NASA
LAUNCH SERVICES PROGRAM

DISCOVERY 2014 AO
PRE-PROPOSAL CONFERENCE
NOVEMBER 24, 2014

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Flight Projects Office
Launch Services Program

NASA Strategic Plan 2014

**Strategic Goal 3:**
Serve the American public and accomplish our Mission by effectively managing our people, technical capabilities, and infrastructure.

**Objective 3.2:**
Ensure the availability and continued advancement of strategic, technical, and programmatic capabilities to sustain NASA’s Mission

**Key Strategy:**
Provide access to space

Lead Office: **HEOMD**
Contributing Program: **LSP**

**Key Strategy “Provide access to space” citation:**

“...certify and procure domestic commercial space transportation services for the launch of robotic science, communication, weather, and other civil sector missions”

“...provide robust, reliable, commercial and cost-effective launch services”

“...assured access to space through a competitive ‘mixed Fleet’ approach utilizing the breadth of U.S. industry’s capabilities”

LSP Strategic Goals 2014

**Goal 1:** Maximize Mission Success

**Goal 2:** Assure Long Term Launch Services

**Goal 3:** Promote Evolution of a U.S. Commercial Space Launch Market

**Goal 4:** Continually Enhance LSP’s Core Capabilities
LSP Functional Structure

• LSP procures/provides a Launch Service
  – It’s more than the basic launch vehicle
  – We don’t buy a tail number
  – This is a commercial FFP procurement with additional insight and oversight

• To enable this, LSP has two functional sides
  – Mission integration
    » Mission Integration Team (MIT) assigned to each mission
    » Manages mission specific procurement, integration, and analysis
    » Includes launch site integration and processing
  – Fleet management
    » Personnel assigned to each contracted rocket
    » Includes resident offices within the production facilities of all active providers
    » We watch the production and performance of entire fleet – we certify the manufacture’s production line, not just a particular unit (tail number)
    » We have a say in any change/upgrade/anomaly

• LSP maintains the final go or no-go for launch
• Interface with Safety and Mission Assurance
  – Safety
  – Quality
• The NLS II Contract is LSP’s primary method to acquire all classes of Category 2 and Category 3 commercial launch services for spacecraft customers
• Provides NASA with domestic launch services that are safe, successful, reliable, and affordable
• Provides services for both NASA-Owned and NASA-Sponsored payloads through multiple Indefinite Delivery Indefinite Quantity (IDIQ) Launch Service Task Order (LSTO) contracts with negotiated Not To Exceed (NTE) Prices
• Provides services on a Firm-Fixed-Price (FFP) basis
  – Incorporates best commercial practices to the maximum extent practical
  – Includes Standard and Non-Standard services
  – Mission unique modifications
  – Special studies
• Allows LSP to turn on a Task Assignment or Non-Standard Service at any time for analyses
NLS II Contracts Overview

- Launch Services Risk Mitigation Policy for NASA-owned and/or NASA-sponsored Payloads/Missions can be found under NPD 8610.7. Document can be found at http://nodis3.gsfc.nasa.gov
  - Risk Category 1: Low complexity and/or low cost payloads-Classified as Class D payloads pursuant to NPR 8705.4
  - Risk Category 2: Moderate complexity and/or moderate cost payloads-Classified as Class C payloads and, in some cases, Class B payloads, pursuant to NPR 8705.4
  - Risk Category 3: Complex and/or high cost payloads-Classified as Class A payloads and, in some cases, Class B payloads, pursuant to NPR 8705.4

- NLS II Launch Service Payment, Milestone & Completion Criteria
  - Authority to Proceed (ATP) concurrent with Task Order Award
  - Cumulative payment of 10% due at L-30 (Nominal)
  - Nominal Mission Integration begins at L-30 months, with quarterly milestone payments
    » NTE will be based on the L-30 date, not the LSTO order year
    » Includes the capability to begin payments at L-33 or L-27 months with no change to Firm-Fixed-Price
  - Each NLS II Contract has standardized work plans tied to the milestone payment. Each work plan varies based on unique vehicle configuration differences.
    » In the event a contractor completes a milestone ahead of the completion date, the contractor may submit an invoice for Government consideration
  - Modified payment schedule may be negotiated through bilateral agreement
• Each Provider has their own unique Launch Delay Table
  – Delay terms are identical for both parties (Contractor/NASA)
  – No-fault Launch delays
    » Include: range constraints, floods, acts of God, strikes and other conditions
    » No adjustment made to mission price
    » No limit on number of days

• For the remaining delay cases grace days are based on sliding scale for both Contractor and NASA delays
  – 150 days of grace at ATP through L-24
  – Sliding down to 7 days of grace at L-10 days
The Launch Services Program provides:

