A SpacePolicyOnline.Com Hearing Summary

NASA FY2010 Budget Request

Senate Commerce, Science and Transportation Committee
Subcommittee on Science and Space
May 21, 2009

Chair: Sen. Bill Nelson (D-FL)
Ranking Member: Sen. David Vitter (R-LA)

Witness

Mr. Christopher Scolese, Acting NASA Administrator (prepared statement)

Background

NASA's Fiscal Year (FY) 2010 budget request is $18.7 billion, an increase of $904 million over the amount that was appropriated by Congress for FY2009. However, Congress included $1 billion for NASA in the American Recovery and Reinvestment Act (the "stimulus" bill), making a total of $18.8 billion available to the agency for FY2009, so the FY2010 request is essentially the same as the FY2009 funded level. The request is for FY2010 and includes projected funding levels for the next four years (FY2011-2014). Much of the debate over the FY2010 request concerns those "outyears" rather than FY2010 itself, particularly whether the flat funding projected for the Constellation program to build new launch vehicles and spacecraft to return humans to the Moon by 2020 is sufficient. The White House has created a panel, chaired by Norman Augustine, to assess options for the future human space flight program. See the webcast of this hearing (it begins at minute 24:28).

Nuggets

"We had a unique opportunity … to craft a COTS-D plan that would have funded the program at the level that folks needed. That path was not pursued. NASA did not obey the law…. Sometimes NASA doesn't want itself to be helped." Senator Nelson

Mr. Scolese replied to a question from Sen. Nelson by saying that NASA has 50-70% confidence that it can fly the remaining eight shuttle missions by the end of FY2010 (Sept. 30, 2010). He emphasized that it is no longer the date that is important; NASA is committed to flying all eight missions and "safety of flight is our number one priority."

Hearing Highlights

Augustine Panel on Options for NASA's Future Human Space Flight Activities

Senators Nelson and Vitter both expressed their views that the Augustine panel should not be constrained to stay within the projected budget set forth by the Obama Administration in the FY2010 budget, even though their instructions are to do so. Sen. Vitter emphasized that all options should be examined in terms of what the option is and how much it would cost. Mr. Scolese expressed confidence that the Augustine panel would consider all options, though he does not know which will be brought forward.

Space Shuttle Program

Sen. Nelson questioned the likelihood of flying eight shuttle missions by the end of September 2010. That would mean six flights in the 12 months of FY2010, while the most shuttle flights that have been flown in a 12-month period since the 2003 *Columbia* tragedy is four. Mr. Scolese replied that NASA has 50-70% confidence that it can fly the remaining eight shuttle missions by the end of FY2010 (Sept. 30, 2010). He emphasized that it is no longer the date that is important; NASA is committed to flying all eight missions and "safety of flight is our number one priority."

Sen. Vitter expressed concern repeatedly about layoffs in the shuttle program, especially at the Michoud facility in Louisiana. Mr. Scolese said that while layoffs that had been announced earlier in the year will go forward, there will be no further layoffs until the Augustine panel submits its report.

Human Return to the Moon

Sen. Nelson asked whether we would be able to return to the Moon by 2020 with the current budget. Mr. Scolese said that NASA was still looking at that, but it would be a challenge to meet that timeline.

Sen. Isakson (R-GA) asked about China's plans to go to the Moon: "How vibrant and rich is their space program right now?" Mr. Scolese replied that "it is very vibrant and very rich" and that "we don't actually know what their ultimate objectives are but they certainly are building the capability to go to the Moon if they want to sometime in the future." Sen. Isakson stated "we must remain competitive" in space exploration.

Taking Crews and Cargo to and from the Space Station: Russian Soyuz Flights and COTS-D

(Under current plans, the U.S. space shuttle will make its last flight in 2010, while its replacement, the Ares I/Orion system, will not be available until 2015. During that "gap," NASA will have to pay Russia to take NASA astronauts to and from the ISS, as well as astronauts from the other non-Russian partners -- Europe, Canada and Japan -- pursuant to the international agreements that govern the ISS program.)

During an exchange between Sen. Nelson and Mr. Scolese, it was confirmed that the new price Russia is charging is $51 million per seat, compared with $47 million per seat currently. NASA is committed to buying six seats at this time.

(One option is for NASA to facilitate the development of a U.S. commercial capability to take crews to and from ISS, called "COTS-D." COTS is the Commercial Orbital Transportation System program through which NASA is incentivizing the private sector to develop the capability to take cargo to the ISS on a commercial basis. COTS contracts have been awarded to two companies -- Orbital and SpaceX. COTS-D would expand that to a developing a commercial capability to take crew to the ISS, too.)

Sen. Nelson and Mr. Scolese had an extended discussion about COTS-D. Sen. Nelson reminded Mr. Scolese that Congress had authorized $150 million for COTS-D in the 2008 NASA Authorization Act, and had provided $150 million to NASA in the stimulus bill to shorten the "gap." Sen. Nelson wants a milestone-based COTS-D program. Mr. Scolese said that NASA looked at that, but decided that it needed to take a "measured" approach -- to work progressively from the ability to get into space; to rendezvous and docking with the ISS; to crew rescue (*i.e. a "lifeboat" capability where a capsule could be attached to the ISS for the crew to use in an emergency*); to carrying crew to the ISS (*which involves additional capabilities, such as a crew escape system on the launch pad*). Mr. Scolese continued that NASA concluded it needs to focus first on taking actions that could broadly help the community that wants to do this, such as setting clear and concise specifications and standards to which they can respond. He believes that will result in a commercial crew capability "quicker and safer" and also would serve to maximize competition.

Sen. Nelson replied that that is not what the legislation said, which was to spend $150 million for COTS-D. He asked if $150 million is enough to demonstrate that capability. Mr. Scolese responded that he did not think so, that it would probably take several times that amount. He noted that the company must develop and demonstrate not only the crew portion, but life support systems, launch escape systems, and recovery systems.

Repeating that Congress had passed legislation directing NASA how to proceed on COTS-D, Sen. Nelson said:

> "We had a unique opportunity this year between the 2009 operating plan and the additional funds provided by the stimulus bill and the development of the 2010 budget to craft a COTS-D plan that would have funded the program at the level that folks needed. And that path was not pursued. NASA did not obey the law. And again… I'm not saying it to you because you are the Acting Administrator since January 20, but I want to point this out that sometimes NASA doesn't want itself to be helped and in the process we've got to get our act together."

ISS as a National Laboratory

Sen. Nelson also expressed concern about how the ISS can be used as a national laboratory – as specified in the 2005 NASA authorization act – without significant "downmass" capability. *("Downmass" is what is brought back down to Earth. Originally the space shuttle was intended to be used to bring experiments and equipment back to Earth, but now that it will be terminated in 2010, the only spacecraft that can return anything to Earth is Russia's Soyuz, which has minimal downmass capabilities beyond that required for the crew itself*).

Mr. Scolese agreed that this is a problem and NASA is now focused on returning data from the experiments rather than the experiments themselves. He also said that NASA is looking at where to get more resources to use ISS as a national laboratory and promised to provide more details for the record.

(Text in italics was added for clarity.)