Due to the proprietary nature of the information collected, it is not publicly available and the FAA is the only agency that collects this type of information. Only AST collects this type of information within the FAA. The agency is not aware of other government agencies that collect such information pertaining licensing of RLV mission or reentry vehicle operations.

5. If the collection of information impacts small businesses or other small entities, describe any methods used to minimize burden on small businesses or other small entities.

Pursuant to the Regulatory Flexibility Act of 1980 (RFA), FAA/AST certifies that the rule does not have a significant economic impact on a substantial number of small entities. Regulations are written to allow flexibility and innovation.

6. Describe the consequence to Federal programs or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.

The frequency of record keeping or reporting is contingent upon the respondent submitting a launch or reentry license application for launch or reentry of a vehicle or operation of a commercial or non-Federal reentry site.

7. Explain any special circumstances that would cause the requirement to be inconsistent with guidelines 5 CFR 1320.5(d)(2) (i)-(viii).

This requirement follows the guidelines in 5 CFR 1320.5(d)(2)(i)-(viii).

8. Describe efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.

FAA/AST, in February 1999, released information guidelines during a public meeting that describes the information that an RLV mission license applicant and a reentry vehicle applicant should provide to FAA/AST in order to receive an RLV mission license or reentry license. An NPRM was published on April 21, 1999. Comments received were considered in the writing of the final rule.

A 60-day notice was published in the Federal Register on January 13, 2021, 86 FR 2729 to solicit comments on the collection related to Commercial Space

Transportation Reusable Launch Vehicle Reentry Licensing Regulations. No comments were received.

9. Explain any decisions to provide any payment as gift to respondents, other than remuneration of contractors or grantees. No decision was made to provide payments or special compensation to respondents.

10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy.

All information collected, including company proprietary information, will be protected in accordance with part 413.9 of the Code of Federal Regulations and 49 USC 70114.

Under Part 413.9, “Confidentiality,” of the Code of Federal Regulations:

“(a) Any person furnishing information or data to the FAA may request in writing that trade secrets or proprietary commercial or financial data be treated as confidential....”

... “(d) Information or data for which confidential treatment has been requested or information or data that qualifies for exemption under section 552(b)(4) of Title 5, United States Code, will not be disclosed to the public unless the Associate Administrator determines that the withholding of the information or data is contrary to the public or national interest.”

49 U.S. Code, Subtitle IX, Chapter 701, Section 70114, “Disclosing information,” states that “The Secretary of Transportation, an officer or employee of the United States Government, or a person making a contract with the Secretary under section 70106(b) of this title may disclose information under this chapter that qualifies for an exemption under section 552(b)(4) of title 5 or is designated as confidential by the person or head of the executive agency providing the information only if the Secretary decides withholding the information is contrary to the public or national interest.”

11. Provide additional justification for any questions of a sensitive nature.

No sensitive information is required.

12. Provide estimates of the hour burden of the collection of information.

The burden estimates for industry in completing the RLV mission license application are based on the hours required for pre-application consultation, preparation of the license application, and resolution of questions associated with the application process. Because Part 450 was published in December of 2020,

there are no new licenses under part 431. All RLV and reentry operators have to comply with Part 450. Part 431 operators already holding a license at the time Part 450 was published are allowed to operate under Part 431 until 2025. Part 431 operators can choose to transition to Part 450. Therefore, cost estimates assume all current Part 431 operators will continue to operate under Part 431 for the next three years. There are 12 licenses currently under Part 431. No new licenses will be allowed in the next three years and the FAA estimates that 4 operators will renew their part 431 license each year and 4 operators will modify their part 431 license each year. Because of the similarities between reentry vehicles and RLVs, the FAA is using the burden estimates for reentry vehicles based on RLV applications.

As shown in Table 2, the total estimated annualized cost to industry per year for all RLV mission license application renewals (and reentry vehicles) is calculated by multiplying the estimated cost to industry per application renewal by the total annual applications. Discussions with industry representatives resulted in a substantial range in the estimates of hours required to obtain a RLV mission license. Therefore, hours and cost estimates provided in this document encompass the average of estimates offered by industry. The estimated cost to industry per application ranges from 3,000 to 15,000 hours. The average cost in hours is 9,000 for an application. As discussed in the Part 417 supporting statement, a modification is estimated to take half the time of an application and a renewal is estimated to take a tenth of the time of an application. Therefore the FAA estimates a modification will require 4,500 hours ($\{[3,000+15,000]/2\}/2$) and a renewal will require 900 hours ($\{[3,000+15,000]/2\}/10$).

