## Position Paper

# The NASA 2026 Skinny Budget

May 2025

**NSS Supports an Increased NASA Budget**

NSS believes that our future in space and the use of the vast resources of space to benefit humanity requires an increased, not a decreased, NASA budget. Many projects of vital importance, including a base on the Moon and Mars, artificial gravity, advanced closed cycle life support systems, In-Situ Resource Utilization (ISRU), space solar power, and detailed resource surveys of the Moon, Mars, and asteroids are either not being funded at all, or only on a small scale. However, this does not mean that NSS supports all current NASA activities or believes that NASA is on an optimal course to create a hopeful future in space. In an ideal world with significant new spending within NASA for the type of projects described above, some current NASA projects might be re-envisioned, reduced, or eliminated.

**NSS (Mostly) Endorses the Proposed SLS Off-Ramp**

The NASA 2026 "Skinny" budget request states "*The Budget phases out the grossly expensive and delayed Space Launch System (SLS) rocket and Orion capsule after three flights. The Budget finds a program to replace SLS and Orion flights to the Moon with more cost-effective commercial systems that would support more ambitious subsequent lunar missions*." With the fully operational status of the Falcon Heavy, the successful first two flights of Vulcan, and the first flight of New Glenn, combined with impressive progress toward an operational Starship/Superheavy, it has become apparent that commercial vehicles are on a solid path to replacing the capabilities offered by SLS/Orion. At the same time, they are not fully ready today to replace upcoming SLS/Orion missions, so the proposed "off-ramp" of flying Artemis 2 and Artemis 3 as planned, followed by a re-envisioning of lunar exploration and development using commercial vehicles, is the most logical and cost-effective path forward. This view was endorsed by Dr. Scott Pace, director of the Space Policy institute at George Washington University, when he stated in written testimony on February 26th, 2025, that "We need an off-ramp for reliance on the SLS."

The most important part of this off-ramp is to immediately halt enhancements to the SLS system, such as improved launch platforms and enhanced upper stages. At the same time, the Gateway, which is not part of Artemis 3 lunar landing operations, should be terminated as proposed. Our position is not strictly that only Artemis 2 and 3 should fly with SLS/Orion; scenarios might exist in which additional flights of the existing SLS/Orion system are needed to ensure a safe landing on the Moon. The Orion capsule should be re-evaluated for continued use with launch vehicles other than the SLS. The need for additional SLS flights beyond those needed for an initial Moon landing can be re-evaluated at annual intervals taking into consideration progress on the various commercial alternatives.

NSS recognizes the significant engineering work that has been done on the Lunar Gateway to date and urges that NASA plan to repurpose the modules if this makes engineering and economic sense. In particular, the Power and Population module appears to be a good fit for a long duration robotic asteroid exploration mission with modifications for fully autonomous operations, and it is probably the nearest to completion. Other components of the Gateway might be upgraded to function as part of a lunar surface base, preserving the international partnership supporting the current Gateway project. Regardless of the precise plan for repurposing the Gateway components, maintaining most of the ISS international partners as part of a lunar base is of vital importance to the U.S. competitive position.

A repurposing of the Gateway components of particular interest to NSS calls for them to be deployed in geosynchronous orbit in crew-tended mode to support the deployment of space solar power satellites. This use of Gateway components also allows the platform to support research on life support, radiation shielding, and other technologies outside the Van Allen belts. Such research is important to support a journey to Mars. Additionally, it would be less expensive to maintain a version of the Gateway in geosynchronous orbit than around the Moon.

NSS has long supported the use of reusable, commercial vehicles as the foundation of our future on the Moon (see the Evolvable Lunar Architecture study of 2015). Low-cost, commercially available, reusable launch vehicles operating with supporting fuel depots are the foundation of our future on the Moon, including lunar bases. NSS believes that we must return to the Moon to stay, operating from a growing lunar base. Such a base would not be sustainable using SLS/Orion vehicles.

A key part of the NSS approach is to employ at least two, and ideally three, technologically different solutions for reaching the Moon supplied by different commercial vendors. Experience with both ISS Commercial Cargo and Commercial Crew has shown that engagement with multiple vendors is critical to sustainable and safe operations.

