

## STATEMENT FOR CHARLIE BOLDEN

### NATIONAL PRESS CLUB EVENT

Tues., Feb. 2, 2010

Thank you, John, and thank you all for joining us this morning. I want to thank the National Press Club for hosting us. We appreciate this opportunity to share more details with you about the President's plans for NASA and America's path forward in space.

Yesterday, we unveiled President Obama's historic budget that launched NASA on a bold and ambitious effort to explore new worlds, develop more innovative technologies, foster new industries, and increase our understanding of the Earth, our solar system, and the universe.

Among the many fresh proposals is an enhanced focus on commercial partnerships. Today we have with us some pioneers in that field who we will be working with, and I'll tell you more about them in a moment.

But first, I would like to say how excited we are to have direction from our President to launch a new era of innovation and discovery. Reaching and living in space is complicated, dangerous and full of unknowns. The technology we need to sustain our leadership as a space faring nation is going to take all of our ingenuity,. But the President has now given us resources -- including \$6 billion of new funds over the next five years -- for significantly increased technology research and development -- a long term plan to think big... to grow... to imagine and to move us vigorously toward the dreams for tomorrow.

Tough budget choices in the past have led to decades of under-investment in space technology development. We have experienced cuts to other critical NASA programs, including Earth observation, aeronautics, robotic space exploration, science, and education and we would have cut short the operational life of the International Space Station at the height of its promised potential.

We believe that the technology shortfall we face is so fundamental that incremental changes or tinkering on the margins will not be sufficient to

address current and future needs. Rather, a fundamental “re-base lining” of our nation’s exploration efforts is needed. We must invest in fundamentally new innovations for space technology, and new ways of doing business if we are to develop a space exploration and development program that is truly sustainable over the long term.

This plan gives us a roadmap to even more historic achievements as it spurs innovation, employs Americans in exciting jobs, and engages people around the world. It pledges us to a renewed commitment to invention and development, to the creative and entrepreneurial spirit that is at the core of our country’s character.

The President has asked us to develop a detailed strategy for executing this plan in the weeks to come. Our goal is to revitalize NASA and introduce the reforms needed to lay a long-term foundation for the agency’s continued excellence and success. To do all of this, the President has increased NASA’s budget over the next five years, an extraordinary show of support in these tough budgetary times.

Today, several of our key partners in this future effort have traveled to Washington to be with us. We asked them for their boldest ideas and concepts, the things that we would truly need to make commercial crew a reality. They gave us some great proposals. This is by no means the end of this process, but it is a fantastic start. I’ll let them tell you briefly in their own words about what is on the drawing board in their shops, but let me also try to answer the question that many of you are asking. What will NASA gain from increased partnerships with industry to fly humans to space?

This initiative supports and fosters the commercial spaceflight industry and its growing capability by leveraging private investment and reducing development costs to the taxpayer; it ensures that commercial systems can safely and reliably transport humans to low-Earth orbit; and draws on our existing NASA spaceflight experience and makes our specialists available to provide insight and expertise.

With many bright minds working on our problems, we may soon have the prospect of multiple providers of space transportation. This would ensure that we have safe, reliable, redundant domestic capability. We do not have this today, which is the crux of our dependence on our Russian partners and the Soyuz and the reason we will have a gap in domestic human

spaceflight capability when the shuttle retires. We want robust back up capability in human spaceflight, and we want it to be made in America!

We're departing from the model of the past, in which the government funded all human space activities. This represents the entrance of the entrepreneurial mindset into a field that is poised for rapid growth and new jobs. And NASA will be driving competition, opening new markets and access to space, and catalyzing the potential of American industry. This is a good investment for America.

Remember that we already depend on commercial companies to launch all of our nation's most precious military and national security satellites. Today commercial companies launch all government communications, weather, imaging, navigation, and intelligence satellites, upon which our lives depend, at home and abroad.

A major benefit of this new partnership is the potential for thousands of new high-tech jobs and spin offs of other businesses that can support this industry and also take advantage of affordable access to space. There will be jobs in propulsion, communications and other industries. Exploration programs drive innovation throughout our economy, and NASA will be leading this economic competitiveness and growth.

There is a misconception that commercial crew means putting our astronauts in the care of untested providers. Quite the contrary, these will be the same providers who will be transporting our multi-billion dollar satellites. America's largest aerospace firms have decades of expertise in human space flight, and they too would be eligible to compete for this program. Even the new entrants will have demonstrated successful flights by the time they would carry astronauts In addition to cargo.

All of us travel on airplanes, and we feel safe because we know the government has set standards and oversees periodic inspections. For spaceflight, safety concerns are even more serious. These commercial flights will have to follow the same safety assurances to which NASA holds itself. As most of you know, I am a former astronaut and have flown four times on the space shuttle. I know personally the great challenges involved in sending humans into orbit, and have lost friends in the trying. I pledge to you that I will make it my job every day to ensure that everything is done efficiently and safely. I am blessed to lead a team of NASA employees who

are the best and brightest in government, and when my team commits itself to a goal, we have the will, the know how, and the commitment to attain it. We are also committed to doing it right. I

As the Augustine Committee reminded us in their recent report to the President, American commercial aerospace industry has always built the nation's crewed launch vehicles. Over its nearly 52-year life, NASA has built a deep foundation of experience and knowledge with a wide range of companies. These companies have been essential to all of our successes from Mercury to Shuttle as well as with our robotic missions, and multi-billion-dollar scientific satellites. They have long demonstrated they can do the job.

