

New Frontiers 3 AO
ELV LAUNCH SERVICES PROGRAM INFORMATION SUMMARY
09/26/2008

Domestic ELV Launch Services Groundrules/Policy

Any domestic Expendable Launch Vehicles (ELV) proposed for this AO will be procured and managed by the NASA/Launch Services Program (LSP) using existing government contracts.

Under the provisions of the NASA contract, the launch service includes the launch vehicle (LV) and associated standard services, non-standard services (mission unique options), and all engineering and analysis. LSP also provides technical management of the launch service, technical insight into the LV production/test, coordinates and approves mission-specific integration activities, provides mission unique LV hardware/software development, provides payload-processing accommodations, and manages the launch campaign/countdown. (Reference Attachment 1.)

Upon mission selection, LSP using its standing contracts, will competitively select a launch service provider and award a Launch Service Task Order (LSTO) for the mission based on customer requirements. Launch Service Task Order (LSTO) is awarded to the Contractor that provides the best value in launch services to meet the Government's requirements based on technical capability/risk, reasonableness of proposed price, and past performance. Accordingly, assumption of a specific launch vehicle configuration as part of the AO proposal will not guarantee that the proposed LV configuration will be selected unless there is firm technical rationale for sole source. This rationale should be clearly explained in the proposal.

All NASA-procured launch services are to be consistent with NASA Policy Directive (NPD) 8610.7, NASA Launch Services Risk Mitigation Policy. Expendable launch services acquired by NASA will be managed in accordance with NPD 8610.23, Technical Oversight of Expendable Launch Vehicle (ELV) Launch Services and NPD 8610.24, Launch Services Program (LSP) Pre-Launch Readiness Reviews. These NPD's can be accessed through the URLs:

http://nodis3.gsfc.nasa.gov/displayDir.cfm?Internal_ID=N_PD_8610_007D_&page_name=main

http://nodis3.gsfc.nasa.gov/displayDir.cfm?Internal_ID=N_PD_8610_023C_&page_name=main

http://nodis3.gsfc.nasa.gov/displayDir.cfm?Internal_ID=N_PD_8610_024B_&page_name=main

Dual manifested or secondary payloads will not be considered under the cognizance of this AO.

Contributed Domestic or Foreign Launch Vehicles

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Foreign launch vehicles are not considered for this AO.

Launch Vehicle Information/Configuration/Performance

The LSP has developed an advanced planning documentation site for vehicles on contract to NASA. This web site contains information relevant to NASA-procured launch services. This planning tool can be found at the following web address: <https://elvppg.ksc.nasa.gov>. Access to this site requires a self-determined password, which is activated by the site administrator at the LSP. A user can request access/password activation by going to the site and following the directions provided on the log-in screen as well as providing the required information. Access to this web site can typically be activated within 24-48 hours during the week. For questions, utilize the point(s) of contact listed in this document.

The Offerors should select the minimum launch service performance class that meets their requirements including adequate performance margins. As a reference, the LSP has developed an on-line tool to assist in determining LV performance. This tool is publicly accessible at the following web address: <http://elvperf.ksc.nasa.gov>. The performance information reflects figures consistent with the NLS contractual commitments. All of these figures reflect separated spacecraft mass and lists the associated ground rules/assumptions under which the performance is valid. For variations from what is found on-line, refer to the contacts listed in this document for an assessment. The Offerors should specifically state in the proposal the launch service performance range to meet their requirements for this mission.

Launch Service Costs

The launch service costs will be held by the New Frontiers Program. Provided in the launch service costs are the launch service, nominal allocation for mission unique launch vehicle modifications/services, mission integration, launch site payload processing, range safety and launch vehicle telemetry support.

As described in Section 5.9.2 of the AO, the PI-Managed Mission Cost will be raised for use of a launch vehicle in the medium or low performance range of an intermediate class launch vehicle. Table one describes these performance ranges in terms of mass to orbit (kilograms) for a C3 = 10.

For missions using nuclear materials (RHU's), the offerors must account for the estimated cost in the PI-Managed Mission Cost (see Section 5.9.2 of the AO). The LSP is responsible for managing the development, coordination and technical content of the LV Databooks and other LV-related items (e.g., range requirements for the LV, Flight Termination System, event sequence diagrams, etc.).

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Table 1
Launch Services Performance Ranges in the Intermediate Class

Case	Performance Range (kg)
C3 = 10 km² / sec²	
Low with 4-meter fairing	0 – 2840 (4-meter fairing)
Low with 5-meter fairing	0 – 2150 (5-meter fairing)
Medium	2150 - 3100
High	4345 - 5300

Evaluation Criteria

Attachment 2 shows the Evaluation checklist that will be used as a guide for the evaluators during the proposal evaluation phase. This checklist should give the offerors an indication of the types of information that are expected to be contained in the proposals.

