Space flight panel can't fit lunar mission into NASA budget

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When President Barack Obama named a panel to review NASA's manned space program, his aides said privately they were hoping the group would recommend scrapping NASA's troubled Ares I rocket program and finding another, cheaper way to get humans back to the moon.

But the Review of U.S. Human Space Flight Plans Committee came to a troubling conclusion this week: NASA's current budget offers no hope of sending humans past the international space station for 20 years or more.

And that confronts the administration with an enormous dilemma: how, in an era of trillion-dollar deficits, to find money to reinvigorate human

space exploration and avoid pulling the plug on a program that just celebrated the 40th anniversary of its first lunar landing.

"The public was promised a Cadillac, or at least a Buick," said one administration science official not authorized to speak for the White House. "There is some concern that we could end up with an Edsel."

Shaping the future of America's space program began Friday, when members of the committee presented their preliminary findings to NASA chief Charlie Bolden and White House officials. Initial reports indicated the group agreed to retire the space shuttle in 2011, extend the space station until 2020 and use more commercial rockets. They also liked the idea of exploring deep space -- rather than landing on the moon.

On Wednesday, the panel said Constellation, NASA's current back-to-the-moon program, is running $50 billion over the current budget through 2020. But the alternatives presented Friday are almost as expensive, requiring $20 billion to $30 billion more than the current budget through 2020.

The outcome was not entirely unexpected.

Even before Obama took office, officials had serious doubts about Constellation, particularly its Ares I rocket, which is expected to shake violently as it climbs through the atmosphere.

They especially questioned a rocket designed in part to take crew to the space station that wouldn't be ready until 2015 -- the same year the complex was supposed to be abandoned.

"I might not have a technical background, but I can read budget and schedule charts, and I can tell you that there are things that don't make

sense," Alan Ladwig, now a presidentially appointed policy adviser at NASA, told Florida space boosters last December.

But Obama officials were reluctant to kill the Constellation program by decree. They preferred that an independent panel come to what they saw as the only logical conclusion: that Ares I was, as one put it, "infeasible."

But they didn't expect that NASA's budget would leave no room for another rocket capable of flying beyond the space station.

Even the panel members themselves were surprised.

Norm Augustine, the retired Lockheed Martin CEO who leads the 10-member panel, said he was shocked at its inability to find an option that would fit within NASA's current manned space budget that the committee put at roughly $100 billion through 2020.

"I certainly didn't think it would miss by as much as it did," Augustine said. "One of the things that have troubled NASA the most in recent years is having objectives that they don't the resources to match."

That leaves the White House with a tough decision: back billions more for human space exploration or support an emasculated program that critics will call pointless.

It is up to Obama, says Marcia Smith, formerly a space expert at the Congressional Research Service and now a consultant, to decide whether human space exploration is a worthy priority or an unaffordable luxury.

"Giving NASA a couple more billion dollars a year for the next 20 years isn't really going to affect the deficit that much, considering how huge the deficit is," Smith said. "So it's a matter of presidential policy and what Obama wants to do."

Committee members are trying to find ways to reduce the costs of some of their options to make them more palatable. But the most likely option would be a new rocket designed and operated by a commercial company and purchased by the agency -- a dramatic break from current practices where NASA designs and "owns" its rockets.

And Congress might not go along because that would harm the contractors now working on the program.

What's more, any of the committee's options would devastate Florida's Space Coast, which faces an estimated 7,000 job losses at Kennedy Space Center in Cape Canaveral, Fla., when NASA retires the space shuttle. That in turn could trigger the loss of 21,000 more jobs outside the Space Center.

If the shuttle is retired in 2011, as now seems likely, it will be years before a new manned space rocket brings even some of those jobs back.

"We need to see what the final outcome is," said Lynda Weatherman, CEO of the Economic Development Commission of Florida's Space Coast. "Right now our strategy is to try to find work that supports a lunar mission. If it's not lunar, then it will be something else. There will be work from whatever they come out with. We just have to be smart enough to take advantage."

But, she added, "it's going to be a tough period."

For NASA allies on Capitol Hill, news that the agency does not have enough money to do what it wants is not so shocking. For years, members of congressional science committees have complained about underfunding.

But in a time of enormous budget deficits, a major boost is seen as

unlikely.

"NASA is getting $18 billion a year. That's more than all the other [space] agencies in the world combined. It's very difficult to make the argument for more money," said Vincent Sabathier of the Center for Strategic and International Studies, a Washington think tank.

Sabathier said NASA's best hope lies in giving a greater role to its international partners to develop key components of an exploration system, such as using a French rocket to launch a U.S. capsule.

"If you cannot find more money, you must work more closely with the international partners," he said. "Obama can use space as a foreign-policy tool, to rebuild its leadership in space."

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LOST IN SPACE?

Options presented to the White House by members of the Augustine Committee.

Stay the course:

• Continue Constellation Program of Ares I rocket to ferry astronauts and Ares V heavy-lift rocket. Space shuttle retired in 2010-11. International space station closed in 2015. First moon orbit would be sometime after 2028. Cost: $99 billion through 2020; $205 billion through 2030

Extend space station:

• Retire shuttle in 2011, but keep the station until 2020. Use commercial rocket instead of Ares I. Develop Ares V "lite." First moon orbit after

2028. Cost: $101 billion through 2020; $204 billion through 2030.

Extend shuttle:

• Fly shuttle until 2015; extend station to 2020, with commercial rockets taking crew there. Build Ares V "lite" or a new "heavy lift" rocket from shuttle fuel tank, main engines and solid-rocket boosters to carry humans to lunar orbit and scouting missions. First moon orbit in early 2020s. No cost data available.

3 "flexible" deep-space exploration options with shuttle retired in 2011 and space station in 2020:

• Build a shuttle-derived rocket; use orbiting fuel depots to orbit moon as soon as 2023; orbit asteroids in 2027; orbit Mars in 2029; land on moon by 2030. Cost: $123 billion through 2020; $266 billion through 2030.

• Build a commercial heavy-lift rocket; use orbiting fuel depots to orbit moon in 2024, asteroids in 2026, Mars in 2028 and land on the moon in 2029. $123 billion through 2020; $256 billion through 2030.

• Use commercial rockets to space station. Build Ares V "lite" to orbit moon in 2025, asteroids in 2030, Mars in 2034; land on moon in 2035. $126 billion through 2020; $272 billion through 2030.

SOURCE: Review of U.S. Human Space Flight Plans Committee, Aug. 12 data

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