

Mars Technologies Spawn Durable Wind Turbines



Ames Research Center

Northern Power Systems (NPS) Barre, Vermont

NASA Technology

- ◆ Planning for an extended stay on Mars, NASA concentrated on creating an ecological life support system to sustain crewmembers on the Red Planet
- ◆ Ames started looking at how to make power on Mars and turned to wind and solar power technologies

Partnership

- ◆ Ames awarded an SBIR award to Northern Power Systems to construct a wind turbine at the South Pole, a place with harsh conditions like Mars
- ◆ The company then began developing a larger turbine that could function in the same conditions
- ◆ By 2000, the wind turbine technology had won an R&D 100 Award



Benefits

- ◆ One Northern Power 100 turbine produces enough energy for 25–30 homes
- ◆ The technology is used at university campuses, residences, farms, businesses, and more—across 25 states and 4 countries
- ◆ More than 200 turbines in operation reduce carbon emissions by 50,000 tons annually