

Questions for the Record
U.S. Senate Committee on Commerce, Science, and Transportation
“Nominations Hearing”
April 21, 2021

Questions for the Record from Sen. Markey to the Hon. Bill Nelson, nominee for Administrator, NASA

Remote Sensors and Environmental Justice. The National Aeronautics and Space Administration (NASA) uses remote sensors to observe Earth and other planetary bodies. These sensors provide important data that can play a critical role in data-informed decision making about the state of our planet.

Question 1. As Administrator, would you support NASA’s collaboration with the Environmental Protection Agency and Council of Environmental Quality, to ensure that we have access to real-time remote sensing data to monitor environmental justice concerns, such as air quality, and complement data collection on the ground?

Answer. Yes. NASA engages in a number of interagency efforts providing data and expertise to support Federal and local policymakers, limited only by available funding, and has a number of data sources that may be of interest, including water availability, sea levels, soils, and applied expertise in a number of areas, including related to disasters such as flooding and wildfires. If confirmed, I look forward to working with NASA’s Earth Science division on how else NASA data and research can support these efforts.

Spacecraft assembly and manufacturing. NASA spacecraft play a major role in helping us monitor, understand, and characterize our changing climate. On-orbit robotic assembly and in-space manufacturing could help support more Earth Science and climate instruments to operate simultaneously.

Question 2. As Administrator, would you work to support this kind of transformational technologies, particularly in aiding Earth Science priorities?

Answer. Yes. On-orbit Servicing, Assembly, and Manufacturing or OSAM is an emerging set of capabilities that create the opportunity to assemble, maintain and repair spacecraft on-orbit, expand the scale of science platforms, manufacture structures/components, and extend the service life of on-orbit assets. NASA, other federal agencies, and the commercial space industry are working to develop these capabilities, all of which could help expand in-space observational capabilities, extend the life of satellites, and lower costs overall for space-based observations. NASA is developing a satellite servicing mission that will refuel and relocate a government- owned Earth science satellite (LANDSAT-7) to extend its life. As you note, these capabilities would be transformational, and I support their development.

Human Landing System Procurement. More than 3,800 U.S. companies, including small businesses, are advancing technologies and systems needed to meet NASA's goal of establishing a sustainable human presence at the Moon by 2028.

Question 3. As a result, do you commit to being transparent with Congress about Human Landing System procurement decisions, in order to foster competition and innovation?

Answer. Yes, transparency, to the extent possible given proprietary concerns, with Congress and the public is key.

Historical Memorabilia. NASA is in possession of artifacts and records of great historical value to the government and of high public interest.

Question 4. If confirmed as NASA Administrator, would you work to ensure NASA properly safeguard, store, index, manage and make publicly available these historical assets?

Answer. Yes, and I look forward to being briefed on the current status of NASA's historic assets.

Questions for the Record from Hon. Sinema to the Hon. Bill Nelson, nominee for Administrator, NASA

University Partnerships. As you know, I was Ranking Member on the Aviation and Space Subcommittee last year. I worked hard to champion university partnerships with NASA, to ensure projects remain on time and under budget. Our Arizona universities do excellent work with NASA, and I look forward to those strong relationships continuing.

Question 1. How do you plan on approaching university partnerships if you are confirmed as Administrator?

Answer. **I will continue and enhance university partnerships. Across all of NASA – human space flight, space science, aeronautics, space technology, and STEM - partnerships with universities and university researchers are critical to NASA’s success. If confirmed, I look forward to learning more about how NASA can expand work with universities to carry out its many missions and research.**

Near Earth Objects. The Near Earth Object Surveillance Mission is led by the University of Arizona, is critical to planetary defense, and unfortunately is way behind schedule due to inconsistent NASA support.

Question 2. Can you commit to keeping the mission moving forward and to keeping my team updated on the status of the mission as it progresses?

Answer. **Yes. The key to any strategy for responding to hazardous asteroids is early detection. I look forward to being briefed on the status and progress of the Near-Earth Object Surveillance Mission, and I will certainly keep you updated as the mission progress**

**Questions for the Record from Sen. Rosen to the Hon. Bill Nelson, nominee for
Administrator, NASA**

Artemis. Senator Nelson, as NASA continues forward on the Artemis project, what will you do to ensure competition within the HLS mission to ensure that we continue to enhance innovation, keep costs low, and reach the moon and cislunar space?

Answer. **If confirmed as Administrator, my goal is a competition for multiple lunar landers from multiple companies for the next phase of the HLS program. Competition in this program will drive innovation, cost savings, and give NASA the best possible chance to create a sustainable lunar exploration program that prepares us for eventual crewed missions to Mars. I look forward to working with the Congress to ensure NASA has the resources to enable competition for this program.**

Questions for the Record from Sen. Ben Ray Luján to the Hon. Bill Nelson, nominee for Administrator, NASA

Flight Opportunities Program and the Suborbital Crew Program. Mr. Nelson, two programs of particular interest to my home state of New Mexico are the Flight Opportunities Program and the Suborbital Crew Program. As you know, the Flight Opportunities Program has successfully worked with commercial suborbital companies to fly research payloads to space. In addition, the Flight Opportunities program recently released a call that allows those non-NASA researchers to propose human-tended payloads for flight through the program.

Question 1. How do you envision NASA expanding upon the important research conducted through these platforms and what can Congress do to assist?

Answer. I believe NASA should look at ways to increase research and flight opportunities for principal investigators, particularly early career researchers. The flight opportunities program has benefited the research community by giving them more spaceflight opportunities, and it has the added benefit of supporting the growing suborbital spaceflight industry. If confirmed, I look forward to being fully briefed on this program and others that involve suborbital spaceflight to ensure these programs are properly resourced.

Suborbital Crew Program. The Suborbital Crew Program was proposed last June as a way for NASA researchers and astronauts to train and conduct research in space. This program needs to be authorized in Congress, likely in a NASA Reauthorization, of which this committee has jurisdiction.

Question 2. I know you cannot comment on pending legislation, but can you indicate your intentions to implement and grow this program?

Answer. As nominee for NASA Administrator, I don't have full access to NASA's programs. If confirmed, I look forward to being fully briefed on the Suborbital Crew Program. On my shuttle flight, I performed 12 experiments in orbit, so I understand the value of human-tended experiments.

Spaceport America. Mr. Nelson, as you know New Mexico is home to Spaceport America, which is one of the twelve spaceports in the United States. I have seen firsthand the importance of this spaceport not only to the local economy but to the research and exploration conducted through the public private partnerships with the agency.

Question 3. Do you agree that continued improvements to America's spaceports are needed to grow not only our industry partnerships, but also for safe and sustainable government use?

Answer. It is critical that the U.S. have more than one way to access space, and I support continued improvements to our launch infrastructure to ensure such access. If demand for access to space continues to grow, it seems likely that more launch providers will explore using commercial spaceports to mitigate scheduling conflicts and congestion as exiting launch sites. NASA will continue to work with launch providers to assess their capabilities and the feasibility of flying NASA payloads on these launch systems.