

New NASA rocket faces delays

September 11 2013, by Mark K. Matthews

The debut launch of NASA's next big rocket - now slated for 2017 - likely will be delayed a year or two because the agency simply does not have the money to finish the rocket and its accompanying crew capsule on time, a top NASA official said Friday.

Lori Garver, leaving NASA after four years as deputy administrator, said NASA and Congress long have oversold the agency's ability to build the rocket, called the Space Launch System, and its Orion capsule on an annual budget of roughly \$3 billion.

"It's very clear that we could have slips of a year or two," said Garver, referring to both the 2017 launch - which won't have a crew - and the first planned flight of NASA astronauts aboard the SLS rocket in 2021.

"People are more optimistic than ... reality," she said in an interview with The Orlando Sentinel.

If she's right, the double delay would mean more heartburn for Kennedy Space Center, which has been reeling since the 2011 retirement of the [space shuttle](#) caused the loss of thousands of jobs. It would also be another setback for NASA's human-spaceflight program, which hasn't built a [new rocket](#) in more than 30 years and relies on Russia to transport astronauts to the International Space Station.

And perhaps worse, Garver and other critics say, the agency's quixotic bid to build the largest rocket in history will gut other NASA programs, such as probes to further [planetary science](#).

"NASA is going to unilaterally give up on (visiting) the [outer planets](#)," said Casey Dreier, a policy analyst with The Planetary Society, a space-[advocacy group](#).

In response to Garver, NASA released a statement saying that the budget submitted by the White House to Congress "fully funds the Space Launch System and Orion to launch in 2017 as planned."

That stance was echoed by a top Boeing official. Boeing is building the "core stage" of the rocket, which resembles the shuttle with two booster rockets on either side of an [external tank](#). The main difference is that the plane-like orbiter is gone, replaced by a crew capsule atop the core stage.

"I have not heard even rumors of slips on this SLS rocket. In fact, my schedule looks five months ahead of schedule. That's across the board," said Virginia Barnes, Boeing's program manager for the SLS [rocket](#).

But Garver said she has math and history on her side.

NASA has a lengthy record of schedule delays and cost overruns, starting with the agency's now-defunct Constellation moon program, which was to land a human on the moon by 2020. NASA spent five years and \$13 billion on that project before President Barack Obama canceled it in 2010 - though pieces of Constellation, including the Orion capsule, remain as part of the current program.

Constellation collapsed despite annual spending of nearly \$3 billion - about what is being spent on SLS and Orion today - and NASA said it actually needed more than twice that amount. But there's no hope in today's constrained budget of spending that much on SLS and Orion.

"NASA still has too much on its plate," said Garver, who joined the agency in 2009 along with Administrator Charlie Bolden. "We came

here trying to avoid that, and I'm afraid we're headed back in that direction."

One sign of trouble was revealed last month when NASA's inspector general - who acts as the agency's watchdog - released a report that highlighted problems with Orion's heat shield, as well as efforts to get the capsule's weight below a 73,500-pound maximum.

"The (Orion) Program faces significant risks in meeting NASA's goal of human exploration beyond low Earth orbit," the report said.

Thanks to across-the-board cuts known as sequestration, NASA's 2013 budget was reduced to less than \$16.9 billion. If similar cuts come in future years - which is a strong possibility - NASA will have to choose between delaying SLS or cutting smaller programs, said Garver and others.

Already there are signs that other programs are being squeezed to protect a few big-ticket items - the largest of which is SLS and Orion.

For example, despite a \$900 million cut to NASA's budget in 2013, the agency reduced its \$3 billion budget for SLS and Orion by only about 4 percent, or \$118 million.

By contrast, about \$229 million, or 15 percent, was slashed from the planetary science division - which sends probes to other planets. Because of these cutbacks, Dreier said NASA can't attempt operations such as a proposed mission to launch a NASA "ship" to explore a liquid sea on Titan, the largest moon of Saturn.

And given NASA's history of cost overruns, Dreier said, development of SLS and Orion ultimately could lead to the cancellation of more NASA missions.

"It's a worry that everyone has in the space community - that it's going to consume NASA's budget internally," he said.

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