

# Obama cancels Moon return project

By Jonathan Amos  
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**President Barack Obama has cancelled the American project designed to take humans back to the Moon.**

The Constellation programme envisaged new rockets and a new crewship called Orion to put astronauts on the lunar surface by 2020.

But in his 2011 budget request issued on Monday, Mr Obama said the project was too costly, "behind schedule, and lacking in innovation".

US space agency Nasa has already spent \$9bn (£5.6bn) on the programme.

The president said Constellation was draining resources from other US space agency activities. He plans instead to turn to the private sector for launch services.

"While we're cancelling Constellation, we're not cancelling our ambitions," said Jim Kohlenberger, chief of staff at the White House Office of Science and Technology Policy (OSTP).

"This isn't a step backwards. I think the step backwards was trying to recreate the Moon landings of 40 years ago using largely yesterday's technology, instead of game-changing new technology that can take us further, faster and more affordably into space."

The decision to cancel Constellation was immediately condemned by Congressional figures who represent workforces dependent on the programme.

The Moon project was initiated by President George W Bush in the wake of the 2003 Columbia shuttle accident, which saw seven astronauts lose their lives when their vehicle broke up on re-entry to the Earth's atmosphere.

The idea was to retire the spaceplane and replace it with a new ship and new rockets capable of sending humans beyond low-Earth orbit (LEO).



The proposed Ares-1 rocket is being cancelled by Mr Obama

But critics claimed the programme was never properly funded, and when it ran into technical difficulties its time schedule also began to slip.

In addition to the \$9bn spent on the programme to date, Nasa will have to spend a further \$2.5bn to close it completely.

### Direction change

The president's budget request plans an investment of an additional \$6bn in Nasa over the next five years - an overall \$100bn commitment to the agency (its budget for 2011 would be \$19bn).

He wants some of the extra funding (\$500m in 2011) to be used to incentivise private companies, to help them bring forward a new generation of launch systems to carry humans to and from space.

As well as being a customer for these rockets and capsules, Nasa would also set and oversee standards, especially in matters of crew safety.

The hope is that the competition seeded by the agency would open up new markets for space activity.

"Nasa will accelerate and enhance its support for the commercial spaceflight industry to make travel to low-Earth orbit and beyond more accessible and more affordable," said Nasa chief Charlie Bolden.

"Imagine enabling hundreds, even thousands of people to visit or live in low-Earth orbit, while Nasa firmly focuses its gaze on the cosmic horizon beyond Earth."

To go beyond LEO, Nasa will implement a research and development programme to support future heavy-lift rocket systems.

This programme would include work on the development of new types of propulsion, and new exploration strategies.

### NASA 2011 BUDGET REQUEST



Adds an extra \$6bn to Nasa's budget over five years

Terminates George Bush's

Constellation Moon programme

Asks commercial launch firms to play a bigger role in future

Extends the life of the space station beyond 2016

Provides more money for robotic Solar System exploration

Funding for probes to the Moon, Mars and the Sun

Aims to accelerate the introduction of Earth observation satellites

Money to rebuild the Orbiting Carbon Observatory lost in 2009

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[Failure hits Nasa's 'CO2 hunter'](#)

One concept under consideration is the idea of having fuel depots in space. These could conceivably reduce the size of the largest rockets needed for big missions by sending the propellant for those ventures into orbit in smaller, more manageable batches - rather than on one heavy-lift vehicle.



Very big rockets might not be needed if spacecraft could be fuelled in orbit

But Nasa would have to develop the in-orbit technologies required to store cryogenic liquids and transfer them from one spacecraft to another, perhaps robotically.

Mr Obama wants to allocate almost \$14bn on a new R&D exploration programme over the next five years.

In addition, Monday's funding boost will enable America to extend the operation of the ISS from 2015 to at least 2020.

### **Congressional opposition**

The changes fit broadly with ideas put forward by a special panel convened last year by Mr Obama to review US human spaceflight options.

The Augustine committee argued strongly in favour of giving the commercial sector a greater role in the nation's space programme.



The Orion spaceship was a key part of the Constellation programme

The panel members thought such an approach could reduce costs and even speed up the adoption of new technologies.

Mr Obama is expected to have a battle to get his changes to Nasa's mission pushed through Congress.

Politicians from Alabama, Florida and Texas - the states that have most involvement in Constellation - have vowed to fight the cancellation.

"Congress cannot and will not sit back and watch the reckless abandonment of sound principles, a proven track record, a steady path to success, and the destruction of our human spaceflight programme," said Richard Shelby, a Republican senator from Alabama.

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