The Augustine Committee also said that, "There is little doubt that the U.S. aerospace industry, from historical builders ... to the new entrants, has the technical capability to build and operate a crew taxi to low-Earth orbit." And they believed, as do we, that they can have this capability by as early as 2016.

NASA itself has been mulling this idea for some time. In fact I was personally involved in working the concept of commercial operation of our space transportation system as far back as my early days as a fledgling astronaut in the early '80s, so it's not a new idea, but rather an idea whose time has come.

The future is unfolding before us now, and it couldn't be more exciting. With low-cost and safe transport to space, more people will be able to have the transformative experiences with which I have been blessed. Kids will be able to realistically envision a career that involves space, either going there or using it. As more of us travel into space, more will look back on our home planet with the special perspective that only space travel can provide. We will expand the global bonds we are already developing through the multi-national partnership that has built and is sustaining the International Space Station.

And with commercial companies providing transportation services, NASA will be able to focus on the greatest challenges that lie ahead, in areas where we already have a stellar track record, advancing cutting-edge technology and scientific discovery, and pushing the boundaries of new

frontiers -- on providing future explorers with dramatically greater capabilities than we have today.

We start down that path now. We have with us today our two funded participants in the Commercial Orbital Transportation Services program, SpaceX of California and Orbital Sciences Corporation of Virginia. They are both well on their way to demonstrations of cargo transport to the ISS and we look forward to their continued progress.

Today, I am also pleased to give you more details about the \$50 million that NASA is awarding to five companies through an open competition for funds from the American Recovery and Reinvestment Act of 2009 to support commercial crew development efforts. Each awardee has also proposed significant investment from other sources to leverage the taxpayer investment.

It's a bold first step. And while there are many vibrant companies out there with which we hope to partner in the future, these five and our two COTS participants are at the starting gate. They specialize in vertical take-off and landing, life support systems, low cost satellites and miniaturized avionics. They are payload specialists and builders of robotic spacecraft and new rockets that have never before existed.

Here's some more about the five companies getting grants today:

- **Blue Origin, located in Kent, Washington**, is developing *New Shepard*, a rocket-propelled vehicle designed to routinely fly multiple astronauts into space and to offer frequent opportunities for researchers to fly experiments in space and microgravity. Blue Origin will receive \$3.7 million for risk mitigation activities related to development of its "pusher" Launch Escape System and to produce a composite crew module for structural testing.
- **The Space Exploration division of The Boeing Company, headquartered in Houston**, has been involved in the development of new spacecraft systems including the X-15, Gemini, Apollo, Skylab, space shuttle and International Space Station. Boeing will receive \$18 million to develop its space transportation system, which includes a seven-person crew capsule that may launch on medium class expendable launch vehicles.

- **Paragon Space Development Corporation is a woman-owned small business headquartered in Tucson, Arizona.** Paragon has directly supported with spaceflight hardware more than 70 successful spaceflight missions involving the International Space Station, the Mir space station, the space shuttle and Soyuz. They will receive \$1.4 million for a development unit of an Environment Control and Life Support Air Revitalization System.
- **Sierra Nevada Corporation, of Centennial, Colorado,** manufactures satellites, spacecraft components, and rocket propulsion systems. The company will receive \$20 million to further develop its space transportation system, including the Dream Chaser seven-person spacecraft to be launched on an Atlas V 402 vehicle.
- **United Launch Alliance, located in Colorado,** is a joint venture of Lockheed Martin Corporation and The Boeing Company. ULA launches the Atlas and Delta expendable launch vehicle families and will receive \$6.7 million for an Emergency Detection System to monitor vehicle health of Atlas V and Delta IV rockets.

Courtesy of President Barack Obama, it's my pleasure to introduce to you in person these space pioneers. I'd like to ask the representatives of each of the companies to join me on stage and say a few words.

Ladies and gentlemen, these are the faces of a new frontier, the vanguard. We will certainly be adding to this group in the near future. The work has already started, and we advance it one more step today.

Congratulations to all the winners. I'd like to ask each of our commercial pioneers to say a word or two.

Robert Millman of Blue Origin

Brewster Shaw, VP and General Manager, NASA Systems, Boeing

Jane Poynter, President and Chair, Paragon Space Development Corp.

Mike Gass, President and Chief Executive, United Launch Alliance

Mark Sirangelo, VP and Chair, SNC Space Systems Board, Sierra Nevada Corp.

David Thompson, CEO, Orbital Science Corporation

Ken Bowersox, VP Astronaut Safety, SpaceX

Thank you all. Mr. Singh, I'm ready for questions.