

The Final Frontier



POLICY HEARING ROLE SHEET

Background Information on Senate Subcommittee Members Senate Subcommittee on Space Exploration (5 members)

Senator #1

From your analysis, you found that space science research has been responsible for many recent scientific breakthroughs. However, you realize that it is impossible to predict what future breakthroughs might occur. In light of a current crisis, you are leaning toward a substantial cutback of funding in future human and robotic space exploration, but you think that current missions and projects should not be affected by these cuts.

Senator #2

You represent a state that benefits a great deal from the science, research, and engineering that supports space exploration. Your research indicates that any cuts in the space program would mean a large number of lost jobs in your state. Since you are up for reelection next year, you are leaning toward level funding for all current space missions.

Senator #3

Your experience as a former research scientist has contributed to your opinion that space exploration is an important part of what makes this country great. While you have a grave concern with the current crisis, you are not sure to what extent funding cuts should be made to the space program. You are interested in hearing the evidence that is presented in these hearings before making a decision.

Senator #4

You have done extensive research on how space science has benefited agriculture and medicine. You understand that this research translates directly into the future quality of life. You are interested in hearing evidence in these two areas before making a decision.

Senator #5

As a retired military officer, you are familiar with how space science technology can be used by the armed forces to protect our country. However, you fear that if this crisis is not resolved soon, our way of living will be dramatically changed forever. You believe that all areas of the federal budget should be cut, thereby reducing the impact in the space program.

Mission Scientist

You were a member of a science team for two robotic space missions. One of the missions you are currently working on has come under scrutiny for mismanaging funds. You see technology applications that result from space explorations as a byproduct, but your real focus is on increasing understanding of the solar system.

Mission Engineer

You have worked on many space science missions in the past 20 years, including the management, design, and construction of several spacecraft and most of the science instruments for an upcoming robotic mission that will observe comets. You understand that it is critical to meet the science objectives for missions.

Space Agency Administrator

You have been a big advocate for human space missions over the years. Your interest is that the space station missions are as successful as possible, while still maintaining fiscal responsibility.

Astronomer

You have been observing far-away objects in our solar system for the last 30 years. You were the co-discoverer of a comet during your tenure at a major observatory. You hope to use the images from an upcoming mission to confirm your theories of the composition of comets, which will give us a better picture of the origin of our solar system.

Environmentalist

You have been an environmentalist since the 1960s. You do not care about NASA or the missions that are funded. You believe the money that is used for space exploration should be used to make the environment clean for the next generation. You are deeply concerned about the tremendous amount of energy used for launching space missions and the environmental impact of these launches on the wildlife and their habitats in Florida.

Teacher

You have been a proponent of the space program since you began teaching 20 years ago. You have been trained at several NASA sites and have attended space camp for teachers. You use many NASA education resources in your high school astronomy class. You see how the work that the space program does directly benefits your students. Space missions spark excitement in your students.

Media

As a member of the media for a large urban newspaper, you witnessed the tragedy of the Challenger space shuttle in 1986. Since then, you have been critical in your articles of the need for humans to travel in space, though you are a proponent of the robotic missions. You often write articles that highlight these robotic missions and the great number of achievements that can be accomplished at a fraction of the cost of missions that involve humans.

Student

While you think that space exploration is cool, you have never really considered how much money it costs. Although you think the space program should continue, the focus should be changed from supporting a space station to having humans travel to Mars.

Industry Leader

You are a major contractor for the United States space program. You are responsible for the building and launching of rockets that take space probes into orbit. Your company would suffer as a result of any funding cuts. You propose keeping the funding as it is and potentially cutting back social programs to pay for these unexpected expenses.

Industry Leader

As the CEO of a large computer company, you have been a part of the microchip industry since it began. You have personally witnessed how computers have decreased in size but increased in functionality as a result of the space program. Your evidence for continuing support for the space program is the many recent examples of technological breakthroughs that have resulted from space exploration.

Medical Professional

You performed one of the first artificial heart transplants in the United States. You were part of a team of doctors who worked with scientists from the space program to develop very small pumps that work in the artificial heart that have kept people alive for 20-30 years longer than if this technology did not exist.

Agricultural Specialist

The use of Geographic Information Systems (GIS) satellites has proved to be invaluable for agricultural specialists and food crop producers. Using the information gathered by these satellites, we can detect diseases in plant life before it becomes apparent to human observation. Global weather mapping aids in predicting both short-term and long-term weather patterns as well as environmental changes and their effects. Agricultural producers world-wide have come to depend on this technology in order to feed the world's increasing population.

Citizens for the Concern of People (CCP)

You see no need for the space program. You continually point out that money spent on the space program should go to help people who live in poverty around the world. You continually point out the extreme cost of the space program and how those dollars could be used to change lives of the poor.

Consumer Analyst

You are unclear about the benefits of the space program on the consumer population. You argue that many of the so-called technology benefits that the space program takes credit for were independently developed in research laboratories for a fraction of the cost of those developed in low-Earth orbit.

Military Expert

As a high-ranking officer in the Army, you rely on information from satellites everyday. Though you are not opposed to the space program, you could see the benefit of combining the United States space program with the Army and focusing its attention more on national security than on space exploration.

University Professor

As a member of the higher education community involved in pure and applied research, you are concerned about the percentage of limited financial resources that will be spent on further space research. Although you appreciate that technology designed for space research often has applications for the use of the general population, you believe the large amounts of money spent on this technology could have financed a very large number of science research projects on university campuses, where significant breakthroughs have been made in the areas of medicine, industrial production, and transportation safety.

Private Citizen

You are ambivalent to the space program, but enjoy watching science shows on the television. You thought that the space program was interesting during the moon landings in the early 1970s, but you have lost interest since then. Your goal is to provide evidence about how the general public currently perceives space exploration in modern times.