

AN NSS POLICY AGENDA (June 2002)

Introduction.

NSS members come from a diverse set of backgrounds, nationalities, and interests, and all can contribute to achieving the NSS vision. However, as the United States plays a leading role in setting priorities and allocating resources for human exploration and settlement, the following policy agenda by necessity focuses on the U.S. contribution. Other NSS policy statements will continue to address actions that concern other communities, such as the national security community, and international space activism, and where NSS members can help. Previous and future statements will be available from NSS HQ and on NSS's website, www.nss.org.

I. A Space Program That Goes Somewhere.

A. NSS's Focus. NSS's vision is "people living and working in space." The mission of NSS is "To promote social, economic, technological and political change, to advance the day when humans will live and work in space." Accordingly, NSS's fundamental advocacy will be for "a space program that goes somewhere."

In this Policy Agenda NSS has identified specific actions it urges on each "leading player" to help achieve that goal.

B. The Administration's Role. The President and Executive Branch can offer the vision and leadership to guide the nation and set government priorities for achieving that goal. NSS urges the Administration to:

1. Promote the priority of human space settlement as a key element in U.S. space leadership and international space cooperation. This goal is set forth in section (a) of the Space Settlement Act of 1988, in which Congress "declares that the extension of human life beyond Earth's atmosphere, leading ultimately to the establishment of space settlements, will fulfill the purposes of advancing science, exploration, and development, and will enhance the general welfare." This goal should be incorporated as a leading element of a revised national space policy that will serve as Administration guidance to government agencies, such as NASA, and for their further implementation of the Act.

2. Identify opportunities for cooperative arrangements with other spacefaring nations and commercial interests.

C. Congress's Role. NSS urges Congress to provide the funding necessary to create a space program that goes somewhere. NSS deplores the continual cutbacks that have resulted in a NASA budget that does not even keep pace with inflation, despite times of greater challenges and opportunities.

D. NASA's Role. NSS urges Congress and NASA to recognize that NASA's prime responsibility is to create the foundation and building blocks for a space program that can establish the permanent presence of humans on other worlds. NASA is the one U.S. government agency for whom this role is unique and cannot be duplicated.

E. Means to the End. Achieving this goal requires an integrated implementation strategy among all the leading players. In addition to what the Administration and Congress must do, NASA should:

1. Comply with the Space Settlement Act of 1988, by submitting the bi-annual reports on progress toward that goal as required by Section (c) of that Act.

2. Prepare and Maintain Updated Mission Designs for the Moon and Mars.

Once the political decision is made to establish a human presence on the Moon or Mars, that Mission Design will be available as a starting point. Each Mission design would set forth "then best" judgment of (i) how to structure such a program, (ii) the separate stages and technologies to be implemented, (iii) timetables to implement the various Design aspects, and (iv) the technological and non-technological aspects that are the most significant current roadblocks. These Mission Designs should be reviewed and completely updated no less frequently than bi annually, in order to reflect technological developments and changes in external circumstances.

3. Create Budget Set-Asides. Implement the "1% for the Future" concept by specifically allocating at least 1% of the NASA budget for developing "a space program that will go somewhere." These allocations need to be vested in a high-visibility human space exploration program that emphasizes NASA's commitment to, and pride in, its space settlement goal. They should include amounts --

(a) "For the Moon" -- with priority given to the most difficult unique technical obstacles and long-lead time items identified in the Moon Mission Design

(b) "For Mars" -- for some of the unique technical obstacles identified in the Mars Mission Design.

(c) [For Earth Orbit] -- for initial design studies for a successor to the International Space Station. This facility should be designed as a permanent orbital facility, a combination national and international laboratory, commercial outpost, and prototype orbital habitat, with units that could be upgraded and replaced, as well as sold or leased to commercial or national users.

(d) [For Getting There and Back] -- for development of propulsion technologies that would support human space settlement in the earliest time frames.

4. Include Human Mission Precursor Components. Every effort should be made to include engineering experiments on spacecraft, especially on long duration missions, that test technologies necessary to supporting human travel beyond Earth's orbit. Long lead-time technologies that need to be tested include, e.g., radiation shielding, closed loop life support systems, in situ resource utilization equipment, and spacesuit materials.

5. Continue With Space Launch Initiative, with an emphasis on developing low-cost reusable systems and operations methods.

6. Enhance Public Awareness of the Economic Benefits and "Spinoffs" from this space program. To further improve public understanding of the economic benefits and spinoffs of the space program -- which are in addition to providing the hardware paid for and the [multiplier effect] of any government spending -- NASA should quantify and publicize the available data to a wider audience than has been done to date.

F. Financial Management. NSS recognizes that proper financial and management procedures are necessary for the budgeting and implementation of human space exploration. NSS strongly supports ongoing reform efforts of Congress, the Administration and NASA to ensure the reliability and credibility of those procedures.

II. Completion of the International Space Station (ISS)

A. Complete the Current ISS Program. As completion of the current ISS program within a reasonable budget may be a prerequisite for public support for all future space activities, NSS recognizes that such completion must be NASA's highest near-term priority.