- Procurement and Management of the launch service
- Technical insight/oversight of the launch vehicle production/test
  - Mission Integration Management and engineering support
  - Oversight of Mission unique launch vehicle hardware/software development – approval of Mission Unique Reviews
- Launch campaign/countdown management – Formal Readiness Reviews
- Risk Management for Launch Service
- Downrange telemetry assets for launch vehicle data
- Budget does not include launch delay
Launch Services Program Budget

• Integrated Services:
  – Payload processing facility and support
  – Range support and services
  – Contractor engineering support
  – Base Support Contracts
  – Logistics
  – Hazardous support

• Standard Services:
  – “Baseline” launch vehicle based on a medium performance with a 4-m payload fairing (credit for low performance with a 4-m fairing)
  – Payload Fairing with 2 access doors with thermal/acoustic blankets
  – Payload Separation System
  – Payload Adapter with availability of test payload adapter
  – Electrical Interface Connectors (approximately 3 sets)
  – Collision/Contamination Avoidance Maneuver (CCAM) capability
  – Spaceraa Spin/De-spin capabaliity
Launch Services Program Budget

- Non Standard Launch Services are NOT covered under the LSP budget and cost must be included in the PI-Managed Mission Cost:
  - Nuclear Launch services utilizing a Radioisotope Heater Unit (RHU) – detailed list included in the ELV LSP Information Summary - $11M
  - Enhanced contamination control, planetary protection, operational clean enclosures
  - Cameras on the LV
  - Extended mission integration periods (in excess of 33 months)
  - LV HW modifications required to accommodate unique payload configuration
  - Non-"baseline" launch vehicle based on high performance curve for a 4-m payload fairing or any performance for a 5-m payload fairing

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Ground Rules

- Any domestic expendable launch vehicle proposed for this AO will be procured and managed by the NASA/Launch Services Program (LSP) via the NASA Launch Services II (NLS II) contract.

- The LSP will competitively select a launch service provider for these missions based on customer requirements and NASA Flight Planning Board (FPB) approval.

Printed documents may be obsolete; validate with the LSP-Flight Projects Office Prior to use.
Available Vehicles under NLS II

• Most likely candidate vehicles for the Discovery AO that are available on the NLS II contract are
  – Atlas V
  – Falcon 9 v1.1

• Bidders must remain compatible with vehicles that provide their performance requirements

• LSP uses the NLS II contract and not the launch vehicle providers users guides when determining LV configurations and performance

• Assumption of a specific launch vehicle configuration as part of this AO proposal will not guarantee that the proposed LV configuration will be selected for award of a launch service competitive procurement
  – Firm technical rationale for sole source justification is required in the proposal, and NASA would have to obtain appropriate approvals
Available Vehicles under NLS II

- The Agency policy, NPD 8610.7, “Risk Mitigation Policy for NASA-Owned and/or NASA-Sponsored Payloads/Mission” has been modified so newer launch service providers are eligible earlier to compete for any of NASA’s missions
  - Requires one successful launch of vehicle configuration in order to bid for a proposal
- Launch Services Program initiates the procurement of a launch service under the NLSII contract via a Launch Services Task Order (LSTO)
LSTO Process

• HQ Flight Planning Board (FPB) notifies LSP of mission requirement
  – Launch Services Interface Requirements Document (LSIRD) has already been developed by Spacecraft Customer & provided to HQ FPB and to LSP (LSP works with Spacecraft Customer to develop LSIRD)

• Launch Services Program Manager notifies procurement officer of requirement and provides recommended technical personnel for LSTO evaluation team

• Procurement officer establishes LSTO evaluation team with designated contracting officer and lead tech evaluator
  – Note that the team includes up to 2 or 3 reps from the spacecraft project team

• LSTO evaluation team performs the following:
  – Develop tech requirements based on mission definition
  – Assures FAR guidelines are being followed
  – Determines and documents LSTO evaluation criteria
  – CO issues Request for Launch Services Proposal (RLSP) to multiple award contractors
LSTO Process

• LSTO eval team performs the following (cont’d):
  – Evaluate contractor proposals in accordance with LSTO procedures
  – Complete evaluation and brief to Procurement officer, LSP Program Manager, FPB, sponsoring Program/Project on evaluation results
  – Verify status of Authority To Proceed (ATP)

• Launch Services Program Manager makes selection and coordinates with KSC Contracting Officer (CO)

• KSC CO awards LSTO for mission launch service
Summary

• It is the Launch Services Program’s goal to ensure the highest practicable probability of mission success while managing the launch service technical capabilities, budget and schedule.

• Questions must be officially submitted to:

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