

Extreme Environment Solar Power (EESP) Project

Game Changing Development Program | Space Technology Mission Directorate (STMD)



ANTICIPATED BENEFITS

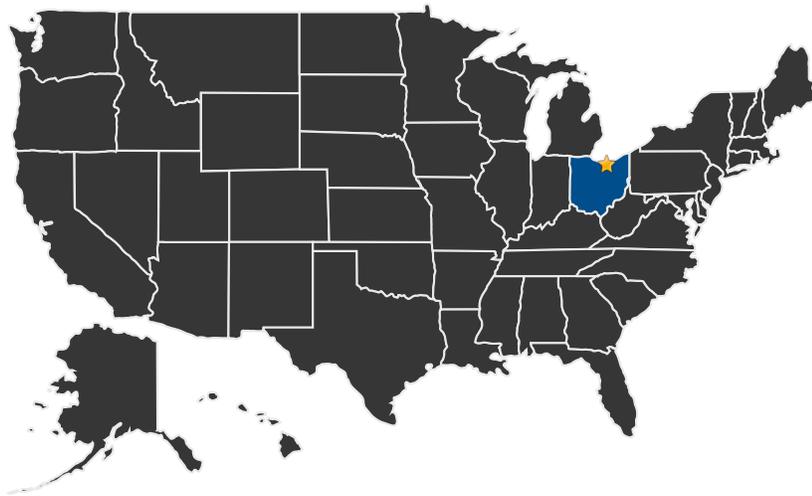
To NASA funded missions:

Enable future NASA robotic and human-exploration missions by increasing solar cell performance, and thus increasing mission life and/or decreasing mission mass/cost.

DETAILED DESCRIPTION

EESP Project is focused on developing cell/array systems that maximize delivered power under Jovian conditions

U.S. WORK LOCATIONS AND KEY PARTNERS



■ U.S. States With Work

★ Lead Center:
Glenn Research Center

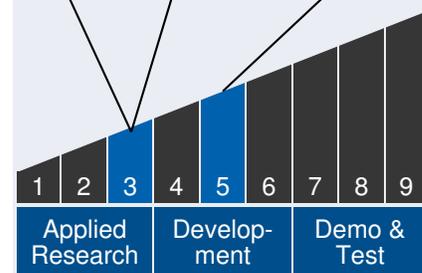


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Technology Maturity

Start: 3 | Current: 3 | Estimated End: 5



Management Team

Program Executive:

- Lanetra Tate

Program Manager:

- Mary Wusk

Project Manager:

- Donald Palac

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Technology Areas

Primary Technology Area:

Space Power and Energy

Storage (TA 3)

└ Power Generation (TA 3.1)

└ Solar (TA 3.1.3)

└ Low-Intensity, Low-Temperature (LILT)

Radiation-Tolerant

Photovoltaic

Blankets (TA 3.1.3.7)

Secondary Technology Area:

Space Power and Energy

Storage (TA 3)

└ Power Generation (TA 3.1)

└ Solar (TA 3.1.3)

Continued on following page.

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Technology Areas (cont.)

Additional Technology Areas:

Space Power and Energy

Storage (TA 3)

- └ Power Generation (TA 3.1)
 - └ Chemical (TA 3.1.2)
 - └ Solid Oxide Fuel Cells (SOFC) (TA 3.1.2.2)
 - └ Solar (TA 3.1.3)
 - └ 25-150 kWe-class Solar Array Structures (TA 3.1.3.1)
 - └ MWe-class Solar Array Structures (TA 3.1.3.3)
 - └ Reliably Retractable Solar Arrays (TA 3.1.3.4)
 - └ Acid-Resistant Solar Array Structures (TA 3.1.3.5)
 - └ Reduced-Cost Photovoltaic Blankets (TA 3.1.3.6)
 - └ High-Temperature, Radiation-Tolerant Photovoltaic Blankets (TA 3.1.3.8)
 - └ Acid-Resistant, High-Temperature, Radiation-Tolerant Photovoltaic Blankets (TA 3.1.3.9)
 - └ Ultra-High-Efficiency Photovoltaic Blankets (TA 3.1.3.10)

Active Project (2015 - 2018)

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DETAILS FOR TECHNOLOGY 1
