

Artemis Moon Mission

BY AUDREY DECKER, ROSMERY IZAGUIRRE | 12/05/2025 05:00 AM EST

PRO POINTS

- NASA is pushing to land astronauts on the moon before the end of President Donald Trump's term, framing the mission — Artemis III — as a grand feat for the nation and a contest with China, which is aiming for a lunar landing in 2030.
- SpaceX is building NASA's lunar lander, but the company is behind schedule, forcing NASA to reconsider its plans and consider whether another space company could deliver a lander sooner.
- Yet major questions remain — including whether another company could be ready before 2029, or if NASA could secure the money to pay for a second lander — leaving the moon mission in a precarious situation.

How We Got Here

More than 50 years after NASA landed humans on the moon for the first time, the space agency is struggling to pull it off again.

NASA enlisted Elon Musk's SpaceX in 2021 to build a lunar lander to return U.S. astronauts to the moon. But the new plan calls for complex technological feats that have never been done before — hoping to push the agency beyond what Apollo achieved.

And SpaceX's mega-rocket Starship, which will ferry the company's lander to orbit, has been hit with delays and setbacks, and NASA has said that landing humans on the moon in 2027 is no longer achievable.

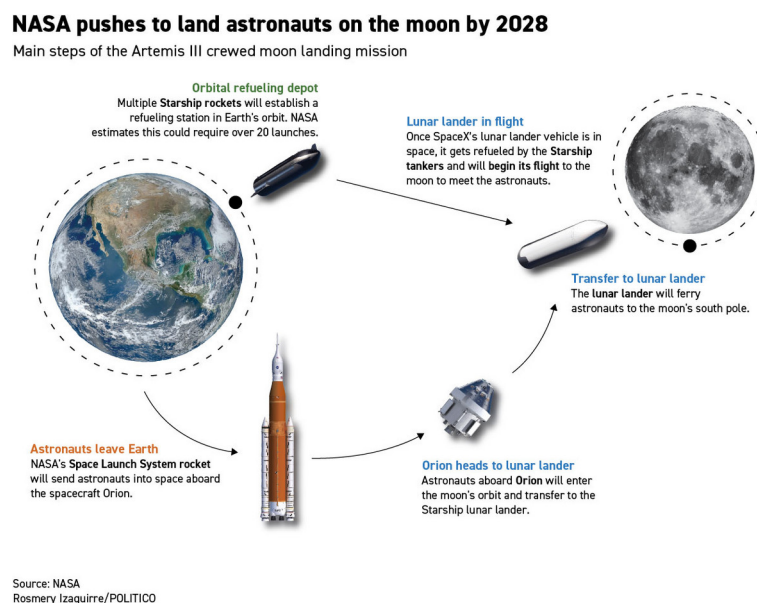
Those delays have opened the door for NASA leadership to reevaluate the original plan to use SpaceX's Starship rocket, and see if Blue Origin or another space company can get there first.

SpaceX now says it can be ready by September 2028, according to previous POLITICO reporting — still an ambitious timeline since the company needs to get its new rocket launching frequently and master in-space refueling, a capability no company has ever demonstrated.

Artemis III is far more complex than the Apollo mission NASA achieved decades ago. During those Apollo missions, astronauts launched to the moon with one rocket.

But the Artemis program wants to explore the moon's southern pole and set up a foundation for long-term, sustainable missions. That will require more power, necessitating multiple Starships to be launched to refuel the lunar lander. SpaceX hasn't confirmed how many launches will be needed, but NASA said it could require over 20 launches.

Under the current plan, astronauts would launch aboard the Orion spacecraft, built by Lockheed Martin. That vehicle would ride on top of a Boeing-built rocket, called the Space Launch System. Once in lunar orbit, the astronauts would move from Orion to the Starship lander, which would bring them down to the moon.



What's Next

Faced with delays, NASA is now reviewing new proposals from SpaceX and Blue Origin, which has a separate contract to build a lunar lander for future Artemis missions, to see if the companies can come up with new, accelerated plans to land astronauts on the moon.

Blue Origin's pitch will use designs and parts from its Mark 1 uncrewed cargo lander to develop a crewed vehicle. The company expects to test key technologies when it sends the Mark 1 uncrewed vehicle to the moon next year.

NASA also solicited bids from other space companies, and aerospace giant Lockheed Martin has made its own pitch. Company officials at the defense industry giant argue that starting fresh today would be faster than any other option.

The company is pitching a simplified lander that wouldn't require nascent in-space refueling technology, according to company officials. Still, Lockheed admits that even if they started it today, they couldn't commit to the 2028 to 2029 timeframe. And, in terms of money, "it won't be cheap," Rob Chambers, Lockheed's senior director of human spaceflight strategy, told POLITICO.

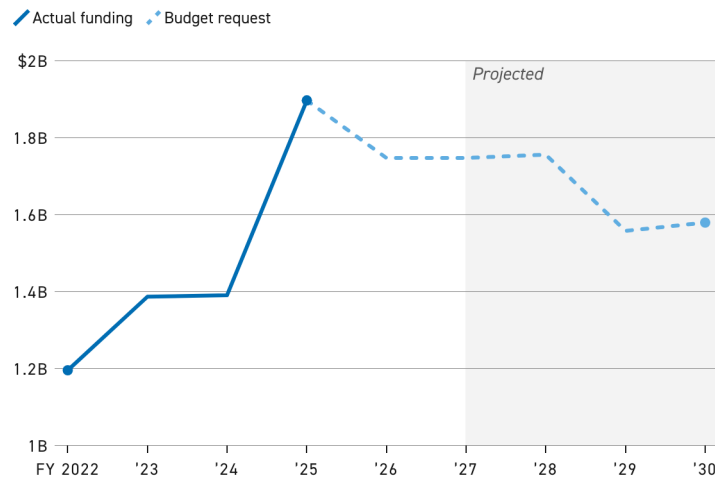
If NASA decides to go with Blue Origin's simplified pitch, or solicit help from another space company, it will need more money. The space agency could ask Congress for more funds — beyond the \$2.9 billion they've already allocated to SpaceX's delayed lander.

And Congress may be willing to reinvest, since the administration is framing the mission as a geopolitical race with China — rhetoric that typically gains traction from both sides of the aisle.

The Artemis program has received steady funding over the past few years. In its 2026 budget request, the Trump administration kept money flowing through the completion of the Artemis III mission, but proposed cutting the program after the mission.

Proposed funding for the lunar lander would slowly decrease by fiscal 2030

NASA budget request for Human Landing System



Both Senate and House appropriators appear ready to restore NASA's topline budget in the coming fiscal year to almost \$25 billion — reversing the administration's proposed cuts. And the agency received a massive boost in the reconciliation bill, which set aside billions for future Artemis flights.



POWER PLAYERS

- **SpaceX:** Elon Musk's company dominates the modern space industry — conducting the vast majority of U.S. launches and pioneering new technology, such as reusable rockets, giving it a leg up over competitors.
- **Blue Origin:** Founded in 2000 as a pet project of billionaire Jeff Bezos, the company has had a slow start catching up to SpaceX, but achieved recent success with its heavy-lift rocket New Glenn.
- **Lockheed Martin:** An aerospace and defense giant, Lockheed has worked on a host of NASA programs, including the Artemis Orion module, and has built many of the spacecraft that have gone to Mars.