

NASA's FY2011 Budget Request and Issues  
House Science and Technology Committee  
February 25, 2010

Chair: Bart Gordon (D-TN) ([opening statement](#))  
Ranking Member: Ralph Hall (R-TX)

Space and Aeronautics Subcommittee Chair Gabrielle Giffords (D-AZ) ([opening statement](#))  
Space and Aeronautics Subcommittee Ranking Member Pete Olson (R-TX) ([opening statement](#))

Witness

Maj. Gen. Charles F. Bolden, Jr. (USMC, Ret.), NASA Administrator ([opening statement](#))

Background

On February 1, 2010, President Obama submitted his [FY2011 budget request](#) to Congress. For NASA, the budget request calls for cancelling NASA's [Constellation program](#) to return humans to the Moon by 2020 and someday send them to Mars as laid out in President George W. Bush's 2004 Vision for Space Exploration. Instead, the United States would turn to commercial companies to develop, build, launch and operate future human space transportation systems – a concept called “commercial crew.” The government would subsidize the companies by paying them \$6 billion over the next five years (FY2011-2014) and offer a market for their services. NASA hopes that this will be a more cost effective solution than having the government build a new crew transportation system as was being executed under the Constellation program, with its Ares I and Ares V launch vehicles and the Orion spacecraft. NASA has spent \$9 billion on Constellation to date, and NASA is requesting \$2.5 billion in the FY2011 budget (\$1.9 billion in FY2011, \$600 million in FY2012) for termination costs. Although Constellation would be cancelled, the NASA budget overall would increase by \$6 billion between FY2011 and FY2014. Additional funds would go to operating the International Space Station for an additional 5 years (to 2020), to space and earth science programs, to aeronautics research, and to space technology development. There had been rumors that the budget would be favorable towards the commercial crew concept, but the proposal to cancel Constellation completely came as a great surprise to almost everyone in the space community, including Congress, where it has been met with deep skepticism and even anger. For more background, see the [hearing charter](#) written by committee staff. The webcast of the hearing is available on the committee's [website](#).

Nuggets

“... will NASA's actions make these [commercial crew] companies ‘too important to fail’...?”  
Chairman Gordon

“We did not frivolously arrive at this budget.”  
NASA Administrator Bolden

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\* Mr. Hall did not attend the hearing. Rep. Pete Olson, ranking member of the Space and Aeronautics Subcommittee, took his place on the dais.

"NASA can't do everything ... I don't believe that the criticism that's saying that the decision being made has put us at risk of not having a human spaceflight capability ...is justified."

Rep. Dana Rohrabacher

"What's fundamentally at stake is whether future generations of astronauts speak English or speak Chinese."

Rep. David Wu

"This is not a program for a bold new path, it's more like managing America's decline."

Rep. Rob Bishop

### Hearing Highlights

#### *In a Nutshell*

The hearing was very well attended by committee Members, and three Members of Congress who are not Members of the committee but have strong interests in the topic also attended as guests: Rep. Rob Bishop (R-UT), Rep. Parker Griffith (R-AL, who had been a member of the committee as a Democrat before switching parties in late 2009 and losing his committee seat), and Rep. Bill Posey (R-FL). With one exception, all of the Members were somewhere between skeptical and adamantly opposed to the Administration's proposal to cancel the Constellation program and rely instead on commercial crew. The exception was Rep. Dana Rohrabacher (R-CA), a long-standing advocate of commercial space who applauded the Administration's decision. Chairman Gordon and a few other members mentioned positive aspects of the budget request, such as increased funding for aeronautics research, earth science missions, and technology development, but the predominant topic was the proposed changes to the human spaceflight program. Even Members whose districts would benefit from the added funding for science and technology opposed the Constellation decision.

#### *More Detail*

Chairman Gordon started the hearing by listing the positive aspects of the budget request – increased funding for NASA overall, increased funding for earth science missions and aeronautics research and technology development, as well as an extension of operation of the International Space Station for 5 more years to 2020. He then turned to the controversial aspects of the budget request – the proposal to cancel Constellation and rely on the private sector to develop a commercial crew capability instead. He challenged NASA Administrator Bolden to provide "concrete evidence" to show that there is a sufficient non-government market for commercial crew "or is NASA going to be on the hook to do whatever it takes to keep them in business since NASA will have no other means of getting into orbit? That is, will NASA's actions make these companies "too important to fail" making an analogy to the "too big to fail" financial institutions the government is now bailing out. Is there really a non-government market for human spaceflight, or will these companies become "wards of the state," he asked.

He ended his opening statement by warning Gen. Bolden that "at present I cannot be confident that the votes are there to enact this budget proposal as is, and you shouldn't be either." Later he directly asked Gen. Bolden what market analyses NASA had done to demonstrate that there is a non-government market for human spaceflight. Gen. Bolden replied that NASA had not done any and he had not asked for any to be done. Instead, NASA is relying on industry analyses. Chairman Gordon responded that was like the fox guarding the chicken house and

“not a satisfactory answer.” In that regard, Chairman Gordon noted that the FY2011 budget request asks for a 62% increase in what NASA plans to pay companies to develop a “commercial cargo” capability to take cargo to and from the International Space Station (called COTS – Commercial Orbital Transportation Services). He wondered how one could postulate that commercial crew would be less expensive than Constellation, when commercial cargo (which is obviously easier to transport than people) already is costing more than expected.

Chairman Gordon also asked about letters NASA had sent to the companies working on the Constellation program asking how much it would cost to terminate those contracts. Congress included language in the FY2010 Consolidated Appropriations Act specifying that NASA could not cancel Constellation or start a replacement program until Congress approved of such actions in an appropriations act. Gen. Bolden sought to assure him that NASA is in compliance with that provision and is not cancelling any Constellation contracts, only asking how much it will cost. (NASA says that the \$2.5 billion it is requesting for termination costs is only an estimate and it does not yet know how much the termination costs will be.)