B. Augment the Station. Upon the completion of the current ISS program (expected in 2004), Congress should authorize ISS's expansion to its full design maximum, to take advantage of all the existing expenditures and infrastructure in place. NASA should continue working with the governments of the ISS Partners to resolve outstanding issues affecting completion of the ISS.

C. Full Staffing. Expedite full staffing and utilization of the ISS.

D. NGO. Create a Non Governmental Organization to support management of the space station and to develop commercial applications for it.

III. "Space Visiting"

A. The Administration, and especially NASA, should, in general, encourage efforts that promote space tourism.

B. NASA should implement programs to regularly fly non-astronaut "civilians" in space by implementing programs such as "Teacher-in-Space" and "Journalist-in-Space."

C. NASA should build on the previous "payload specialist" experience and encourage commercially and academically funded visiting scientists on the shuttle and ISS.

IV. Economically Self-Sufficient Space Settlements

A. Premise: NSS recognizes that the directions and timetable of human space settlement may very well depend on whether such settlement can be commercially profitable, or at least economically beneficial. To date, space activists have assumed that sooner or later such favorable economics would exist, but no one has set forth any scenario that would rigorously confirm such an assumption. If a space settlement on another world is going to pay for itself, sooner or later it is going to have to generate products that people can use and will pay for. Even people who might purchase on speculation will ultimately need to find such end users.

B. The "NSS Challenge" -- NSS will continue to challenge the aerospace, economic and university communities to identify "products" that would support such a space settlement without continuing subsidies. To that end, NSS will continue its ongoing call for essays or papers on the subject of: "An Economically Self-Sufficient Settlement on Another Body in the Solar System (e.g., the Moon, Mars, Asteroid or Comet)." A paper should describe a space settlement that is either: (a) a closed system that, after start-up, is physically self-sufficient and thus able to function indefinitely without imports which would have to be paid for; or (B) an open system that will require the import of resources but will generate income to pay for them. Income may be direct, as proceeds from exports, or may be indirect wherein economic benefits to civilizations on Earth are viewed as sufficient to merit continuing public support of a settlement. Ideally the space settlement should generate enough revenue to pay off all start-up costs (including, e.g., launch vehicles, transportation costs, settlement materials), but a scenario is acceptable if it describes a settlement that is marginally self-sufficient after writing off all start-up costs. Conforming concepts will include technical, regulatory, economic and commercial assumptions, the anticipated stages of development, and economic projections validating the self-sufficiency in the relevant time periods.

V. Pending U.S. Space Legislation.

Legislation is necessary to achieve many aspects of our goal. NSS members should be aware of pertinent U.S. legislation that is pending and work to encourage legislation consistent with the NSS vision and mission.

A. NSS supports the following proposed legislation and encourages its members to ask their Members of Congress to support the Bills (texts available at <http://thomas.loc.gov>):

"Charles 'Pete' Conrad Astronomy Awards Act" (HR 4613 in 2002) -- "To authorize the Board of Regents of the Smithsonian Institution to establish an awards program in honor of Charles 'Pete' Conrad, astronaut and space scientist, for recognizing the discoveries made by amateur astronomers of asteroids with near-Earth orbit trajectories.□

"Invest in Space Now Act" (HR 2177 in 2001) (Rep Calvert et al.) -- "To amend the Internal Revenue Code of 1986 to encourage the timely development of a more cost effective United States commercial space transportation industry, and for other purposes.□

"Satellite Trade and Security Act" (HR 1707 in 2001) (Reps. Berman and Rohrabacher) -- "To provide that the Secretary of Commerce has jurisdiction over exports of commercial satellites and related items, to provide certain procedures for exports of commercial satellites and related items, and for other purpose.□

"Spaceport Equality Act" (HR 1931 in 2001) (Rep. Weldon et al.) -- "To amend the Internal Revenue Code of 1986 to treat spaceports like airports under the exempt facility bond rules.□

"Space Exploration Act" (HR 4742 in 2002) (Rep. Lampson et al.) -- "To restore a vision for the United States human space flight program by instituting a series of incremental goals that will facilitate the scientific exploration of the solar system and aid in the search for life elsewhere in the universe, and for other purposes.□

This Bill is the first legislation in many years that actually promotes a space program that goes somewhere, and with a reasonable near-term budget. Accordingly, NSS is especially encouraging its members to ask their Members of Congress to co-sponsor this Bill.

"Zero Gravity, Zero Tax Act" (HR 2504 in 2001) (Rep. Rohrabacher et al.) -- "To amend the Internal Revenue Code of 1986 to provide tax incentives for investing in companies involved in space-related activities."

B. NSS supports legislation promoting commercial spaceports, but does not endorse legislation creating any particular spaceport.

C. NSS opposes the following legislation:

"Comprehensive Fiscal Responsibility and Accountability Act of 2001" (HR 1270) -- Section 501 -- "The National Aeronautics and Space Administration shall not obligate any further funding for the International Space Station."

VI. What Can NSS Members Do to Help?

NSS members can contact their Congressional representatives, participate in phone tree and be active in public forums such as the upcoming World Space Congress. For more information -- or if you want to help implement this space agenda -- contact NSS HQ at nsshq@nss.org.

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