

SPACE POWER SYMPOSIUM (C3)  
Technologies and Experiments related to Wireless Power Transmission (2)

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WIRELESS POWER TRANSMISSION: OPPORTUNITIES AND CHALLENGES

**Abstract**

Recent announcements in the United States and Japan have brought renewed interest in space based solar power and wireless power transmission. The first commercial contract to deliver electric power from space to the electric utility grid between Solaren Corporation and Pacific Gas and Electric Company in California was announced in the United States. In Japan, the government announced a phased program leading to a full-scale demonstration solar power satellite in the 2030s. Opportunities for using wireless power transmission have been identified on earth and beyond.

While judged technically feasible since the 1981 National Research Council report on the NASA Definition Study, the deployment of an operational space based solar power system still presents many challenges. These challenges are both technical and programmatic. Similar challenges will be encountered in other applications of wireless power transmission.