Federal Aviation Administration

Office of Commercial Space Transportation

Financial Responsibility Requirements as Determined by the Maximum Probable Loss (MPL) Process

As of

April 14, 2014

ACTIVE LAUNCH LICENSES

Vehicle Company	Year	Launch Site	U.S. Government Property ($M)		Third Party ($M)	
Antares	2013	WFF	Pre-flight:	$1	Pre-flight:	$9
Orbital Sciences Corp			Flight:	$44	Flight:	$34
Atlas V 401			Pre-flight:	$7	Pre-flight:	$6
Lockheed Martin	2007	CCAFS	Flight:	$21	Flight:	$45
Atlas V 411			Pre-flight:	$7	Pre-flight:	$3
Lockheed Martin	2006	CCAFS	Flight:	$100	Flight:	112.5
Atlas V 421			Pre-flight:	$7	Pre-flight:	$3
Lockheed Martin	2006	CCAFS	Flight:	$100	Flight:	$193.5
Atlas V 431			Pre-flight:	$7	Pre-flight:	$3
Lockheed Martin	2006	CCAFS	Flight:	$100	Flight:	$261
Atlas V 521			Pre-flight:	$7	Pre-flight:	$3
Lockheed Martin	2006	CCAFS	Flight:	$100	Flight:	$193.5
Delta IV Heavy	2013	CCAFS	Pre-flight:	$25	Pre-flight:	$6
Boeing Launch Services			Flight:	$50	Flight:	$56
Delta IV M or M+	2006	CCAFS	Pre-flight:	$21.5	Pre-flight:	$3
Boeing Launch Services			Flight:	$43	Flight:	$261
Delta II	2005	VAFB	Pre-flight:	$68.6	Pre-flight:	$10
Boeing Launch Services			Flight:	$79.6	Flight:	$48.8
Dragon Pad Abort	2014	CCAFB	Pre-flight:	$1	Pre-flight:	$12
Space Exploration Technologies			Flight:	$10	Flight:	$3
Falcon 9	2014	CCAFS	Pre-flight:	$13	Pre-flight:	12
Space Exploration Technologies			Flight:	$100	Flight:	$45
Falcon 9	2013	VAFB	Pre-flight:	$1	Pre-flight:	$9
Space Exploration Technologies			Flight:	$17	Flight:	$90
Pegasus			Flight:	$17	Flight:	$90
Orbital Sciences	1997	CCAFS	Flight:	$1	Flight:	$37.5

Pegasus Orbital Sciences	1997	WFF	Pre-flight: $1 Flight: $1	Pre-flight: $10 Flight: $43.5
Pegasus Orbital Sciences	2008	KMR	Pre-flight: NA Flight: $1	Pre-flight: NA Flight: $57
STIG B Armadillo Aerospace	2012	Spaceport America	Pre-flight: $0 Flight: $0	Pre-flight: $3 Flight: $3.3
Zenith – 3SL Sea Launch	2011	Pacific Ocean	Pre-flight: NA Flight: $Zero	Pre-flight: NA Flight: $10

ACTIVE REENTRY LICENSES

Dragon (Reentry Vehicle) Space Exploration Technologies	2011	Pacific Reentry		Reentry $33
ORION (Reentry Vehicle) Lockheed Martin	2014	Pacific Reentry		Reentry $18.75

ACTIVE PERMITS

Vehicle **Company**	**Year**	**Launch Site**	**U.S. Government Property ($M)**	**Third Party ($M)**
Falcon 9R Space Exploration Technolgies	2014	McGregor Texas	Pre-flight: $0 Flight: $0	Pre-flight: $0 Flight: $3
SpaceShipTwo Scaled Composites	2013	Mojave, California	Pre-flight: $0 Flight: $0	Pre-flight: $0 Flight: $9
Grasshopper Space Exploration Technologies	2012	McGregor Texas	Pre-flight: $0 Flight: $0	Pre-flight: $0 Flight: $3

INACTIVE OR EXPIRED LICENSES

Orbital Launches--Launch Operator

Vehicle Company	Year	Launch Site	U.S. Government Property ($M)		Third Party ($M)	
Atlas I			Pre-flight:	$60	Pre-flight:	$30
Lockheed Martin	1989	CCAFS	Flight:	$75	Flight:	$164
Atlas II/IIA			Pre-flight:	$44	Pre-flight:	$45
Lockheed Martin	2000	CCAFS	Flight:	$53	Flight:	$113
Atlas IIAS			Pre-flight:	$55	Pre-flight:	$45
Lockheed Martin	2000	CCAFS	Flight:	$78	Flight:	$135
Atlas IIIA & IIIB			Pre-flight:	$44	Pre-flight:	$30
Lockheed Martin	2000	CCAFS	Flight:	$53	Flight:	$149
Delta II	2006	CCAFS	Pre-flight:	$51	Pre-flight:	$24
Boeing Launch Services			Flight:	$85	Flight:	$76.5
McDonnell Douglas	2000	CCAFS	Flight:	$56	Flight:	$126
Athena-1			Pre-flight:	$10	Pre-flight:	$10
Lockheed Martin	1998	VAFB	Flight:	$27	Flight:	$40
Athena-2			Pre-flight:	$20	Pre-flight:	$10
Lockheed Martin	1998	VAFB	Flight:	$10	Flight:	$109

