



Stakeholders Newsletter

November & December, 2015

Image credit: NASA

WELCOME

Dear <<First Name>>,

As 2015, a year of tremendous accomplishment and growth for the commercial spaceflight industry, winds to a close, I'd like to briefly reflect on some of the events and highlights.

This year, we saw our industry take off with greater momentum than ever before. To name just a few examples: SpaceX is poised to return to flight by the end of this year, and Virgin Galactic is making great headway on its new SpaceShip 2. Blue Origin pulled off a tremendously successful launch and landing of its New Shepard rocket in November, and Bigelow Aerospace will be launching its revolutionary BEAM module to the ISS by early 2016. Planetary Resources deployed their first spacecraft, AGI won its first space command contract with the U.S. government, and Spaceport America unveiled the "Spaceport America Experience." Meanwhile, Moon Express, World View Enterprises,

XCOR Aerospace, and Sierra Nevada have all announced plans to begin flight operations in the next year or two.

We also saw great things come from NASA's Flight Opportunities Program, which allowed companies like Masten Space Systems and World View to participate in groundbreaking research. NASA's Flight Opportunities Program takes promising technologies from industry, academia and government beyond the laboratory environment and gives them the flight heritage needed for infusion into exploration missions.

Policy-side, CSF worked hard with Congress in November to bring about a major win with the Commercial Space Launch Competitiveness Act (CSLCA). By extending the indemnification regime and learning period, addressing issues of spaceflight participant liability, and laying the legal framework for extraterrestrial resource extraction, this business-friendly piece of legislation will surely be remembered as setting the stage for ever more opportunities and growth in commercial space.

Meanwhile, we've been hard at work preparing a response to the NTSB's accident investigation report, hosted a Google+ Hangout discussing space resources in the new legislation, and are reviewing and revising the process by which we develop industry voluntary consensus standards. Needless to say, we've been very busy this December!

While 2015 has been a successful year by anyone's count, we at CSF are looking forward to 2016 with great anticipation. Along with continuing to engage with public and private stakeholders in order to advance the aims and interests of our member companies, we are excited about celebrating the ten year anniversary of our organization.

As always, feel free to reach out if you have any questions.

Warmest regards,
Eric

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ABOUT US

The [Commercial Spaceflight Federation](#) (CSF) is the industry organization of leading businesses and organizations working to make commercial human spaceflight a reality. Our mission is to promote the development of commercial human spaceflight, pursue ever higher levels of safety, and share best practices and expertise throughout the industry.

Currently, [74 businesses and organizations](#) are CSF members. Executive Members include commercial spaceflight developers, operators, and spaceports. Associate Members include suppliers supporting commercial spaceflight, with recent members including suppliers of mission support services and suppliers of training, medical, and life-support products and services.

POLICY HIGHLIGHT

Amidst the Congressional deadlock and partisan impasse of our present day, it is difficult for an observer of politics to identify a topic for which there is widespread bipartisan and bicameral support. Fortunately for those who desire consensus and compromise in American politics and who champion the commercial space industry, the recent passage of the Commercial Space Launch Competitiveness Act is a welcome example of sound policy borne from “across-the-aisle” cooperation and understanding.

The Commercial Space Launch Competitiveness Act (CSLCA) represents the most significant modernization of commercial space policy and regulatory legislation since the original Commercial Space Launch Act (CSLA) was enacted in 1984. Among other provisions, the legislation provides a number of pro-business measures such as the establishment of legal rights for US citizens to own resources in outer space and the

extension of indemnification for commercial launches through 2025. Champions of the bill believe it will spur considerable levels of investment and innovation in the burgeoning commercial space sector while ensure higher levels of industry safety. Its passage, a solid victory for the commercial space industry, is expected to benefit and solidify American leadership in outer space.

Commercial spaceflight has long enjoyed rather broad bipartisan support. The original CSLA, considered by some to be a seminal achievement of Congress, reflected what Senator Ted Cruz (R-TX), a co-sponsor of CSLCA, called “President Reagan’s efforts to establish America’s leading role in the commercial space sector.” Keeping true to this element of Reagan’s legacy, the CSLCA comes while there is a growing cadence in commercial launches and spaceflight operations, in part a product of the Obama administration's strong push for commercial crew and cargo programs. The commitment to commercial space by the Reagan and Obama administrations is reflective of a support which transcends our otherwise stark political differences.

