

REMARKS FOR DEPUTY ADMINISTRATOR NEWMAN

FAA Commercial Space Transportation Advisory Committee COMSTAC

Feb. 3, 2016

It's a pleasure to be here at my first COMSTAC and to share the stage with Shana Dale, the first female Deputy Administrator of NASA.

I'm serving in my first full year as NASA Deputy Administrator. However, my connection with the agency covers the past three decades. Administrator Charlie Bolden and I are frequently queried on our strategy for NASA – more specifically – for exploration. Let me assure you that commercial space is a key component of our vision for the future.

Our intention is to expand our scientific portfolio, and infuse our aeronautics research and technology development efforts with greater resources. At the same time, we'll facilitate the development and success of a vibrant commercial space industry to provide cargo and crew access to the ISS and other low Earth orbit destinations.

COMMERCIAL OVERVIEW

It's been an amazing couple of years on the commercial front, with the first crew of astronauts chosen for the first test flight of a commercial mission. Meanwhile, SpaceX and The Boeing Company are under contract for our commercial crew services.

In the cargo arena, Orbital/ATK has resumed cargo delivery to the International Space Station – I was pleased to be at Orbital’s launch to the station in December -- and SpaceX is soon to follow. We also just contracted for the 2nd phase of cargo delivery, through 2024 our current commitment to the ISS, and have SpaceX, Orbital/ATK, and Sierra Nevada Corporation preparing for those critical missions. Each carrier is contracted for a minimum of six missions. So we are entering the 2nd generation of commercial cargo delivery to orbit -- something that is quite extraordinary standing on its own, but it’s one among many huge accomplishments in commercial space on our Journey to Mars.

Work has already been ongoing aboard the station to make it possible for the new commercial crew vehicles to dock to the ISS – and the actual docking adapter will be launching to the station soon. Commercial crew will also enable us to expand to a crew of 7 aboard the space station and make even more use of its unique facilities for helping us learn about human health in space and moving farther into the solar system.

Expanding the capability for science and technology demonstrations aboard the station is absolutely critical. As a former PI myself, I know well how important it is to get that astronaut time to help you carry out experiments or to demonstrate new technologies.

This year is extremely busy for commercial crew, from parachute tests, to launch pad certifications, to the completion of spacecraft that will actually fly into orbit. We have a lot of opportunities to build on the momentum of 2015 and carry us through a busy 2016 to landmark space achievements in 2017.

JOURNEY TO MARS

All of these things are making it possible for NASA to expand our human presence beyond LEO and realize the goal expressed by President Obama to develop the capability for humans to work, learn, operate and live safely beyond Earth for extended periods of time.

Our country is on a Journey to Mars, and it is a journey that will bring American astronauts to Mars in the 2030s. And with the progress in commercial crew and other technologies we will need, it is a journey that is well underway.

This effort is putting Americans to work, fueling advances in science, technology, education, innovation, medicine, and green energy, and it is teaching us more about our universe and the most important planet of all: spaceship Earth.

We are currently in the “Earth dependent” phase of this journey, where we’re conducting research and developing and testing technologies that will enable long-duration missions into deep space. American astronauts are taking it to the next level – literally – living aboard the space station.

(I’d note that our current call for astronauts closes Feb. 18, so if any of you are thinking of applying and perhaps flying some of those commercial missions, you only have 2 more weeks to turn in your application!)

HIGHLIGHT – BENEFITS OF THE JOURNEY

In nearly every state, Americans are working in more than 1,000 companies on NASA's partnerships with commercial companies to deliver the cargo and crew to the Station in support of this important work.

Meanwhile, across the board, about 80% of NASA's activities are carried out by our partners in industry and at America's academic institutions. We're developing more than 1,600 new technologies a year and working with business partners to transfer thousands of products, services and processes into the market for job creation and economic growth. And the business community is responding: more venture capital was invested in America's space industry in 2015 than the sum total of the previous 15 years combined.

So I think we've made incredible progress in achieving the dual purpose of returning astronaut launches to American soil while positioning to create a commercial market in low-Earth orbit that creates jobs and grows the American economy.

Few would have imagined back in 2010 that less than 6 years later we'd be able to say commercial carriers have transported nearly 16,000 kilograms (35,000 pounds) of space cargo (and counting!) to the International Space Station (ISS); or that we'd be so firmly on track to return launches of our astronauts to the ISS from American soil on American commercial carriers; or that we're succeeding at "insourcing" American jobs

and empowering American entrepreneurs and innovators to expand the commercial market in low-Earth orbit.

