

**COMMERCIAL SPACE TRANSPORTATION LICENSING
REQUIREMENTS FOR OPERATION OF A LAUNCH SITE
14 CFR Part 420**

AND

**COMMERCIAL SPACE TRANSPORTATION REENTRY SITE
LICENSING REGULATIONS
14 CFR Part 433
Effective December 18, 2000**

**Paperwork Reduction Act Submission by FAA/AST to
Office of Management and Budget**

August 31, 2011

This document outlines the information collection requirements associated with the commercial space transportation licensing rules to be submitted to the Office of Management and Budget for approval.

JUSTIFICATION

1. Explain the circumstances that make collection of information necessary. Identify any legal or administrative requirements that necessitate the collection. The data requested for a license application to operate a commercial launch site are required by 49 U.S.C. Subtitle IX, 701—Commercial Space Launch Activities, 49 U.S.C. §§ 70101-70119 (1994). 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 interest of the United States.

Launch regulations were issued by the Department of Transportation in 1988, which reflect the Government's view that maintaining an efficient and reasonable regulatory approach is vital to the commercial space launch industry. Privatized space launch facilities require clear and concise regulations to facilitate federal oversight. The first non-federal launch site ("spaceport") license was issued in 1996. By July 2011, the FAA has issued eight U.S. launch site operator licenses. As of July 2011, the FAA has yet to receive an application for a reentry site license.

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. This information collection requirement is intended to enable FAA/AST to incorporate acquired data into the license, which subsequently becomes

binding on the site operator. FAA/AST issues a site operator license based on the site operator's demonstration of the ability to ensure public safety and the safety of property, both on and off the site.

Under the policy review and approval process, an applicant is required to submit information identifying foreign ownership of the launch site or reentry site enterprise. FAA/AST determines, before issuing a license, if issuance of such a license would jeopardize the foreign policy or national security interest of the United States. The Launch Site Location Review and Approval provision requires the applicant to conduct an analysis that objectively determines whether the location of a proposed launch or reentry site can support the launch or reentry of a suborbital launch vehicle or, at a minimum, one class of orbital launch vehicle on at least one trajectory. Finally, the applicant is required to submit an explosive site plan, which complies with established levels of risk calculations to acceptable exposure to destructive forces.

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 new launch sites and launch 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. The office is pursuing the following improved information technology enhancements:

- In accordance with the government Paperwork Reduction Act, a website is maintained to improve the ability of the public to access information pertaining to the collection of information, and the information may be submitted 100% electronically.

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, a small number of applicants is expected, and therefore the number of paperwork submissions will remain very low.

4. 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. For sites that are not located within a Federal launch range, an applicant is not obligated to comply with Federal launch range procedures nor does an applicant have continuing oversight of a Federal launch range. Therefore, this arrangement decreases the burden on industry. In the case of renewals, an applicant may reference previously submitted information with noted changes. The FAA is not aware of other government agencies that collect such information as required for licensing applications to operate commercial launch or reentry sites.

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 recordkeeping or reporting is contingent upon the respondent submitting a launch site or reentry site license application.
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. A 60-day notice was published in the Federal Register on June 21, 2011, vol. 76, no. 119, page 36172, to solicit comments on the collection related to Commercial Space Transportation License Requirements for Operation of a Launch Site. No comments were received. This regulation was effective as of December 18, 2000.
9. Explain any decisions to provide any payment as gift to respondents, other than remuneration of contractors or grantees. There are no 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 the Freedom of Information Act.
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 launch site or reentry site license application are based on hours required for pre-application consultation, preparation of the license application, and resolution of questions associated with the application process. The FAA estimates that the number of industry and government hours needed to process a reentry site application is similar to that of a launch site license.

Industry representatives were consulted about the amount time required for the license applications activities listed above. The range of estimates received from industry was extremely wide and therefore the numbers included here represent an average and best estimate for hours and costs to industry. Some license applicants are able to take advantage of existing environmental information required for a site license while other applicants may have to start from the beginning of the process. The launch site license is

valid for a period of five years and it is assumed that all licenses would be renewed after five years. It is estimated that there will be zero to one launch site applicants per year, and zero to one reentry site applicants per year, over a three-year period beginning in 2012.

As shown in Table 1, the estimated cost to industry per application (\$146,402) is calculated by multiplying the estimated hourly wage rate (\$63.05) by the estimated average hours required for the application (2,322). The industry hourly rate (\$63.05) is the unit labor cost for aerospace engineering personnel involved in gathering, reviewing, and formatting the information required in each license application. The industry hourly rate is based on aerospace engineering personnel only; it does not include rates for executive or managerial personnel. The industry hourly rate includes a fringe benefit multiplier of about 32 percent, based on discussions with industry. The annual costs per year for the launch site licenses (\$0 to \$146,402) are calculated by multiplying the estimated cost per application (\$146,402) by the total number of applications received on a yearly basis (0 to 1). The annual costs per year for the reentry site licenses (\$0 to \$146,402) are calculated by multiplying the estimated cost per application (\$146,402) by the total number of applications received on a yearly basis (0 to 1)

Table 1: Estimated Burden Hours and Annual Costs to Industry for Launch Site and Reentry Site Operator Licensing Regulations