Yet even more indicative of this solid bipartisanship and cooperation is the manner by which the CSLCA came into being and was passed.

The House version of the bill, HR2262, introduced in May, saw sponsorship by a primarily Republican cadre of legislators: Representatives Kevin McCarthy (R-CA), Steven Palazzo (R-MS), Dana Rohrabacher (R-CA), Frank Lucas (R-OK), Michael McCaul (R-TX), Bill Posey (R-FL), Stephen Knight (R-CA), Brian Babin (R-TX), Randy Hultgren (R-IL), Jim Bridenstine (R-OK), Randy Weber Sr. (R-TX), and John Moolenaar (R-MI). Yet it contained another bill sponsored by Representatives Bill Posey (R-FL) and Derek Kilmer (D-WA) and secured 48 Democratic votes to pass with the House with a 68% majority. The final form of the legislation passed the House by voice vote, having faced very little objection.

Senate-side, the bill, S.1297, was sponsored by a mixture of members from both parties: Senators Ted Cruz (R-TX), Bill Nelson (D-FL), Ranking Member of the Senate Committee on Space, Science, and Competitiveness, Marco Rubio (R-FL), Gary Peters (D-MI), Cory Gardner (R-CO), and Tom Udall (D-NM). It incorporated language which Senators Marco Rubio and Patty Murray (D-WA) built off of Representatives Posey’s and Kilmer’s bill in the House. Significantly, in its final form, the legislation passed unopposed in the only-nominally Republican-controlled Senate through unanimous consent.

Throughout the legislative process, members of both parties recognized the value of strong policy over political gamesmanship. The finalized form of the CSLA incorporated language from both the House and Senate versions of the bill – language which was largely similar in scope and intent in the first place. Examples of cooperation on the part of individual lawmakers abound. Reps. Posey and McCarthy, who have had their differences within the Republican Party, nonetheless worked very well together on this bill. The compromise language between the Senate and the House was negotiated in large part

between House Committee on Science, Space, and Technology Chairman Lamar Smith (R-FL) and Ranking Member Senator Nelson. One of the few issues facing the CSLCA, a last-minute holdup in the Senate involving concerns over liability provisions, was dealt with by a compromise carefully crafted by Senators Cruz, Nelson, Peters, and John Thune (R-SD) that won bicameral, bipartisan support.

Equally reflective of an “across-the-aisle” sense of consensus on the legislation were the statements made by key legislators in the process. Senator Rubio commended “this bipartisan legislation [that] makes a commitment to supporting the continued development of a strong commercial space sector.” Senator Nelson concurred, arguing that “This will help clear the way for the commercial space companies to grow and thrive on Florida’s Space Coast and across the nation. And that will help with our push to explore Mars while providing jobs and growing the economy closer to home.” In the House, Chairman Smith echoed his Senate colleagues, saying “This bill secures American leadership in space and fosters the development of advanced space technologies... It provides the boost America’s private space partners need as they lead the world into the future.” And Majority Leader McCarthy lauded the bipartisan experience, stating “We have met with countless stakeholders and considered this bill in committee with markups, on the House floor under a rule that allowed for amendments, and successfully negotiated a bipartisan, bicameral bill with the Senate. By all measures, this is how the legislative process should work.”

As a signal of support for the bipartisan and bicameral nature of the CSLCA, the bill won widespread support from its key stakeholders in the commercial space industry. The Commercial Spaceflight Federation expressed this support in a press release congratulating those involved “for their leadership and perseverance in passing this critical piece of bipartisan legislation to ensure that America remains the leader in space.” Similar sentiments were echoed in press releases from commercial space companies such as SpaceX, Blue Origin, Planetary Resources, and Virgin Galactic.

At a time when partisan showmanship and Congressional sluggishness dominates the news cycle, it is heartening to know that our representatives can still find common ground on policy that promote the United States’ technological, scientific, and economic leadership in the 21st century. America’s leadership in space is a matter important to all legislators, regardless of their political affiliation or ideological position, and the passage of the CSLCA speaks to that. If the original CSLA should be considered one of the “seminal achievements of Congress,” the CSLCA should be considered the same – not just for what it does for the commercial space industry, but for how it demonstrates that bipartisan political consensus and compromise can be reached in our otherwise partisan time.

