



# AFPC Capitol Hill Briefing - Understanding the New Space Race: China's Space Ambitions and U.S. Responses

April 25, 2023

**Related Categories:** Military Innovation; Science and Technology; Warfare; SPACE; NASA; China

**Related Expert:** Richard M. Harrison, Peter Garretson



On April 25, the American Foreign Policy Council's (AFPC) Space Policy Initiative hosted a closed-door briefing for Congressional staff on *Understanding the New Space Race: China's Space Ambitions and U.S. Responses*. The session was moderated by Richard M. Harrison and facilitated by the House Select Committee on China. The event featured a keynote by Gen. Steve "Bucky" Butow on "*The Need for an American Space Vision*," a review of *China's Space Ambitions and Counter-space Program* by Dr. Namrata Goswami, a discussion of *The Promise of the Space Economy* by Mr. George Pullen, and *Space Policy Recommendations for Congress* by Peter Garretson based on the recently published book, *The Next Space Race: A Blueprint for American Primacy*. A summary of the speakers' remarks follows:

## **Keynote: The need for an American space vision** *Steve (Bucky) Butow*

Since humans landed on the Moon half a century ago there have only been minor developments in space, however, within the last few years the rate of technological innovation in space is unprecedented and strategic competition is heating up. The Great Powers competition of the 21st century will be settled in Space with the Moon as the new strategic foothold to sustained U.S. economic prosperity. A whole-of-nation approach is essential to maintaining U.S. leadership in space with contributions and benefits from technological, diplomatic, informational, environmental, academic, economic, and military sectors. Reusable rocketry will lead to drastic cost reductions and a renaissance of interest in space, ushering in innovative modular serviceable space systems. New Space companies are increasingly fueling space-related research and development spending and driving space infrastructure development for civil, commercial, and military use. He emphasized the importance of valuing innovation that results in products, services, and capabilities over R&D which merely produces paper. Economic security is critical to assuring our National Security and the only way U.S. leadership will be sustained is through the economic development and human settlement of space for the benefit of all in the 21st Century.

## **China's space ambitions and counter-space program** *Namrata Goswami*

China has a grand strategic comprehensive national plan to develop its space capacities. This space strategy is informed by China's Civil-Military Fusion strategy. For the near term, China is invested in developing its permanent presence in Low Earth Orbit (LEO), cislunar space as well as develop its military space capabilities to include kinetic Anti-Satellite (ASAT) weapons, non-kinetic ASAT capabilities like spoofing, jamming, high powered microwave and laser beams, as well as proximity operations. For the long term, China is invested in ensuring that U.S. commercial space capabilities like SpaceX Starlink cannot be utilized for instance in a Taiwan scenario. This it wants to accomplish by developing its counter space capabilities with a 'systems of systems' approach that can target entire constellations. In the long term, China wants to ensure that space contributes to its economic power, with investment in technologies like Space Based Solar Power and Asteroid Mining. In 2020, China included space capacities as critical infrastructure.

### **The promise of the space economy**

*George Pullen*

In the Fifth Industrial Revolution, that is, the Space Economy, to be a Global Power, a nation must be a space power. The world economy today is \$100T, and the space economy is estimated to grow to \$4T by the 2040s and \$10T by 2050, generating more than the GDP of the majority of the world's continents. Space technology, like most deep tech, relies heavily on the research and development activities of SMEs (small and medium-sized enterprises) entrepreneurs. Those activities are supported through awards and funding primarily from Small Business Innovation Research (SBIR) & Small Business Technology Transfer (STTR) programs by NASA and SpaceWERX, but nothing currently helps these spacepreneurs receive operations funding and transition to contracting. Critical infrastructure, communication networks, and other U.S.-grown space technology cannot be left to die on the vine but must be shepherded through the funding Valley of Death that traditional investors, banks, and venture capitalists will not enter. Hence why to maintain democracy and the American way of life, a dedicated nonprofit investment fund must be Chartered to ensure that America remains a global power by being the leading space power.

### **Space policy recommendations for Congress**

*Peter Garretson*

AFPC Senior Fellow in Defense studies reviewed the imperatives driving the need for a whole of nation strategy and policy, the six centers that will determine advantage in great power competition. He provided an overview of the emerging in-space supply chain, followed by organizational recommendations to secure U.S. advantage. He provided 17 specific recommendations to Congress to create a vibrant in-space economy, and 14 recommendations by which Congress can secure it. He concluded with several imperatives Congress should act upon including:

- Congress should provide strong direction to NASA and U.S. Space Force (USSF) to support and enable the in-space economy
- Congress should create separate funding lines for In-space Servicing, Assembly, and Manufacturing (ISAM) & In-Situ Resource Utilization (ISRU)
- Congress should elevate space in the Department of Commerce and Department of Transportation
- Congress should increase the share of funding for ISRU, ISAM, Advanced Space Power, Advanced Space Propulsion
- Congress should consider authorities which catalyze a space supply chain: Strategic Reserves, Bonds, Public Capitalization Notes, Space Commodities Exchange
- Congress should consider authorities for USSF which enable it to better enable and secure US Space interests: Corps of Engineers, Civil Reserve Space Fleet, Reserve/Guard Component, and a separate Department of the Space Force

### **Participant Bios:**

#### **Gen. Steven J. "Bucky" Butow**

Space Portfolio Director for the Defense Innovation Unit (DIU), Office of the Undersecretary of Defense for Research & Engineering

#### **Dr. Namrata Goswami**

Senior Analyst, Author, Academic Entrepreneur

*Co-Author of Scramble for the Skies*

#### **George Pullen**

Chief Economist, Milky Way Economy

Instructor in Space Economics, Columbia University

Senior Economist, U.S. Commodity Futures Trading Commission

#### **Peter Garretson**

Senior Fellow in Defense Studies, American Foreign Policy Council

*Co-Author of Scramble for the Skies; Co-Author of The Next Space Race*

#### **Richard M. Harrison**

Vice President of Operations and Director of Defense Technology Programs, American Foreign Policy Council

*Co-Author of The Next Space Race*