NASA Launch Services Program Point of Contact for Additional Information

Prior to AO release, additional information including performance quotes, mission integration inquiries and costs may be obtained directly from the point of contact below. Otherwise questions must be directed as indicated in the Technical and Scientific Inquiries section if the AO.

Rex A. Engelhardt
Mission Manager
NASA Launch Services Program
Code VA-C
Kennedy Space Center, FL 32899

Phone: 321-867-5150
Email: Rex.A.Engelhardt@nasa.gov

Attachment 1

NASA-LSP Standard Launch Services

This list provides an overview of the standard services that the spacecraft customer receives with NASA-LSP as their launch service provider.

Integrated Services:

- Range support and services
- Payload processing facility and support
- Contractor Engineering support
- Base Support contractors
- Logistics
- Hazardous support

Launch Vehicle and Mission Unique:

- Launch vehicle that meets customer's performance needs
- Payload Fairing with approximately 3 access doors with thermal and/or acoustic blankets
- Payload Separation System
- Payload Adapter
- Test Payload adapter availability
- Spacecraft Spin/De-spin capability for separation (if required)
- Collision/Contamination Avoidance Maneuver (CCAM) capability if needed
- Electrical interface connectors (approximately 3 sets)
- Mission Unique Reviews (approximately 3)
- Readiness Reviews (approximately 4)
- Risk Management
- Launch vehicle insight and approval
- Mission integration management & engineering support
- Launch campaign management
- Down range telemetry assets for LV data

Attachment 2
AO Evaluation Form
Launch Services Program

Proposal Name: _____
Proposal #: _____
Evaluator POC: _____
Phone: _____
Email: _____

Launch Service Technical Evaluation:

Overall Assessment: - Given the ground rules in the AO, is the proposed launch vehicle (LV) concept feasible for this application? (Yes or No)

Comments: _____

LV Performance: Area of concern (Yes or No)

Proposed LV configuration: _____

Proposed Launch Date: _____

Launch Period (MM/DD/YYYY to MM/DD/YYYY): ____/____/____ to ____/____/____

Launch Window (On any given day of the launch period Minutes:Seconds): _____ : _____

Orbit requirements: Apogee: _____ km Perigee: _____ km Inclination: _____ deg.

High Energy requirements: C₃: _____ km²/sec² DLA: _____ deg RLA: _____ deg

Proposed LV Performance: _____

Mass (including reserves) Dry Mass: _____ kg Wet Mass: _____ kg

Dry Mass Margin: _____ kg _____ %

Wet Mass Margin _____ kg _____ %

Formulas:

Mass Margin kg = LV Performance – S/C Mass (including reserves)

Mass Margin % = [(Mass Margin kg)/ S/C Mass (including reserves) kg] X 100

LV Performance Comments/issues/concerns:

Launch Service Cost Assessment: Area of concern (Yes or No)

Is there additional funding for any mission unique modifications/services? (Yes or No)

LV Integration: Area of concern (Yes or No)

Does the proposer have experience in LV integration? (Yes or No)

LV to Spacecraft Interface: Area of concern (Yes or No)

Proposed Payload Fairing (PLF) _____

Spacecraft (S/C) Dimensions: Radial: _____ m Height _____ m

Any intrusions outside of the PLF usable dynamic volume? (Yes or No)

Mechanical Interface:

Standard Adaptor: _____

Custom Adaptor: _____

Electrical Interface:

Standard _____ Pin(s) Connector(s): (Yes or No)

Mission Unique requirements:

Instrument T-0 GN₂ Purge: (Yes or No)

T-0 S/C Battery Cooling: (Yes or No)

Planetary Protection Requirements: (Yes or No)

Contamination Control Requirements: PLF: (Yes or No) LV adapter: (Yes or No)

Cleanliness Level: _____ other: _____

Unique Facility Requirements: (Yes or No)

Pad: _____

S/C Processing Facility: _____

S/C Environmental Test Plans

Environmental Test Plan/Flow described: (Yes or No)

Test Levels provided: (Yes or No)

Test Schedule provided: (Yes or No)

Comments/issues/concerns: _____

Spacecraft Schedule: Area of concern (Yes or No)

Adequate timing of: Launch Service Integration Start Time: (Yes or No)

S/C Environmental Test Program: (Yes or No)

Delivery of Verified S/C Model: (Yes or No)

S/C ship date: (Yes or No)

S/C to LV integrated Operations: (Yes or No)

Missions with Radiological material Area of concern (Yes or No)

List the Radiological Sources: _____

Are unique facilities required to store/process the Radiological Sources? (Yes or No)

Any LV modifications required for additional safety or Launch approval? (Yes or No)