



U.S. HOUSE OF REPRESENTATIVES COMMITTEE ON
SCIENCE, SPACE, & TECHNOLOGY

Opening Statement

Chairman Don Beyer (D-VA)
of the Subcommittee on Space and Aeronautics

Subcommittee on Space and Aeronautics Hearing:
*NASA's Future in Low Earth Orbit: Considerations for International Space Station
Extension and Transition*

September 21, 2021

Good morning, and welcome to our distinguished witnesses. We are very pleased to have you with us today as we discuss “*NASA's Future in Low Earth Orbit: Considerations for International Space Station Extension and Transition.*”

The International Space Station—the ISS—has been an important component of America’s post-Apollo human spaceflight program for decades. Beginning in 1984 with President Reagan’s resurrecting the idea of developing a crewed orbiting space station that would include our allies and partners, followed by President Clinton’s decision to include the Russians in a redesigned station, it has continued through multiple Congresses and Administrations with development, assembly, and now full utilization. In many ways, the ISS epitomizes the long-term continuity of purpose that is essential to our human spaceflight program.

During its more than two decades of operation, the ISS has cemented our international partnerships, enabled knowledge of large structural assembly in space, supported extensive basic and applied research, maintained US expertise in human spaceflight operations, enabled the development of public private partnerships for cargo and crew transportation to the ISS, and opened space to multiple users, including commercial entities, academia, and other Federal government agencies. Perhaps, most importantly, it continues to inspire our youth as they are born into an era that has never been without an American living and working in low Earth orbit.

This Committee and multiple Congresses have shaped U.S. policy related to the ISS, and today we must continue to exercise our responsibilities as we face important decisions on the future of NASA’s role in low Earth orbit, the duration of ISS operations, what should follow, and ensuring a U.S. presence in LEO.

Has the ISS fulfilled its purpose? If not, what additional objectives need to be achieved during the ISS lifetime, how much additional time is needed, and is the ISS, as a facility, structurally fit to support the duration required to achieve those objectives?

If we're going to consider extending the ISS, we will need assurances of its structural integrity and safety.

Because, whether due to routine use, aging, or otherwise, the ISS structure is not problem-free. A debris hit to the Canadian arm, air leaks in the Russian segment, and the incident of the newly attached Russian module firing its thrusters-- causing the ISS to flip over until attitude control was regained -- are recent examples.

The 2020 Annual Report of the Aerospace Safety Advisory Panel – the ASAP – recommended “that NASA document the ISS life- limiting systems and components—through and beyond 2028—which are considered ... to be of highest risk to ISS lifetime” and that “NASA assess the engineering lead time required to develop and fly solutions to the highest risk failures if they were to occur before 2028.”

I look forward to hearing from our witnesses on this matter.

Whatever decision is made on the lifetime of ISS operations, we'll need a strong plan in place to ensure research and related activities can be transitioned seamlessly to alternative capabilities without a gap.

And, as we look to ISS transition, there is no getting around the fact that we'll need to consider the plan for deorbiting the facility, and the cost and responsibilities for that action.

The 2017 NASA Authorization Act directed NASA “to develop a plan to transition in a step-wise approach from the current regime that relies heavily on NASA sponsorship to a regime where NASA could be one of many customers of a low-Earth orbit non-governmental human space flight enterprise.”

NASA's current post-ISS plans are to use commercial LEO platforms or “destinations” to support its future activities in low Earth orbit and to purchase services from a commercial LEO providers.

While commercial activities in LEO are developing, multiple market studies have shown that commercial demand is not yet sufficient to support a commercial LEO platform or platforms and that NASA will need to be an anchor tenant for the foreseeable future.

To that end we'll need to understand NASA's costs and related commitments, once ISS operations cease, and what NASA support a private LEO platform will need, at what level, and for how long. We'll also need to understand the demand for a National Laboratory in low Earth orbit following the end of the ISS.

Because all of these decisions, while consequential from a U.S. policy perspective, also come with costs and resource implications. We need to go in with our eyes wide open.

There's the \$3-4 billion annual costs of operating the Station for whatever duration is decided, in addition to any NASA investment in commercial platform development, and the future costs associated with purchasing commercial LEO services.

And who is to pay for the sustainment of commercial LEO platforms, including repairs, supplies and ground-based mission operations? Will commercial providers be prepared to bear all of these costs, and what level of “savings” is NASA anticipating to accrue from being a customer?

Well, we have a lot to discuss today and I look forward to our witnesses testimony.

In closing, our decisions about the ISS and what follows are not only essential to sustaining our research in LEO, they also concern our nation’s strategic presence in space. How we’ll continue to engage with our international partners in LEO in a post-ISS era, and the implications of other activities, including China’s Space Station, must be considered.

The ISS partnership is a beacon of, and vehicle for, peaceful, international cooperation in outer space that has built the foundation for our collaborative next steps in human exploration—Moon to Mars. Maintaining the fabric of this peaceful coalition must guide us as this Subcommittee and Committee continues to shape our nation’s policy for civil space in low Earth orbit and outer space.