INACTIVE OR EXPIRED LICENSES

Orbital Launches--Launch Specific

Vehicle Company	Year	Launch Site	U.S. Government Property ($M)	Third Party ($M)
Conestoga EER Systems	1994	WFF	$73.5	$13
Conestoga EER Systems	1995	WFF	$88	$13
Delta 7920-10 McDonnell Douglas	1993	VAFB	$48.8	$41
Athena-1 Lockheed Martin	1996	VAFB	$27	$117
Athena-1 Lockheed Martin	1997	SFA	$32	$21
Athena-2 Lockheed Martin	1997	SFA	$81.2	$36
Pegasus Orbital Sciences	1992	CCAFS	$15	$15
Pegasus XL Orbital Sciences	1997	Spain	$Zero	$48
Scout LTV	1990	WFF	$21.6	$10
Scout LTV	1990	VAFB	$1.6	$10
Titan Lockheed Martin	1989	CCAFS	$80	$215
Falcon 1 Space Exploration Technologies	2005	Pacific RTS	Pre-flight: $1 Flight: $ 1	Pre-flight: $6 Flight: $9

INACTIVE or EXPIRED LICENSES

Sub-Orbital Launches--Launch Specific

Vehicle Company	Year	Launch Site	U.S. Government Property ($M)	Third Party ($M)
Black Brant IX Conatec	1988	WSMR	$1	$10
Prospector Orbital Sciences	1990	CCAFS	$1	$12.5
SMLV AMROC	1989	VAFB	$1	$12
Starfire SSI	1989	WSMR	$1	$10
Starfire EER Systems	1992	WSMR	$2.5	$10
Starfire Black Brant Class EER Systems	1994	WSMR	$3	$10
Talos Castor I Orbital Sciences	1991	KTF	$0.3	$10
SASSY Flea Society for Amateur Scientists	2000	VAFB	$Zero	$3
SpaceShipOne Scaled Composites	2004	Mojave	Pre-flight: $Zero Flight: $Zero	Pre-flight: $Zero Flight: $3.1
Tachyon Interorbital Systems	2000	Western Range	$Zero	$0.250
Terrier Orion Astrotech	2001	WTR	Pre-flight: $Zero Flight: $0.140	Pre-flight: $Zero Flight: $4.5

INACTIVE OR EXPIRED LICENSE

Sub-Orbital Launches--Launch Operator

Vehicle Company	Year	Launch Site	U.S. Government Property ($M)	Third Party ($M)
Aries Orbital Sciences	1991	WSMR	Pre-flight: $1 Flight: $1	Pre-flight: $10 Flight: $10

NOTES

For all tables, the date shown in the Year column is the date of the MPL study. The dollar values shown for U.S. Government property and Third-party losses are as assigned in the applicable license orders. Those values are periodically and routinely reassessed. During such a reassessment, if the MPL values are confirmed to remain valid, the report's date is not changed. If the values are revised and new license orders issued, the date of the report will also be revised.

Past practice for launch specific licenses was to not discriminate between pre-flight and flight phases for the purposes of establishing financial responsibility requirements based on the MPL. Thus, assigned dollar values for U.S. Government and Third-party losses were the higher of the values determined for each phase – pre-flight and flight. This will no longer be the case for future launch specific licenses in that MPL values will be assigned for both phases of the two loss categories.

ACRONYMS

AMROC	American Rocket Corporation
CCAFS	Cape Canaveral Air Force Station, Florida
KMR	Kwajalein Missile Range, Pacific Ocean
RTS	Formerly, Kwajalein Missile Range, Pacific Ocean
KTF	Kauai Test Facility, Hawaii
LTV	Ling Temco Vought
SFA	Spaceport Florida
SMLV	Single Module Launch Vehicle
SSI	Space Services, Incorporated
VAFB	Vandenberg Air Force Base, California
WFF	Wallops Flight Facility, Virginia
WSMR	White Sands Missile Range, New Mexico
WTR	Woomera Test Range, Australia