



# **Milestone Based Acquisition: Innovative Lunar Demonstrations Data (ILDD) Contracts**

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# ***STATEMENT OF NEED***

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The NASA Altair Lander Project Office was interested in proving, testing, and verifying specific capabilities that will be useful for the eventual landing of a human vehicle through the utilization of small robotic landers. Work is underway in the private sector to develop and utilize small robotic landers to travel to and operate on the Moon. NASA sees this work as providing an optimum testbed.

This procurement allowed the Lander Project Office to increase its knowledge and understanding of the design, testing, and flight lessons to be learned through data obtained from these landers without having to build or procure a NASA lander. Additionally, this information would enable the NASA Altair Lander Project Office to quickly and efficiently implement a plan for building and testing relevant components of lander hardware to be utilized in future landers.



# Acquisition Overview

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- Multiple Award IDIQ BAA
  - BAA Structure
    - 4 Contract Line Item Numbers (CLINs) with well defined descriptions & set fixed prices in the solicitation
    - Basic contract award to multiple contractors. Fair opportunity provided to all contractors to submit proposals for each CLIN.
      - Goal of up to 3 equal awards for each CLIN
        - CLIN 4 has the potential for multiple (>3) awards
      - **Maximum Purchase**: \$10M – If a contractor is awarded and successfully performs all 4 CLINs in their entirety it would earn a total of \$10M
      - **Minimum Purchase**: System Definition Review data package submission valued at \$10K
  - Maximized government flexibility on funding and adapting to contracting team success



# Competition Considerations

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- Instrument Type: Broad Agency Announcement resulting in a multiple award IDIQ
  - Why BAA?
    - Purpose of the activity is for study and experimentation directed toward increasing knowledge and understanding of lander design and capabilities.
    - Government wanted to acquire research on development not related to the development of a specific Government defined system or hardware;
    - No common work statement possible;
  - Why IDIQ?
    - Allowed for healthy competition throughout the process
    - Hard to predict early in development which companies will actually land on the Moon – IDIQ allows for broader participation throughout the maturation process resulting in a better chance for the government to receive the desired data from a lunar landing
    - Government anticipated meaningful proposals with varying technical approaches and varying schedules.
  - NFS 1835.016 requires Assistant Administrator of Procurement approval to use BAA type: “other forms of announcement” which most appropriately fits this type of BAA.



# Competition Considerations

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- Full and Open Competition:

- Intended to be an open competition aimed at creating a pool of companies capable of supplying data generated as a result of landing on the Moon in the FY12-13 timeframe
  - **Words from BAA:** All categories of non-government U.S. institutions are eligible to submit proposals in response to this BAA. NASA Centers (JPL is considered a NASA Center for the purpose of this BAA) cannot submit proposals to this BAA.
- Includes small & large businesses in order to obtain the best scientific & technological sources
- Foreign Participation: Consistent with NASA policy, NASA sought the broadest participation in response to this BAA, including proposals with foreign participation. If a proposal is received with foreign participation, it will be considered consistent with the procedure in NFS 1835.016-70 and the evaluation criteria in the BAA.
  - **Words from BAA:** NASA's policy is to conduct research with foreign entities on a cooperative, no-exchange-of-funds basis
  - Export control considerations have been added to BAA and reference appropriate regulations (ITAR & EAR)



# Competition Considerations

- Funding Availability (FY10-12):

CLIN Awards (\$M)	FY10	FY11	FY12	TOTAL
ILDD Procurement	1.6	1.8	26.7	30.1

- Exploration Systems Mission Directorate (ESMD) funds FY10, 11 & 12

- FY10 Schedule

- Aggressive schedule with specific assumptions make this possible

- Small Business Considerations

- Coordination with, and concurrence by, JSC & HQ Small Business Offices
  - Per FAR 19.502-2, this activity is not appropriate for a small business set aside
  - Per FAR 19.702, the contracting officer has determined that no subcontracting plan is required because no subcontracting possibilities are reasonably available