Space and Aeronautics Subcommittee Ranking Member Pete Olson called the budget request a “radical departure from the consensus that developed” after the 2003 space shuttle Columbia accident: “I cannot understand how the Administration can propose such an ill-conceived decision to cancel the Constellation program without providing a compelling alternative plan with measurable goals and adequate resources. This budget proposal, relying as heavily as it does on the unproven capabilities of a nascent commercial space industry, contains very few details. At worst, I am afraid that its reliance on commercial is unfounded, and as a consequence, it not only threatens our leadership in space and our utilization of the International Space Station, but it also risks the loss of much of our aerospace industrial base and our highly-skilled workforce.”

During questioning, Rep. Olson pointed out that NASA’s Aerospace Safety Advisory Panel (ASAP) argued against cancelling the Ares I launch vehicle program, which is part of Constellation, in its most recent report. Gen. Bolden was a member of ASAP before he became NASA Administrator and his name is on that report. Rep. Olson asked if Gen. Bolden was disavowing the report, and Gen. Bolden said no, but that he and the panel’s chair, Adm. Joe Dyer (Ret.), sometimes agree to disagree.

Rep. Olson also pressed Gen. Bolden on what process was used to make the decisions represented in the budget and the extent to which he was directly involved in that process. Gen. Bolden responded that he could not discuss those “pre-decisional” deliberations but assured Rep. Olson that he had been involved and “got all the meetings I asked for.”

Rep. Dana Rohrabacher (R-CA) was the only member of the committee who supported the decision to cancel Constellation and rely on the commercial sector: “NASA can’t do everything.” The agency can’t have \$9 billion programs “that are... way behind schedule and over budget and ignore it,” he said. Decisions have to be made and “I appreciate the fact that this administration and you ... have decided to make some decisions.” He argued that complaints that the decision would hurt the workforce were misplaced, and maintaining the NASA workforce should not be a goal in and of itself. In summary, he said, “I don’t believe that the criticism that’s saying that the decision being made has put us at risk of not having a human spaceflight capability for the United States of America ... is justified.”

Rep. David Wu (D-OR) and others worried that other countries would take the lead in human spaceflight away from the United States: “What’s fundamentally at stake is whether future generations of astronauts speak English or speak Chinese.” He was skeptical that several

companies could compete to launch people into space, wryly asking to see NASA's business plan if the Administration really believed it. Noting that supporters of commercial crew liken it to when the government spurred the evolution of the commercial airline business after World War II, Rep. Wu said that the commercial space launch industry is too immature today and commercial aviation would have failed if the government made that investment in 1910 rather than after World War II.

Several members stated or inferred that they did not believe that Gen. Bolden was deeply involved in these decisions because they view the budget as harming the human spaceflight program and Gen. Bolden is a former astronaut. Rep. Giffords asked who was consulted to make such a radical decision to terminate the human spaceflight program. Gen. Bolden said that he consulted with his senior leaders over a period of months as well as with the President and "I played an integral part" in the process and "this is my program, it is my budget. I can't say that too many times."

Other members questioned whether this budget would be any more sustainable than previous programs. Rep. Marcia Fudge (D-OH) represents NASA's Glenn Research Center, which could benefit from the greater investment in technology development envisioned in the FY2011 budget request. She asked, however, what guarantees there were that the technology programs would not be cancelled: "If the commercial crew estimates rise how do we know technology development programs won't be sacrificed as they have in the past? Gen. Bolden responded he could not make any promises about the future, but that he knows what President Obama wants, exclaiming "We did not frivolously arrive at this budget."

Rep. Donna Edwards (D-MD) also represents a district (near NASA's Goddard Space Flight Center) that stands to gain if the proposal is adopted, but she said that "the fact of the matter is that this is really about a vision for our space program" which she compared to a three legged stool – "earth science..., the research and development and technology development, and human exploration." In her assessment, "With this budget we lose one of the legs of that stool."

Gen. Bolden pointed out in response to a question from Rep. McCaul (R-TX) that commercializing human spaceflight is not a new concept. When he joined NASA in the early 1980s, he recounted, NASA was considering turning space shuttle operations over to the commercial sector. That prospect ended with the 1986 Space Shuttle Challenger tragedy because President Reagan decided that the shuttle could not be used for launching satellites that could as easily be launched by rockets. But his point was that commercializing the shuttle had been under consideration. Later under intent questioning from Rep. Grayson (D-FL), Gen. Bolden added that he believes the current arrangement under which the United Space Alliance operates the shuttle system is a type of commercial crew capability. Rep. Grayson then asked why swap the shuttle for the new commercial crew concept. Gen. Bolden said it would relieve NASA of the responsibility and costs for maintaining infrastructure.

Rep. Bishop challenged the assertion that the President and NASA want to encourage children to study math and science because they were giving "pink slips" to the very people who had invested their lives in pursuing those careers: "This is not a program for a bold new path, it's more like managing America's decline."

Rep. Griffith worried that if a private company had a human spaceflight accident, it would not be able to recover: "Only the USA can survive that with the will of the American people." He argued that the debate is "not about jobs. The heart and soul of America is NASA. If we do anything, anything, to detract from that we're going to lose and we really can't afford to lose."

Rep. Posey noted that when then-Senator Obama campaigned in Florida, he promised to close the gap between when the shuttle ended and a new crew transportation system was available and he was not doing that. He also challenged statements that the Constellation program is over budget, when everyone knows that it was underfunded.