



Legislative Bulletin.....December 17 2005

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S. 1281 — National Aeronautics and Space Administration Authorization Act of 2005 Conference Report

Summary of the Bill Under Consideration Today:

Total Number of New Government Programs: many

Total Cost of Discretionary Authorizations: \$36 billion over two years

Effect on Revenue: \$0

Total Change in Mandatory Spending: 0

Total New State & Local Government Mandates: 0

Total New Private Sector Mandates: 0

Number of Bills Without Committee Reports: 1

Number of Reported Bills that Don't Cite Specific Clauses of Constitutional Authority: 0

S. 1281 National Aeronautics and Space Administration Authorization Act of 2005 Conference Report (Sen. Hutchison, R-TX)

Order of Business: The bill is scheduled for consideration on Saturday, December 17, 2005, under a motion to suspend the rules and pass the bill.

Summary: S. 1281 reauthorizes for two years, the National Aeronautics and Space Administration (NASA) at \$17.93 billion for FY07 and \$18.68 billion for FY08.

Recent NASA Appropriations:

FY00: \$13.601 billion (authorized at \$13.625 billion)
FY01: \$14.230 billion (authorized at \$13.747 billion)
FY02: \$14.868 billion (authorized at \$13.839 billion)
FY03: \$15.364 billion (unauthorized)
FY04: \$15.379 billion (unauthorized)

FY05: \$16.197 billion (includes \$126 million in emergency hurricane supplemental appropriations)
 FY06 House-passed: \$16.47 billion (an increase of \$274 million over FY05, and \$15 million more than the Administration requested)

Specific Authorization Levels in S. 1281

(In millions)

Category	FY07	FY08
Science, Aeronautics and Education	\$7,136	\$7,747
Exploration Systems	\$10,761	\$10,903
Inspector General	\$33	\$34
Total	\$17,930	\$18,684

S. 1281 directs NASA to manage space flight programs to strive to at achieve the following milestones:

- Returning Americans to the Moon no later than 2020;
- Launching the Crew Exploration Vehicle as close to 2010 as possible;
- Increasing knowledge of the impacts of long duration stays in space on the human body using the most appropriate facilities available; and
- Enabling humans to land on and return from Mars and other destinations on a timetable that is technically and fiscally possible.

The bill also prohibits NASA from entering into a contract for the until at least 30 days after the Administrator has submitted to Congress a report outlining the expected cost of the Crew Exploration Vehicle and the expected budgets for each fiscal year through fiscal year 2020 for human space exploration, aeronautics, space science, and earth science.

Human Presence on the Moon

S. 1281 directs NASA to establish a program to develop a sustained human presence on the Moon.

National Awareness Campaign

S. 1281 directs NASA to implement, not later than May 1, 2006, a national awareness campaign through various media, including print, radio, television, and the Internet, to articulate missions, **to publicize recent accomplishments**, and facilitate efforts to encourage young Americans to enter the fields of science, mathematics, and engineering to help maintain United States leadership in those fields.

Aeronautic and Science Policy Directives

S. 1281 directs the President, through NASA and consultation with academic and industry experts, to develop a national *aeronautics* policy to serve as an aeronautics program guide through 2020. Among other things, the aeronautics plan is to determine the extent to which NASA should address military and commercial needs, and to what extent NASA should focus on long-term, high-risk research or more incremental research, and the expected impact of that decision on the United States economy, and the ability to achieve environmental and other public goals related to aeronautics.

The reauthorization also directs the NASA Administrator to develop a *science* policy to serve as a guide for NASA science programs through 2016. Among other items, the science policy is to include plans for a human mission to repair the Hubble Space Telescope. ,

International Space Station (ISS)

S. 1281 repeals a section of the NASA Authorization Act of 2000 which, with certain exceptions:

- provided a \$25 billion cap on ISS costs obligated by NASA;
- capped space shuttle launch costs in connection with the assembly of the ISS at \$17.7 billion, and
- capped costs for any single space shuttle launch at \$380 million.

S. 1281 specifies that at least 15 percent of the funds devoted to ISS research must be allocated for research not related to human exploration.

Additional Required Reports

The bill requires the NASA Administrator to perform and submit to Congress, various reports and reviews including the following:

- A plan outlining facilities NASA intends to acquire, significantly modify, lease, sell or close;
- An independent review of the Nation's long-term strategic needs for test facilities;
- An agenda for the International Space Station and its proposed final configuration
- The number of flights the Space Shuttle will make before its retirement, the purpose of those flights, and the expected date of the final flight;
- A description of the launch vehicle for the Crew Exploration Vehicle;
- A plan for updating the space communications and navigation architecture for both low Earth orbit and deep space exploration;
- A report on plans for a Joint Dark Energy Mission, including estimated cost;
- A study by the Office of Science and Technology Policy to determine if any NASA research and development programs duplicate aspects of programs of other Federal agencies;
- A commercialization plan to support among others, the human missions to the Moon and Mars, including opportunities for partnership between NASA and the private sector; and
- A feasibility study on the use of ground source heat pumps in future NASA facilities or substantial renovations of existing NASA facilities involving the installation of heating, ventilating, and air conditioning systems.
 - According to www.actionrenewables.org, "Ground source heat pumps can be used to extract heat from the ground and pump it into a building to provide space heating and to pre-heat domestic hot water. In the summer months this process can be reversed to meet the cooling requirements of a building."