- Data Rights

- Total funding for this BAA is substantially less than that required to obtain the data
- NASA has much greater flexibility in contracts requiring the contractor to make substantial contributions of funds or resources. Can limit the acquisition of data and/or acquire less than unlimited rights in data. (FAR 27.408 and NFS 1827.408)
- BAA establishes a set minimum and allows offerors to describe additional data rights they will allow – this will be used as a positive evaluation factor



# Technical Requirements

- Buying data resulting from completion of the tasks below, via data packages for each CLIN
- Contractors are not required to compete/bid on every CLIN or Delivery Order (DO)

CLIN	CLIN Title	Value (\$M)
1.	Critical Component Demo (FY10/11)	0.5
2.	Ground Test/Mission Simulation of Flight Hardware (FY11/12)	0.6
3.	Basic Capabilities (FY12/13)	2
	Pre-launch - \$0.5M	
	In-Flight Activities - \$0.5M	
	Lunar Landing - \$1M	
4.	Enhanced Capabilities (FY12/13)	6.9
	Human Mission Profile Landing - \$2.5M	
	Identification of Hazards During Landing - \$1M	
	Precision Landing - \$1M	
	Video Survey of Lander Post-Landing - \$0.4M	
	Imagery of Landing Path - \$0.5M	
	Participatory Exploration - \$0.5M	
	Extended Duration Operations - \$1M	
<b>TOTAL</b>		<b>10</b>



# Proposals

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- BAA asked for the following to be submitted:
  - Technical Approach (Max 10 Pages)
    - Concept of Operations
    - Conceptual Vehicle Design
    - Description of Demonstrated Performance with Relevant Technical Endeavors
  - Business Model (Max 10 Pages)
    - Business Strategy
    - Financial Plan
    - Threats
  - Value Proposal (Max 5 Pages)
    - State for each CLIN the rights in data proposed to confer to the Government beyond the minimum: internal Government use only
    - Provide written justification that the Government is receiving products of value commensurate with the prescribed value for each CLIN
    - Allows flexibility for delivery orders to provide more specific guidance



# Evaluation Information

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- Evaluation Factors & Relative Importance – in descending order:
  - Technical Merit
    - Reasonableness of Approach
    - Innovativeness of Approach
    - Effectiveness and Relevance of Demonstrated Performance to Proposed Technical Approach
  - Business Merit
    - Realistic and reasonable business strategy, including suitable facilities, for development of spaceflight hardware by FY12 or 13.
    - Assessment of funding, including threats, providing a reasonable indication that the technical mission as outlined is properly supported to meet a FY12 or 13 lunar landing
  - Value Merit
    - Positive evaluation due to the establishment of a minimum
    - Assessment of the offeror's willingness to confer data rights to the government for each data deliverable including what limitations the government will have regarding distribution of the data
    - Verification that the government is receiving products of value that are commensurate with the associated dollar values



# Award Information

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- Multiple awards were anticipated
  - Basic contract award to 6 companies as a result of the BAA
    - All guaranteed a minimum of \$10K for submission of SDR data package as defined in BAA
  - CLIN payments occur when tasks outlined in the Delivery Order (DO) and agreed upon in the proposal/contract are complete & verified
  - Fair opportunity provided to all contractors in the initially selected pool to submit proposals for each DO
  
- Deliverables
  - Basic Deliverable, minimum order: requiring submission of SDR data package by all contractors
    - Valued at \$10K
    - Detailed description of the products necessary for an acceptable SDR data package to be provided in the BAA
  - Delivery Order CLIN Data Package
    - Each CLIN will provide further definition in the specific delivery order
    - In general, all CLINs will require written submissions of the data outlined within the BAA and further defined in the delivery orders
    - Data may also be required in non-written formats: orally, visually, or direct telemetry (to be specified in delivery order)



# Questions??

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