It is more than mere coincidence that we are also able to say that America is closer today than ever before to sending our astronauts to Mars.

THE VISION

As President Obama said in 2010 when he outlined the vision we have been pursuing, *“in fulfilling this task, we will not only extend humanity’s reach in space -- we will strengthen America’s leadership here on Earth.”*

Our investment in commercial space is creating jobs and it’s bringing us closer to sending American astronauts to Mars.

That journey is advancing our ability to provide reliable, safe, routine access to low-Earth orbit, and to conduct exploration beyond LEO. NASA will depend on the capabilities and talents of companies represented in this room to provide LEO access for cargo and crew. Next, we will turn our sights to the difficult and risky challenges of deep-space exploration.

But in deep space exploration as well, there are opportunities for the commercial sector. We’re at the early stages of soliciting input on what those partnerships might look like, but the technologies and capabilities we’ll need are coming into sharp focus.

For instance, in Human Exploration, we will begin development of a cis-lunar habitat and habitation systems that will enable extended duration human missions around the moon in preparation for human missions into deep space. This work builds on the technology and systems testing and demonstrations on ISS and the NextSTEP public-private partnerships to leverage additional public sector investments to develop commercial habitats in low-Earth orbit. Public-private partnerships leverage both kinds of investment to help us meet our requirements while also fostering the growth of commercial endeavors.

It's also gratifying to see that the Center for Advancement of Science in Space, or CASIS, which NASA has asked to maximize use of the station as a national lab, has reached capacity based on its share of crew time in 2015. CASIS has achieved this by drawing on research from commercial companies, academic institutions and government agencies, and by growing nontraditional demand.

Milestones like the one-year crew mission and the upcoming addition of a 7th crew member, as I mentioned, are making it possible for us to get the most out of station science and technology demonstrations.

Soon, the BEAM expandable space habitat also will be on its way to the station as well to demonstrate that new technology.

Back at the dawn of the space age, getting a human into space was too risky and too costly, for any company to take on by itself. Today, that has changed. We've learned a lot in the past 58 years, and we've been able to pass much of that on to our commercial partners in the form of our human rating requirements and critical safety lessons learned. Since they've been working hand in hand with us, the learning is mutual.

All of our partners have different approaches, different systems – none mandated by NASA. We also want to support the associated technologies and capabilities that will be necessary to ensure that this commercial sector of the economy grows and thrives and can respond to changes.

The innovation of commercial partners helps make possible a wide array of objectives and capabilities that not only NASA, but also many other stakeholders, want to achieve in space. We don't intend to be the only customer for LEO access. Other government agencies as well as other nations, academia, and businesses also are going to need these capabilities.

It's a complex process, and our friends at the FAA are also hard at work in the regulatory field. I'm pleased that at this conference commercial space is being discussed on so many fronts – from the technical, to the legislative, to the collaborative.

It's going to take all of us to make this work, but we're well underway, and let me repeat, the benefits for our nation are HUGE!

At the heart of it, this is not new. The Space Act that founded NASA in 1958 requires us to use commercial services to the extent feasible. What IS new, is what is now feasible!

The U.S. National Space Policy guiding us currently maintains as one of its key principles that, "A robust and competitive commercial space sector is vital to continued progress in space. The United States is committed to encouraging and facilitating the growth of a U.S. commercial space sector that supports American needs, is globally competitive, and advances U.S. leadership in the generation of new markets and innovation-driven entrepreneurship."

All of this brings NASA in line with a reinvigorated national focus on "capability creation" and the research and development and testing that will advance our priorities today and give us payoffs in the out-years, allowing future generations to have much greater capabilities to explore.

We're committed to a commercial space industry at NASA. In the long run, it's going to increase our human spaceflight capabilities; it's going to strengthen our leadership position in space exploration as it provides us with multiple, redundant, reliable capabilities to access space; and it's going to stimulate the economy and create a job-producing engine for America.

We are today living a new era of exploration, and we are happy at NASA to have so many energetic and entrepreneurial partners -- as well as partners in government, academia and the legislative branch -- helping us to create what I believe is a very bright future. Brilliant, in fact. I sincerely hope all of you want to be a part of that future.

Thank you. I'm happy to take your questions.