Lunar Volatiles Science Partnership (LVSP) Announcement for Partnership Proposals (AFPP) using VIPER

National Aeronautics and Space Administration

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AFPP kickoff briefing – 2-10-2025

SMD release of the AFPP

- Following VIPER project cancellation, SMD explored alternatives to achieve some/all VIPER science objectives, using a partnership to land VIPER on Moon and operate the rover and instruments. RFI evaluation indicated viable partners exist (technically and financially)
  - **On February 3rd, 2025, NASA released an Announcement for Partnership Proposals (AFPP) (public link) for a Lunar Volatiles Science Partnership using NASA's VIPER rover.**
- SMD/ESSIO worked with NASA HQ organizations (i.e., OGC, NASA Partnership Office, PSD) to develop a partnership competition approach that will use a Cooperative Reseach and Development Agreement (CRADA), following NASA's policies for partnerships
- Two steps for proposals:
  - Step 1 – 15 page proposals – due March 3rd
  - Step 2 – 70 page proposals – due NET May 2nd
- Schedule discussed on a later slide
- The AFPP document is the formal NASA document governing this solicitation; in the event of any disagreement between this powerpoint and the AFPP, view the AFPP text as authoritative.

LVSP offers multiple benefits to partner and the public

Partner will be a leader of lunar science and at exploring the resource potential of the Moon

Partner will be leaders at 500kg (or higher) class lunar landing and cargo delivery to the lunar surface

Partner execution would demonstrate true private missions to space

CRADA can further facilitate tech transfer with patenting and licensing terms favorable to industry.

Partner can access unique NASA resources and expertise related to VIPER on a reimbursable basis, furthering Partner understanding of lunar engineering and science

Promotes commercial economy as part of NASA’s Strategic Plan

Key Aspects of Evaluation Criteria

Full criteria can be found in the AFPP

- Technical and Science Approach
  - Feasibility of Landing and Operations Success
  - Interface with VIPER rover – preventing changes to VIPER
  - Science operations and return. Must reach two ice stability regions, at least one in a PSR. Open science/data.
- Schedule
  - Faster time to delivery
  - Realism of the schedule
- Management
  - Finance
  - Management and Systems Engineering approach
  - Insight provided to NASA
- NASA expenditures and Cost
  - Non-reimbursable costs to NASA viewed unfavorably. Requesting reimbursed NASA services welcome

Potential reimbursed & non-reimbursed NASA costs

NASA is planning to provide (NASA funding NASA):

- NASA attendance at regularly scheduled reviews proposed by the partner to demonstrate partner progress
- Provisioning of the NASA VIPER rover for partners' accomplishment of the goals in Section 1.2 above
- NASA evaluation of Partner milestones
- NASA review of Partner-provided data, plans, and risk philosophy
- Volatiles Science: NASA processing, calibration, validation, and analysis of VIPER instrument-generated science data during and after mission operations, along with the delivery of all science data to the Planetary Data System

Support the Partner may request*:

- VIPER rover traverse planning and operations
- VIPER science instrument team support for pre-mission planning for instrument operations and for future generation of VIPER science data
- Ames Research Center (ARC) mission operations center for assistance in operations/support

**The degree and type of NASA support requested by a Proposer should be identified in the proposal*

Schedule & Mechanics of AFPP

AFPP Release date: February 3rd, 2025

- Full and Open competition using a two-step approach

Technical Briefing and Q&A Session: February 10th (this meeting) and February 13th (2-6pm EST) Step 1 proposals due by March 3rd, 2025 (15 page count)

SMD Proposal Evaluation Panel (PEP) selection by March 10th (target), Step 2 proposals requested

Step 2 Proposals (only from invited proposers) due: NET May 2nd, 2025

- Partner proposes their technical and business approach, risks, milestones, science operations, management, and development (70 page count)

Complete evaluation, with potential due diligence discussions

Selection & Announcement: Summer 2025

- CRADA in place: as soon as practicable


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