If you have any questions regarding anything I covered in this policy update please don't hesitate to give me a call or send me an email.

Tommy

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UPCOMING EVENTS AND DEADLINES

[PTC'16](#)

January 17-20, 2016 | Honolulu, HI

[Moving the Future Conference](#)

February 12, 2016 | Boston

[NASA Astronaut Application Period Closes](#)

February 18, 2016

[2nd IAA Latin America CubeSat Workshop](#)

February 28 - March 2, 2016 | Florianopolis, SC Brazil

[International Astronomical Conference Paper Abstracts Due](#)

February 29, 2016

CSF UPDATES

October 6: CSF President Eric Stallmer moderated a panel discussion at the House of Sweden in Washington DC that discussed suborbital space travel and space sustainability. Karin Nilsson, Chief Executive of Spaceport Sweden, served as one of the panelists .

October 19: AIAA and CSF convened to discuss industry standards.

October 20-21: CSF staff attended the fall 2015 Commercial Space Transportation Advisory Committee.

October 22: CSF staff attended the Women In Aerospace Annual Awards Dinner & Ceremony.

November 16: CSF staff attended the Center for Strategic and International Studies' Global Security Forum 2015.

November 16 - November 20: CSF President Eric Stallmer attended the Space Tech Expo in Bremen, Germany, where he moderated a panel on space hardware reusability.

November 17 - November 19: Assistant Director Jane Kinney attended the SpaceComm Conference in Houston, Texas. While there, she discussed commercial spaceflight in an interview with the Discovery Channel.

November 30: CSF hosted a "Friendsgiving" reception to celebrate the signing into law of the Commercial Space Launch Competitiveness Act.

December 1: CSF hosted a Google+ Hangout to discuss CSLCA, with a focus on the provisions that deal with Space Resources.

RECENT INDUSTRY NEWS

October 1: [The U.S. Air Force awarded orbit-modeling software provider AGI](#) a contract valued at \$8.4 million for a subscription service for data from the company's Commercial Space Operations Center, or ComSpOC.

October 1: [Moon Express, Inc. is one step closer to becoming the first private company to land a spacecraft on the Moon.](#) The company announced it signed a contract with Rocket Lab on Sept. 30 to launch three Moon Express robotic spacecraft to land on the Moon starting in 2017. Moon Express is the first company in history to secure such a contract.

October 7: [Spaceport Colorado](#) aims to secure approval for its commercial spaceport license in the second quarter of 2016, said air and spaceport director David Ruppel.

October 8: [Sierra Nevada Corp. expects to start a new series of unpowered flight tests of its Dream Chaser](#) spacecraft in early 2016 as the company awaits the outcome of a NASA commercial cargo competition.

October 14: As part of its Venture Class Launch Services program, [NASA awarded contracts for one launch each to Firefly Space Systems of Cedar Park, Texas; Rocket Lab USA, headquartered in Los Angeles but with most of its engineering staff based in New Zealand; and Virgin Galactic of Long Beach, California.](#) The combined value of the contracts was \$17.1 million.

October 16: [George Mueller](#), who led NASA's human spaceflight efforts through the first moon landing and was credited as the "father of the space shuttle," died Oct. 12 after a brief illness. He was 97.

October 19: [The U.S. government, primarily the Department of Defense, plans to spend some \\$6 billion on efforts to monitor the space environment](#) in real time through 2020, according to the U.S. Government Accountability Office.

October 26: [World View](#) has successfully completed a major milestone test flight this past weekend, keeping the company on track to meet its 2017 goal for manned private flights to the edge of space. This test flight carried a scaled down, replica spacecraft to a final altitude of 100,475 feet (30624 meters), successfully marking the transition from sub-scale testing to a historical next stage of development – full scale testing.

October 28: The House of Representatives passed legislation Oct. 27 to [reauthorize the U.S. Export-Import Bank](#). The House voted 313–118 to pass H.R. 597, a bill that extends the bank's authorization through fiscal year 2019 and makes reforms to the bank. The bill had broad bipartisan support, with a majority of Republican members voting with all but one Democrat in favor of the bill.

October 29: A [NASA investigation into last year's failure of an Orbital ATK Antares launch vehicle](#) identified three possible technical root causes of the accident, a conclusion consistent with, but not identical to, Orbital's own investigation.

