



The Promise of Space-Based Solar Power

September 21, 2022 **Peter Garretson, Cody Retherford** *Space Policy Review*

Related Categories: Energy Security; Science and Technology; SPACE; NASA; China; Europe; Japan

Energy drives policy. Markets are dictated by energy flows, and nations with excess energy capacity have an economic advantage. As evidenced recently in Russia's war in Ukraine, nations' responses can be dictated by their energy dependence on Russia. Unfortunately, carbon-based energy sources are finite, and the impact of excess atmospheric carbon on the climate has necessitated a reduction in fossil fuel use. The solution to global demand for energy may be found in the form of solar power, not in the traditional terrestrial sense but, instead, through energy collection in space.

Space-based solar power (SSP) satellites have the potential to change human life dramatically, in the same manner as previous satellite technologies such as satellite communications and global navigation satellite systems. The United States must execute a series of legislative and policy actions to support the U.S. space community's efforts to compete with China over this key technology...