**NSS Endorses integrating MSR with Humans to Mars**

The NASA 2026 "Skinny" budget calls for the termination of Mars Sample Return (MSR) as currently conceptualized, and its integration with humans to Mars as the method for returning samples currently being cached on the Red Planet. NSS endorses this direction, as suggested in the recent NSS position paper opposing cuts in the NASA science budget. Continuing the current approach to MSR threatens other planetary missions while not supporting the development of technology needed for humans to Mars. NSS appreciates that this course may result in the Chinese returning modest samples from Mars before the U.S. Given the long history of U.S. leadership in Mars science, we believe it is more important to the U.S. to establish a base on the Moon and to land humans on Mars before the Chinese than it is to achieve this particular milestone.

**NSS Supports Crewed Bases on the Moon and Mars**

NSS believes that so-called "sortie" missions to explore the Moon and Mars will be too expensive to be sustainable. The best approach to the exploration of the Moon and Mars lies in the establishment of permanent surface bases maintained using ISRU technology. This is analogous to the transition from "sortie" microgravity research on the space shuttle to much more productive research on the continuously staffed ISS. Such a base supports a gradual transition to commercial operations in the same fashion as the ISS has done. From such bases, large numbers of surface traverses may be made to many more locations than could be practically visited directly from the Earth. It should be noted that ISRU locations and base locations may not be the same, and there is no necessity to co-locate mining operations with an exploration base. Additionally, the operation of a lunar base will enable the development of the logistics and transport systems needed for a journey to Mars.

**NSS Opposes Drastic Cuts in Space Science**

In our previously mentioned position paper, NSS has taken a position opposing drastic cuts in NASA space science. NSS opposes all cuts in heliophysics, planetary defense, astrophysics, astrobiology, and space-based astronomy, as well as the Nancy Grace Roman space telescope. Additionally, NSS calls for a restructuring of how planetary science is conducted to align with building crewed bases on the Moon and Mars.

### NSS Opposes Reductions in ISS Operations and Transition Funding

The NASA 2026 “Skinny” budget states “*The Budget reduces the space station’s crew size and on-board research…. Crew and cargo flights to the station would be significantly reduced. The station’s reduced research capacity would be focused on efforts critical to the Moon and Mars exploration programs.*”

NSS believes these proposed changes are unwise and counter-productive. To ensure that there is a gapless transition to commercial Low Earth Orbit (LEO) stations during the same time-period as a station de-orbit vehicle is being built, it is essential that Commercial LEO Destinations be fully funded, and that cargo/crew to the ISS be maintained or even increased to support growing commercial research on the ISS being done in preparation to the transition to commercial LEO stations. Rather than seeing a $508M cut to the ISS operations in 2026, we should be seeing significant increases in the ISS budget to ensure that the construction of the deorbit vehicle does not “hollow out” ISS research and the Commercial LEO Destinations (CLD) program. There is strong reason to think that current CLD funding is not sufficient to support a gapless transition, and we urge that the CLD line item in the 2026 budget be increased above current spending levels.

### NSS Urges that ISS Research and Crew Time Focus on the Transition to Commercial LEO

Historically, NASA has put an enormous focus on microgravity impacts on humans in preparation for a journey to Mars. As a result, NASA has created a rich trove of scientific and medical knowledge on the human response to microgravity. At this time, funds would be better spent to ensure that a thriving economy in LEO emerges post-ISS. We believe that thriving commercial crewed operations in LEO are foundational to the human future in space, including on the Moon and Mars. Some reductions in targeted ISS operations might be sensible in the context of full funding for the CLD program and a refocusing of ISS research on supporting the transition to commercial LEO stations and building demand for microgravity products.

## CONCLUSION

NSS advocates increasing NASA's budget rather than reducing it, emphasizing support for critical future-oriented projects like lunar and Mars bases, artificial gravity, space solar power, and in-space resource utilization. NSS generally supports the Administration's proposal to phase out the Space Launch System (SLS) and Orion capsule after Artemis 3, replacing them with more affordable commercial vehicles, while urging immediate cessation of further SLS enhancements and repurposing Lunar Gateway modules for alternative missions such as asteroid exploration, geosynchronous orbit support for space solar power, or lunar surface operations. Additionally, NSS endorses integrating Mars Sample Return missions into human missions to Mars, advocates for establishing permanent crewed bases rather than short-term exploratory missions, opposes severe cuts in NASA's science programs, and insists on maintaining robust ISS operations and research to ensure a seamless transition to commercial low Earth orbit destinations.

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