



**U.S. Department of Energy
Office of Public Affairs**

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**Energy Department Nuclear Systems
Are Powering Mars Rover**

2011 Marks

50th Anniversary of Nuclear-Powered Space Missions

Washington, D.C. – The Mars Science Laboratory rover, which launched from Cape Canaveral this weekend, is powered by nuclear systems developed by the U.S. Department of Energy (DOE), marking the 28th space mission supported by nuclear energy.

This year also marks the 50th anniversary of nuclear-powered space exploration. To commemorate the launch, DOE released a [new video](#) highlighting this legacy and the Department’s work designing these advanced systems.

“For the last 50 years, this technology has supported the peaceful use of nuclear power for space exploration, helping to shape the world’s understanding of our solar system,” said U.S. Energy Secretary Steven Chu. “We are proud to share in the inspiring discoveries our nation’s space program has made.”

Nuclear power is uniquely suited to provide these missions with safe and reliable electricity and heat for many years, even in the darkest regions of the solar system. The Mars Science Laboratory rover, named Curiosity, is powered by DOE’s Multi-Mission Radioisotope Thermoelectric Generator (MMRTG).

MMRTG uses heat produced by the natural decay of plutonium-238 to generate 110 watts of electricity. That electricity will be used to provide continuous power to the rover and maintain effective operating temperatures for its 11 scientific instruments. Curiosity will investigate whether the Gale Crater on Mars has ever offered environmental conditions that support the development of microbial life.

Since 1961, the United States has used nuclear energy systems developed by DOE to power missions such as the Apollo and Viking missions; the Galileo and Cassini spacecraft; and the Voyager probes, which are currently exploring the outer fringes of our solar system 34 years after their launch.

Curiosity is expected to land on Mars in August 2012 and carry out its mission over 23 months.

Find more information about these nuclear power systems [HERE](#).

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