The total annual industry hours for submitting licensing application modifications (18,000) are calculated by multiplying industry hours to submit an application modification (4,500) by total annual modifications (4). The total annual industry hours for submitting licensing application renewals (3,600) are calculated by multiplying industry hours to submit an application renewal (900) by total annual renewals (4). Industry base salary is estimated to be \$121,118. Base salary is loaded the commercial fringe rate based on information available from the Aerospace Industry Association database. As summarized in Table 1, this results in an estimated industry loaded salary of \$157,817¹; accordingly, hourly labor costs are \$75.87 (calculated as $\$157,817 \div 2,080 = \75.87).

¹ Space transportation salaries are based on information obtained from the U.S. Bureau of Labor Statistics (BLS) and the Aerospace Industry Association (AIA) and adjusted for inflation.

TABLE 1. Private Sector Fringe Benefit Factors and Loaded Salary

Category	Government Factor
Total Fringe Benefit	30.03%
Industry Loaded Salary ^a	\$157,817

Source: Bureau of Labor statistics hourly rate of \$58.23 for an Aerospace Engineer in the Occupational Employment and Wages, May 2020 (<https://www.bls.gov/oes/current/oes172011.htm>) and an hourly benefit rate for a professional and related percentage of total compensation of 30.3% in table 4 of the Employer Costs for Employee compensation for private industry workers by occupation and industry (<https://www.bls.gov/news.release/pdf/ecec.pdf>)^a Calculated as \$121,118 × 1.303 = \$157,817.

Multiplying the industry collection of information hourly burden by the industry hourly labor cost yields \$682,830 (calculated as 9,000 × \$75.87 = \$682,830) per initial application, \$341,415 for a major license modification application (calculated as 50% of the initial application cost) and \$68,283 for a license renewal application (calculated as 10% of the initial application cost). Multiplying the application cost by the estimated annual number of applications yields the annual information collection cost burden to industry associated with the regulations — \$0 for initial license applications (cost is \$0 because no new licenses will be issued under part 431, all new licenses will be issued under part 450), \$1,365,660 for major license modifications, and \$273,132 for renewal applications. This is summarized in Table 2.

TABLE 2. Collection of Information Burden to Industry

Category	Hour Burden			Total
	Initial Application	Modification Application ^a	Renewal Application ^b	
Hours required to submit each application	2,808	2,250	281	
Number of applications per respondent ^d	0	1	1	
Annual number of applications ^c	0	4	4	8
Total Hours	0	9,000	1,800	10,110
Cost per application	\$0	\$341,415	\$68,283	
Annual cost ^d	\$0	\$1,365,660	\$273,132	

^a Includes major modifications to existing licenses.

^b Renewal of a license application is voluntary; a license is approved for five years.

^c Federal Aviation Administration, Office of Commercial Space Transportation (FAA/AST), April 2006.

^d Industry total cost per annum calculated as \$217,451 × 0 = \$0 for initial applications, major modification applications are calculated as 50% of the

initial application cost, or $\$108,725 \times 6 = \$652,350$, and renewal applications are calculated as 10% of the initial application cost, or $\$21,745 \times 6 = \$130,470$ for renewal applications.

Thus, the total annual burden to industry is $(18,000 \text{ hours} \times 0) + (9,000 \times 4) + (1,800 \text{ hours} \times 4) = 43,200 \text{ hours}$.

- 13. Provide an estimate of the total annual cost burden to respondents or recordkeepers resulting from the collection of information.** There is no additional cost other than that shown in Item 12.
- 14. Provide estimates of annualized cost to the Federal government.**

The burden to the federal government associated with information collected to comply with 14 CFR part 431 for either a Launch Operator or Launch Specific License involves several principal activities. These activities include pre-application consultation with industry and review of preliminary information; review of the formal application and its disposition (that is, approval or disapproval); resolution of questions associated with the application; and amending an approved license. The application review process is generally the same for either a Launch Operator or Launch Specific License, as AST determines which license type is issued based on the information submitted with the application. The FAA estimates that it expends as many as 3,900 hours to review and process the information collected associated with an application submittal in compliance with 14 CFR part 431.² Further, the FAA estimates that the hour burden it incurs to review information necessary to support a license renewal application can be as many as 390 hours.³

Base salary in 2021 for FAA personnel based on the GS 13 Step 5 wage for the Washington DC area is estimated to be \$117,516.⁴ As summarized in Table 3, the base salary loaded with federal government fringe benefits is \$162,290, resulting in an FAA hourly labor cost of \$78.02 (calculated as $\$162,290 \div 2,080 = \78.02). Multiplying the

²Discussions in 2005 with AST personnel indicate that the FAA expends as much as 2.5 person-years, or 5,200 hours (calculated as 2,080 annual person-hours \times 2.5 person-years = 5,240 person-hours) to execute the license application review process for a single submittal. The hour burden to the FAA to review and process the information collected associated with an application submittal can be as much as 75 percent of the total hours expended in this process, or 3,900 hours (calculated as $0.75 \times 5,200 = 3,900$).

