

Deficit hit men target NASA's post-shuttle plans

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This artist's rendering provided by Sierra Nevada Space Systems shows the company's Dream Chaser spacecraft docking with the International Space Station. The company hopes that by 2014 the Dream Chaser will make its first orbital flight and then eventually take space travelers to the International Space Station. NASA's effort to farm out astronaut trips to the International Space Station to private companies over the next decade is under fire again, this time by federal deficit hit men. (AP Photo/Sierra Nevada Space Systems)

(AP) -- NASA's effort to farm out astronauts' space station trips to private companies over the next decade is under fire again, this time by federal deficit hit men.

Spaceflight vendors stand to lose \$1.2 billion in NASA funding in 2015 under a proposal by the co-chairmen of President Barack Obama's bipartisan deficit commission.

Eliminating federal funding for commercial rocket rides is just one of dozens of ideas put forth earlier this month. It was No. 24 on the list and, outside of space circles, was barely noticed, overshadowed by proposed cuts in Social Security benefits and a call for higher taxes.

NASA isn't overly worried, for now. Neither are the entrepreneurs who are counting on government dollars to hurry their spacecraft and rockets along; they're used to the Earth-mired roller coaster ride. Besides, few if any observers expect the proposed cut to muster enough support.

But the fact that commercial spaceflight was targeted, underscores the vulnerability and controversy of the Obama administration's plan to get American astronauts to the International Space Station via commercial craft once the space shuttles stop flying next year.

"We're at the point now where it's either commercial human spaceflight or no human spaceflight in the U.S.," said the founder and chief executive officer of Space Explorations Technologies Corp., Elon Musk.

His California-based SpaceX is one of several companies vying to build rockets and spacecraft that could deliver astronauts or supplies to the space station, freeing NASA up to focus on grander deep-space adventures.

Unless those private businesses come up with safe and reliable means of transport, NASA will be forced to continue buying seats on Russian Soyuz spacecraft at a cost of tens of millions of dollars - per person.

A round-trip ticket to the space station in 2011 and 2012 will run NASA as much as \$51 million, up from the current \$26 million. The price will jump to \$56 million in 2013 and 2014.

With two or three Americans on the space station at any given time, and

crew swaps every six months, the millions add up fast. The orbiting outpost is expected to operate until at least 2020.

"The Russian price goes up every year, and they have a monopoly," said Sierra Nevada Corp.'s Mark Sirangelo. The company is building Dream Chaser, a winged mini-shuttle that it hopes to launch atop a rocket to the space station.

"Why should the U.S. spend money in Russia?" asked Sirangelo, who also serves as chairman of the Commercial Spaceflight Federation. "Why should we create Russian jobs and spend money on Russian technology when there are a number of U.S. companies who could provide the same kind of service?"

The federation represents 37 companies employing thousands of Americans working on real hardware and new concepts. Some of the firms are pushing the space tourism frontier on their own dime and have little if anything to lose by the government funding fracas.

NASA does not want to make too much out of the proposal to hack away at commercial space funding. A space agency spokesman in Washington said there would be no official comment on these "what ifs."

So far, NASA has pumped \$723 million into the commercial crew and cargo effort. Sirangelo sees opposition to all this as "somewhat of a PR issue." NASA has been working with private companies for decades to launch people as well as payloads, he noted.

Obama wanted \$6 billion set aside for commercial spaceflight in NASA's budget over the next five years, an amount that was reduced by Congress in the three-year spending plan that the president signed in October. Further cuts are possible as Congress wrangles over budget appropriations.

SpaceX's Musk said his Falcon rockets and Dragon capsules could be carrying cargo to the space station next year and people within three years of getting the go-ahead from NASA.

A Falcon 9 is due to blast off in December from Cape Canaveral on the first test flight under NASA's Commercial Orbital Transportation Services program for space station cargo. (June's successful test flight of the Falcon 9 was strictly a SpaceX affair.) The operational Dragon capsule will orbit the Earth a few times, for systems testing, before making a Pacific splashdown.

This week, the Federal Aviation Administration issued SpaceX a license for spacecraft re-entry from orbit - a first for commercial space.

SpaceX's has a \$1.6 billion contract with NASA for 12 cargo flights to the space station. Orbital Sciences Corp., NASA's other partner on cargo, has a \$1.9 billion contract for eight supply hauls. Orbital Sciences is revving up for an early 2011 test launch of its Taurus rocket and Cygnus spacecraft from NASA's Wallops Flight Facility in Virginia.

Hauling humans is trickier - and costlier - because of all the safeguards that need to be built in.

Retired space shuttle program manager Wayne Hale wrote in his blog in mid-November that commercial human spaceflight faces a "coming train wreck" because of all the astronaut-launching requirements proposed by the space agency. He said the document - a draft - "runs a mind-numbing 260 pages of densely spaced requirements" that would take massive amounts of work to document and verify.

"This, folks is the old way of doing business," he wrote. "This is one of the major reasons why spaceflight is as costly as it is."

Within three days, Hale was backtracking - a bit - after criticism from all sides.

If all goes well, Sierra Nevada expects to be flying Dream Chaser with a crew by 2014. The company is among five competing under NASA's \$50 million commercial crew development program, round one.

The others: Amazon.com founder Jeff Bezos' rocket company, Blue Origin; Boeing, which is teaming up with commercial space station builder Bigelow Aerospace; Paragon Space Development Corp., which is designing life-support systems; and United Launch Alliance, which builds the Atlas and Delta rockets.

It's no secret NASA wants to hedge its bets, in case the commercial contenders fall behind with their launches. Top managers are pushing for an extra shuttle flight next summer before the 30-year program ends to carry up enough supplies to tide the crews over until the commercial deliveries begin.

If the commercial rockets are delayed and there are no more shuttle flights, the space station could end up with a shortfall of supplies, shuttle program manager John Shannon warned last month. That, in turn, could prompt a reduction in crew size and a hiatus in research.

SpaceX wants to carry people into space one way or another. It will happen more quickly with NASA's help, said Musk, the co-founder of PayPal.

"NASA's like a huge accelerator, a huge risk reduction," Musk said. "They are key anchor tenants, the key anchor tenant, I'd say. You can do something without an anchor tenant, but it's a lot harder."

More information:

NASA: <http://www.nasa.gov/offices/c3po/home/index.html>

Commercial Spaceflight Federation:
<http://www.commercialspaceflight.org/>

Deficit commission: <http://www.fiscalcommission.gov/>

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