Paper ID: 34899
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SPACE POWER SYMPOSIUM (C3)
Space-Based Solar Power Architectures / Space & Energy Concepts (1)

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KEYNOTE: SPACE SOLAR AT THE 2016 DEFENSE, DIPLOMACY, AND DEVELOPMENT TECHNOLOGY INNOVATION PITCH CHALLENGE

Abstract

It has been widely recognized that the world is in need of sustainable sources of energy. One possibility is space solar, in which sunlight is collected in space (where it is brighter than anywhere on earth and is unaffected by clouds or night) and sent wirelessly to the earth. This would be a clean, constant, globally dispatchable source of energy. Recent advances in several key technologies now make it imperative to seriously investigate space solar as a prospective future energy source. These technologies include advancements in the mass production of spacecraft, breakthroughs in power conversion electronics and lightweight materials, emerging space robotics capabilities, and reusable commercial launch. Though the space solar has been examined in the past, these new developments combined with the unprecedented projected need for clean energy demand that it now be included as part of any "all of the above" energy strategy. This concept has received increased attention after qualifying for and subsequently winning the majority of awards at the finals of the recent Defense, Diplomacy, and Development (D3) Technology Innovation Summit Pitch Challenge, sponsored by DOD, DOS, and USAID, and judged by Gen Paul Selva (Vice Chairman, Joint Chiefs of Staff), Catherine Novelli (Under Secretary of State for Economic Growth, Energy, and the Environment), and Eric Postel (Associate Administrator of USAID). Briefs have been well-received by audiences including principals from the U.S. House of Representatives Committee on Science, Space, and Technology; the U.S. Department of State Office of Space and Advanced Technology; and the Office of the Deputy Assistant Secretary of Defense for Space Policy.