³ Discussions in 2005 with AST personnel indicate that as much as 10 percent of the 3,900 hours are expended reviewing and processing the information collected to support a license renewal application.

⁷ Data from FY15 – 17 suggests that requests for major modifications to existing license applications result in roughly 50 percent of the 3,900 hours expended for an initial application

⁴ Base salary from the 2021 General Schedule Salary Table 2021-DCB (for the locality pay area of Washington-Baltimore, Northern Virginia, DC-MD-PA-VA-WV), GS-13, Step 5. Fringe benefit from Economic Analysis Investment and Regulatory Decisions — Revised Guide, Federal Aviation Administration, January 1998, page 4-22.

FAA hourly burden to review collected information by the federal government hourly labor cost yields \$304,278 (calculated as $3,900 \times \$78.02 = \$304,278$) to review an initial application, \$152,139 to review a license modification (calculated as 50% of \$304,278), and \$30,428 to review a license renewal application (calculated as 10% of \$304,278). Multiplying the application cost by the estimated annual number of applications yields the annual collected information review and processing cost burden to the FAA associated with the collection — \$0 for initial licenses (cost is \$0 because no new licenses will be issued under part 431, all new licenses will be issued under part 450), \$912,834 for modified licenses, and \$182,568 for renewals. This is summarized in Table 4.

TABLE 3. Public Sector Fringe Benefit Factors and Loaded Salary

Category	Government Factor
Total Fringe Benefit	0
Federal Government Loaded Salary ^a	\$162,290

Source: Based on Bureau of Labor Statistics Employer Costs for Employee Compensation by ownership Table 1 June 2021 (<https://www.bls.gov/news.release/pdf/ecec.pdf>) for government employees..

^a Calculated as $\$117,516 \times 1.381 = \$162,290$.

TABLE 4. Collection of Information Burden to Federal Government

Category	Hour Burden		
	Initial Application	Modification Application ^a	Renewal Application ^b
Hours required to submit each application	3,900	1,950	390
Number of applications per respondent ^d	1	1	1
Annual number of applications ^c	0	4	4
Federal government cost per application	\$0	\$152,139	\$30,428
Federal government annual cost ^d	\$0	\$608,556	\$121,712

^a Includes major modifications to existing licenses.

^b Renewal of a license application is voluntary.

^c Federal Aviation Administration, Office of Commercial Space Transportation (FAA/AST), April 2006.

^d Federal government total cost per annum calculated as $\$304,278 \times 0 = \0 for initial applications; calculated as 50%, or \$152,139, for each major modifications = \$608,556; calculated as 10%, or \$30,428, for each renewal application = \$121,712.

Thus, the total cost to the FAA for processing information received under parts 431, is \$0 + \$608,556+ \$121,712= \$730,268.

15. Explain the reasons for any program changes or adjustments.

Adjustments are a result of using 2021 labor rates for the calculation of government and commercial burden costs. The government rate is based on the 2021 national average salary and hourly rate for GS13, step 5 employees. The industry rate is based on the 2021 Bureau of Labor Statistics average annual salary for aerospace engineers. Part 431 was replaced by part 450, published October 2020. Parts 431 is retained until 2025 and allowed to be used by operators with active licenses at the time of part 450 publication. This collection still applies to those operators operating under part 431 at the time of part 450 publication that wish to continue to operate under part 431. The burden was adjusted assuming all operators operating under parts 431 at the time of part 450 publication will continue to operate under part 431. The burden was computed using the number of active licenses at the time of part 450 publication. The estimates assumed all operators allowed to operate under part 431 continue to do so and renew their licenses until part 431 is removed. This estimate is conservative because it assumes no operators switch to part 450.

16. For collections of information whose results will be published, outline plans for tabulation, and publication.

We do not intend to publish this information.

17. If seeking approval to not display the expiration date of OMB approval of the information collection, explain the reasons that display would be inappropriate.

No approval is sought.

18. Explain each exception.

There are no exceptions.