Private Sector Feasibility Study

S. 1281 directs the Administrator to conduct a study to determine if any NASA centers should be operated by or with the private sector by converting a center to a Federally Funded Research and Development Center, or through any other mechanism. Specifically, the study is to include, but is not limited to, a recommendation for the operation of each center and provide reasons for that recommendation and a description of the advantages and disadvantages of each mode of operation considered in the study.

Competitive Prize Program

The bill directs the NASA Administrator to establish a new competition in which cash prizes are awarded to stimulate innovation in basic and applied research, technology development, and prototype demonstration that have the potential for application to the performance of the space and aeronautical activities of the Administration. According to Committee Report 109-173, the prize program is modeled after the privately-funded X-Prize won last year by Burt Rutan with his

SpaceShipOne. The bill requires NASA to report to Congress before offering any prize *worth more* than \$10 million.

Pilot Project Grant Program

S. 1281 provides for the establishment of new a “program of grants for competitively awarded pilot projects to explore the integrated use of sources of remote sensing and other geospatial information to address State, local, regional, and tribal agency needs.” Grant assistance given to a pilot project under this program is limited to three years per project. The bill does not include an authorized funding amount for this project.

Educational Outreach Program

S. 1281 provides for the establishment of “an educational outreach program to increase awareness at institutions of higher education and State, local, regional, and tribal agencies of the potential applications of remote sensing and other geospatial information.”

George E. Brown, Jr. Near-Earth Object Survey

S. 1281 directs the Administrator to develop and implement a new Near-Earth Object Survey program to “detect, track, catalogue, and characterize the physical characteristics of near-Earth objects,” which consists of “an asteroid or comet with a perihelion distance of less than 1.3 Astronomical Unites from the Sun.” In the bill’s findings related to the Near-Earth Object Survey, the text states, “Near-Earth objects pose a serious and credible threat to humankind, as scientists are certain that a major asteroid or comet was responsible for the mass extinction of the majority of the Earth’s species, including the dinosaurs, nearly 65,000,000 years ago.”

Charles “Pete” Conrad Astronomy Awards

S. 1281 directs NASA to establish an awards program to recognize amateur astronomers’ discoveries of near-Earth-orbit asteroids. Each year, assuming eligible discoveries, the program would give two, \$3,000 awards.

Additional NASA Programs and Research Initiatives

S. 1281 states the NASA Administrator may establish the following:

- An environmental aircraft research and development initiative;
- A Mars Aircraft project;
- A hypersonics research program; and
- A program of collaborative research with the National Oceanic and Atmospheric Administration on convective weather events.

Education and Scholarships

S. 1281 provides for the following regarding NASA s education programs:

- Requires the inclusion of Historically Black Colleges and Universities that are Part B institutions, Tribal Colleges or Universities, Alaskan Native, Native Hawaiian, and Hispanic-serving institutions, in the list of small businesses or other organizations owned or controlled by socially and economically disadvantaged individuals, to which NASA has been previously directed to work towards a goal of awarding at least 8 percent of the total value of the agency's contracts;
- Directs NASA to strive to ensure equal access for minority and economically disadvantaged students to NASA s Education programs;

- Establishes a program of scholarships for full-time graduate students in aeronautical engineering; and
- Directs NASA to enter into an arrangement with the National Research Council of the National Academy of Sciences to review and evaluate NASA's various education programs.

NASA Healthcare Program

S. 1281 directs NASA to develop a plan to better understand the longitudinal health effects of space flight on humans.

Technology Transfer Program

S. 1281 directs NASA to execute a commercial technology transfer program with the goal of facilitating the exchange of services, products, and intellectual property between NASA and the private sector.

Additional Provisions of Note

S. 1281 gives state and local law enforcement, at the discretion of the Administrator, jurisdiction over NASA-owned research centers to allow for enforcement of local laws such as speeding and drunk driving.

Committee Action: On July 22, 2005, the House passed H.R. 3070, and on September 28, 2005, the Senate passed, S. 1281. These two versions of the NASA Authorization Act of 2005 then went to Conference.

Cost to Taxpayers: There is no CBO score available for S. 1281. The bill authorizes \$17.93 billion for FY07 and \$18.68 billion for FY08, roughly \$1.25 billion annually more than the House-passed version.

Does the Bill Expand the Size and Scope of the Federal Government?: No

Does the Bill Contain Any New State-Government, Local-Government, or Private-Sector Mandates?: No

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