November 4: The White House [issued a directive](#) to U.S. agencies involved in space weather to consider commercial sources of observation data as they draft a unified, long-term plan for forecasting solar storms.

November 5: NASA has once again [delayed the award of commercial contracts](#) to transport cargo to and from the International Space Station, pushing the announcement of contracts until as late as the end of January 2016 and dropping Boeing from the competition.

November 6: Orbcomm Inc. said it remained [cautiously optimistic](#) that SpaceX will return to flight in December by launching 11 Orbcomm second-generation satellites, filling a "hole in the sky" that has caused service delays for some customers.

November 10: Virgin Galactic has hired the company's [first female test pilot](#). Kelly Latimer, a retired U.S. Air Force lieutenant colonel, worked with Boeing and NASA's Armstrong Flight Research Center prior to joining Virgin Galactic.

November 11: The United States Senate [passed through unanimous consent](#) the U.S. Commercial Space Launch Competitiveness Act, a commercial space bill that extends two

key regulatory provisions and provides limited property rights for resources extracted from asteroids.

November 13: Fidelity has [written up its investment](#) in the company by 15 percent in one fund that holds company shares, and by a similar amount in another fund. The decision to write up SpaceX's value comes as Fidelity is writing down its stakes in other technology companies, like Snapchat.

November 16: The U.S. Air Force is [looking for new data](#) from commercial providers to better map satellite movements and help detect threats to U.S. military satellites, according to a November 4 request for information.

November 16: The United States House of Representatives [passed](#) the Commercial Space Launch Competitiveness Act, previously passed by the Senate on November 11, after about a half-hour debate on the House floor.

November 17: Chirag Parikh, director of space policy at the White House National Security Council since late 2010, [has announced](#) he is leaving his post for a leadership position at the National Geospatial-Intelligence Agency.

November 20: Jeff Bezos, Blue Origin's founder, [said that](#) work was ramping up for another flight of the company's New Shepard vehicle, but did not give an estimated date of the flight. Company officials have recently said another test flight is planned before the end of the year. A goal of the next flight would be to recover both the vehicle's payload capsule and its propulsion module.

November 20: SpaceX [will launch astronauts](#) to the International Space Station in late 2017 under a Commercial Crew order NASA announced Nov. 20. SpaceX netted its first order some six months after Boeing, NASA's other provider of astronaut transportation services under Commercial Crew Transportation Capability (CCtCap) contracts awarded in September 2014.

November 24: Blue Origin announced that it launched its [New Shepard](#) suborbital vehicle on a second test flight, flying to the edge of space and successfully landing both sections of the vehicle.

December 1: After its next launch, [SpaceX hopes to fly a Falcon 9 booster back to a landing site on Cape Canaveral Air Force Station](#), making its first attempt to bring a booster down on land rather than on a platform in the ocean.

December 4: Virgin Galactic announced Dec. 3 that it has [purchased a Boeing 747 jetliner](#) to serve as the new carrier aircraft for its LauncherOne small satellite launch vehicle.

December 8: [The X Prize Foundation announced Dec. 8 that it has verified a launch contract announced in October by Moon Express](#), making the company the second with an approved deal to participate in the \$30 million Google Lunar X Prize competition to land spacecraft on the moon.

December 15: A Federal Aviation Administration advisory committee has recommended that the [FAA start discussions with the European Space Agency](#) about commercial participation in an international lunar base concept promoted by the agency's leader.

RESOURCES

Consult the following resources for the most up-to-date news and information about the commercial space industry!

Commercial Spaceflight Federation

Visit the [Commercial Spaceflight Federation homepage](#) for the most recent press releases and news stories featuring CSF member organizations.

Spaceflight Now Launch Tracker

Check out the [Spaceflight Now Launch Tracker](#) for the most up-to-date schedule of U.S. government, commercial, and foreign space launches.

SpacePolicyOnline.com

Go to [SpacePolicyOnline](#) for recent news and analysis as well as a comprehensive list of space-related hearings, briefings, and events in the Washington, DC area.

NASA Procurement Information

Consult the [NASA procurement page](#) for a breakdown of NASA spending by state and Congressional district; details include information about SBIR awards, grants, and contracts with universities and businesses.

FAA Office of Commercial Space Transportation (AST)

Head to the [FAA AST website](#) to view launch licenses and procedures as well as relevant legislation governing commercial space.



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