

Space Exploration, Development, and Settlement (SEDS) Act

FAQ

Alliance for Space Development

V7

1. What is the Space Exploration, Development and Settlement Act (SEDS)?

The SEDS act modifies NASA's founding legislation to include the development and settlement of space as NASA goals. Currently, neither the economic development of space nor the settlement of space are listed as fundamental goals for NASA. The full text of the draft SEDS Act can be found at:

<http://allianceforspacedevelopment.org/wp-content/uploads/2016/03/Space.Exploration.Development.and.Settlement.Act.of.2016.pdf> .

2. For the purposes of the SEDS Act, what is Space Settlement? The SEDS Act defines "space settlement" to mean "any community of humans living beyond Earth's atmosphere that is able to economically sustain its population through a neutral or positive balance of trade of goods and services, and is able to expand its habitable real estate as need and desire of the community may warrant and international law permits."

3. For the purposes of the SEDS Act, what is Space Development? ASD believes that space settlement will follow the development of a thriving space economy. Such an economy will be based on the usage of resources found in space, including the free energy provided by the Sun and minerals on the surface of the Moon, Mars, and the asteroids. Products produced by such a thriving economy might include power beamed to the Earth's surface, materials manufactured in microgravity for usage on Earth, services related to space tourism, and rocket fuel used in space.

4. Doesn't Public Law 111-314, enacted Dec. 18, 2010, require NASA to develop a space economy? In Title 51, Subtitle II, Chapter 201, Subchapter I, Sec. 20102, (c) COMMERCIAL USE OF SPACE NASA is urged to "seek and encourage, to the maximum extent possible, the fullest commercial use of space." Since this text is not listed under (d) as a NASA objective, some appear to believe that NASA should not be engaged in the enablement of space resources development, but instead NASA ought to purchase goods

commercially for use in space if they are available. The fundamental objectives of NASA need to be modified so that the development of a thriving economy in space leading to space settlement is given equal weight with other NASA objectives.

5. **What is the deep legislative history of the SEDS Act?** The SEDS Act is based on the Space Settlement Act of 1988, which was included in the NASA Authorization Act 1988, and signed into law by President Ronald Reagan to become Public Law 100-685. Unfortunately, the space settlement language was not included in the next NASA Authorization Act, and the bill had little apparent impact on NASA.
6. **What is the recent legislative history of the SEDS Act?** In 2015 the Alliance for Space Development created a draft SEDS Act similar to the Space Settlement Act of 1988, but targeted to modify the founding legislation of NASA to create an enduring mandate to support the development and settlement of space. The SEDS Bill was introduced in the House by Representative Dana Rohrabacher (R-CA) in March 2016. Significant parts of the SEDS Bill appeared in the Senate version of the NASA Transition Act of 2017 but were removed in the House-Senate conference prior to final passage.
7. **Will the SEDS Act remove NASA's mandate to study the Earth?** The legislation does not remove the mandate for NASA to study the Earth. The Alliance for Space Development urges that NASA's role in Earth science and NASA's role in enabling the development and settlement of space be treated as separate issues to be advanced via different pieces of legislation.
8. **Can the SEDS Act be adopted without completely changing all parts of the NASA founding Act?** Yes! The recently signed NASA Transition Act of 2017 changed the NASA founding legislation to add the search for life in the universe as one of the fundamental goals of NASA without changing any of the currently existing goals. This path is a model for how the SEDS Act might become law.
9. **What will be the impact of the SEDS Act on NASA?** The legislation places no hard requirements on NASA other than a yearly report on progress. The intention of the Act is to focus NASA's efforts on a long term goal (the development and settlement of space) that logically encompasses current NASA efforts but re-orientes them toward a non-mission direction. Although a mission focus is sometimes useful, it can lead to a series of "one-off" efforts that are not

sustainable and do not create lasting progress. As one example, NASA is currently considering a Mars sample return mission. A pure mission focus might result in bringing all fuel needed for the sample return from Earth. A space development/settlement focused approach would be based on using Martian resources to produce fuel for the return voyage; with the result that a “gas station” on Mars is created that could be used by future missions.

- 10. How does the SEDS Act relate to the ASRA?** Rep. Jim Bridenstine’s omnibus American Space Renaissance Act contains a section on modifying the founding legislation for NASA to reflect a “Pioneering Doctrine.” It should be noted that Rep. Bridenstine has put forward the ASRA as a library of “good space ideas” and does not intend that the Bill be passed in its current form. Although there is significant value in the modifications to the NASA founding act proposed in the ASRA, there are also controversial elements, such as the removal of Earth science as a goal for NASA. The Alliance for Space Development is open to merging elements of the “Pioneering Doctrine” contained in the ASRA with making space development and settlement the horizon goal for NASA as described in the SEDS Act, but ASD believes that any proposed changes should be separated from legislation related to Earth science as a fundamental goal of NASA.
- 11. How will the SEDS Act affect SLS and Orion?** The SEDS Act does not require any changes in the SLS/Orion vehicles, but as NASA considers how to best enable space development and settlement, mission selection for SLS/Orion may be impacted.
- 12. Does the SEDS Act create an “unfunded mandate”?** The legislation does not require new funding or increase spending levels. No new projects are created. Instead, existing NASA programs will be encouraged to enable space development and settlement.
- 13. Should the U.S. government take an active role in the development and settlement of Space?** The U.S. government has had an active role in the development and settlement of the Western frontier of the U.S. since the founding of our country. During the expansion of the United States, federal and state governments supported the construction of roads, canals, and railroads. They also took an active role in supporting new technologies such as air mail. The U.S. government has the right, and indeed the obligation, to play a similar role in the development and settlement of space.

14. Will the SEDS Act require NASA to build space settlements? No. The legislation only aims to **enable** space development and settlement and to structure our space activities for that purpose. The legislation does not explicitly task NASA to settle space, nor is this the proper role of government. However, nothing in the SEDS Act prevents NASA from constructing or operating, preferably using public-private partnerships, bases/stations at various locations in space to carry out its goals, including but not limited to the International Space Station (ISS) and the proposed Deep Space Gateway.