	Launch Site	Reentry Site
Annual number of applicants	0 to 1	0 to 1
Annual number of applications per applicant	1	1
Total annual applications	0 to 1	0 to 1
Industry hours to submit an application	2,322	2,322
Total annual industry hours	0 to 2,322	0 to 2,322
Industry hourly rate	\$63.05	\$63.05
Cost to industry per application	\$146,402	\$146,402
Total estimated annualized costs	\$ 0 to \$ 146,402	\$ 0 to \$146,402

In addition to the burden estimates for industry in completing the launch site or reentry site license application outlined above, industry will incur additional costs per license application in order to comply with NEPA requirements. Depending on the extent of environmental impact, the license applicant may be required to complete an environmental assessment (EA) or an environmental impact statement (EIS). An EA is an analysis of a proposed action and reasonable alternatives (including no action) that could result in preparation of an EIS or a Finding of No Significant Impact (FONSI). An EIS is a detailed analysis of environmental consequences of a proposed action and reasonable alternatives (including no action), cumulative impacts, and mitigation actions. Average costs for an environmental assessment (EA) and (EIS) are shown in Table 2.

Table 2: Estimated Burden on Industry for Launch Site or Reentry Site Operator Licensing Regulations Environmental Requirements

	Time	Cost
Environmental Assessment	2-18 months	Average \$20,000 to \$200,000
Environmental Impact Statement	1-5 years	Average \$500,000 to \$2,000,000

13. Provide an estimate of the total annual cost burden to respondents or record keepers 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 estimated annualized cost to FAA/AST to certify safe operations at commercial launch sites is \$0 to \$289,632, and for reentry sites is \$0 to \$289,632 (see Table 3). The cost to the government for processing the license is driven by procedures involving review and analysis of the information contained in the application. Based on the 2010 GS 13 Step 5 wage, the annual cost per federal worker is \$81,230. The government hourly rate (\$39.05) is calculated by dividing the annual salary by the total yearly government working hours (2,080) per worker. A fringe benefit multiplier of 32.45% is used to increase the government hourly rate to \$51.72.

The estimated cost to process the collected information is calculated by multiplying the average hourly wage rate (\$51.72) by the estimated total hours (2,000 to 5,600). The low end of the range of hours represents work on existing facilities that require only an EA and will only support the launches of reusable launch vehicles. The high end of the range of hours represents work on new facilities that require an EIS and do plan to support launches of expendable and reusable launch vehicles. The total annual government hours for processing launch site license applications (0 to 5,600) are calculated by multiplying government hours required to process each application (2,000 to 5,600) by the total number of new applications (0 to 1). The total estimated annualized costs for launch site applications (\$0 to \$289,632) are calculated by multiplying the cost to the government per application (\$103,440 to \$289,632) by the total annual applications (0 to 1). The total annual government hours for processing reentry site license applications (0 to 5,600) are calculated by multiplying government hours required to process each application (2,000 to 5,600) by the total number of new applications (0 to 1). The total estimated annualized costs for launch site applications (\$0 to \$289,632) are calculated by multiplying the cost to the government per application (\$103,440 to \$289,632) by the total annual applications (0 to 1).

Burden estimates for the government are based on those hours required for facilitating pre-application consultation; license application acceptance and review procedures; disposition of a license (i.e., approved or disapproved); and issuance of the license. The government estimates include environmental personnel.

Table 3: Estimated Burden Hours and Annual Costs to Government for Launch Site and Reentry Site Operator Licensing Regulations

	Launch Site	Reentry Site
Annual number of applicants	0 to 1	0 to 1
Annual number of applications per applicant	1	1
Total annual applications	0 to 1	0 to 1
Government hours to process an application	2,000 to 5,600	2,000 to 5,600
Total annual Government hours	0 to 5,600	0 to 5,600
Government hourly rate	\$51.72	\$51.72
Cost to Government per application	\$103,440 to \$289,632	\$103,440 to \$289,632
Total estimated annualized costs	\$0 to \$289,632	\$0 to \$289,632

In addition to the burden estimates for the Government for processing the launch site or reentry site license application outlined above, it will incur additional costs per license application in order to comply with NEPA requirements. Depending on the extent of environmental impact, the license applicant may be required to complete an environmental assessment (EA) or an environmental impact statement (EIS), as defined in Question #12 above. Average costs to the Government for completing an environmental assessment (EA) and (EIS) are shown in Table 4.

Table 4: Estimated Burden on Government for Launch Site or Reentry Site Operator Licensing Regulations Environmental Requirements

	Time	Cost
Environmental Assessment	2 -18 months	Average \$20,000 to \$200,000
Environmental Impact Statement	1 - 5 years	Average \$500,000 to \$2,000,000+

15. Explain the reasons for any program changes or adjustments. Adjustments are a result of using 2010 labor rates for the calculation of government and commercial burden costs. The government rate is based on the 2010 national average salary and hourly rate for GS13, step 5 employees. The industry rate is based on the 2010 Bureau of Labor Statistics average annual salary for aerospace engineers.

FAA/AST has more data since the previous submission that allows for improved accuracy in estimating hours and costs required for license applications to be processed. Additionally, the changes reflect the current forecast for license applications.

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