REQUEST FOR PROPOSALS

FEASIBILITY STUDY FOR THE

AZERSPACE-2 COMMUNICATIONS SATELLITE PROJECT FEASIBILITY STUDY

Submission Deadline: **4:00 PM**

BAKU TIME

October 24, 2013

Submission Place:

Mr. Rashad Nabiyev
CEO/Chairman of the Board
Azercosmos OJSCo.
72 Uzeyir Hajibeyli Street
AZ1000, Baku, Azerbaijan

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SEALED PROPOSALS SHALL BE CLEARLY MARKED AND RECEIVED PRIOR TO THE TIME AND DATE SPECIFIED ABOVE. PROPOSALS RECEIVED AFTER SAID TIME AND DATE WILL NOT BE ACCEPTED OR CONSIDERED.

REQUEST FOR PROPOSALS

Section 1: INTRODUCTION

The U.S. Trade and Development Agency (USTDA) has provided a grant in the amount of US$604,000 to Azercosmos Open Joint Stock Company (the "Grantee") in accordance with a grant agreement dated August 21, 2013 (the "Grant Agreement"). This project will focus on the Azerspace-2 communications satellite project in Azerbaijan. The feasibility study (FS) will help Azercosmos to assess the technical, economic, and financial feasibility for a second communications satellite. The Grant Agreement is attached at Annex 4 for reference. The Grantee is soliciting technical proposals from qualified U.S. firms to provide expert consulting services to perform the Feasibility Study.

1.1 BACKGROUND SUMMARY

Azerbaijan established its space program in 2009 with the aim of improving communications in the country, diversifying the economy from oil and gas by establishing a satellite industry, and contributing to bridging the global digital divide. As part of this program, Azercosmos was created by the President of Azerbaijan that same year as the key implementation arm for the mandated space program. As such, Azercosmos is responsible for the design, implementation and management of the current and planned satellite projects of the Republic of Azerbaijan.

Azercosmos has already launched and is operating its first satellite, the Azerspace-1 communications satellite. Azercosmos partnered with MEASAT Satellite Systems, the leading satellite operator in Malaysia, to jointly operate this satellite, which has an orbital slot that covers not only the entire territory of Azerbaijan, but also the Caucasus, Central Asia and Europe, as well as the Middle East, CIS region and Africa. This has allowed MEASAT to replace its aging Africasat-1 communications satellite. Azerspace-1 was procured from Orbital Sciences Corporation of Dulles, VA with financing from a loan of $116.6 million by the Export-Import Bank of the United States (Ex-Im). The total cost of the project was greater than $200 million. The satellite was placed into orbit on a French Arianespace rocket in early 2013 and has been already commissioned for commercial satellite operations. Azercosmos controls the satellite from its modern ground control center in Baku, Azerbaijan. Azercosmos reports that it has already contracted 40% of the capacity on Azerspace-1 and will have contracted 80% of capacity within two years of launch. With the contracted capacity revenues Azercosmos expects to pay back the Ex-Im loan within ten years, with the satellite slated to last approximately more than 15 years.

Although Azerspace-1 will meet immediate satellite telecommunications needs, the demand for services is expected to grow. Furthermore, Africa, which is experiencing considerable economic growth and even higher need for telecommunications bandwidth, is a historically underserved market for satellite coverage. In order to meet the expected future demand in Azerbaijan, the region and Africa, the President of the Republic of Azerbaijan announced in 2012 the commitment to launch a second communications satellite, Azerspace-2. Azerspace-2 will meet this increased demand by using three different satellite frequency ranges, C-band, Ku-band and Ka-band; Azerspace-1 only uses C-band and Ku-band. By incorporating Ka-band, which is the newest and the highest bandwidth frequency range available to communications satellites, Azerspace-2 will be able to meet high data throughput needs. Furthermore with multipoint and steerable beams, the satellite will be able to provide spot coverage, which increases the number

of customers that can be served simultaneously, supports internet broadband access, typically reduces data transmission costs, and provides better performance. Azerspace-2 will allow Azercosmos to be a full service satellite provider in its coverage area.

A background Definitional Mission Report is provided for reference in Annex 2.

1.2 OBJECTIVE

To assess the feasibility of launching a second satellite for Azercosmos Open Joint Stock Company. The Terms of Reference (TOR) for this Feasibility Study are attached as Annex 5.

1.3 PROPOSALS TO BE SUBMITTED

Technical proposals are solicited from interested and qualified U.S. firms. The administrative and technical requirements as detailed throughout the Request for Proposals (RFP) will apply. Specific proposal format and content requirements are detailed in Section 3.

The amount for the contract has been established by a USTDA grant of US$604,000. **The USTDA grant of $US604,000 is a fixed amount. Accordingly, COST will not be a factor in the evaluation and therefore, cost proposals should not be submitted**. Upon detailed evaluation of technical proposals, the Grantee shall select one firm for contract negotiations.

1.4 CONTRACT FUNDED BY USTDA

In accordance with the terms and conditions of the Grant Agreement, USTDA has provided a grant in the amount of US$604,000 to the Grantee. The funding provided under the Grant Agreement shall be used to fund the costs of the contract between the Grantee and the U.S. firm selected by the Grantee to perform the TOR. The contract must include certain USTDA Mandatory Contract Clauses relating to nationality, taxes, payment, reporting, and other matters. The USTDA nationality requirements and the USTDA Mandatory Contract Clauses are attached at Annexes 3 and 4, respectively, for reference.

Section 2: INSTRUCTIONS TO OFFERORS

2.1 PROJECT TITLE

The project is called Azerspace-2 Communications Satellite Project Feasibility Study.

2.2 DEFINITIONS

Please note the following definitions of terms as used in this RFP.

The term "Request for Proposals" means this solicitation of a formal technical proposal, including qualifications statement.

The term "Offeror" means the U.S. firm, including any and all subcontractors, which responds to the RFP and submits a formal proposal and which may or may not be successful in being awarded this procurement.

2.3 DEFINITIONAL MISSION REPORT

USTDA sponsored a Definitional Mission to address technical, financial, sociopolitical, environmental and other aspects of the proposed project. Portions of the report are attached at Annex 2 for background information only. Please note that the TOR referenced in the report are included in this RFP as Annex 5.

2.4 EXAMINATION OF DOCUMENTS

Offerors should carefully examine this RFP. It will be assumed that Offerors have done such inspection and that through examinations, inquiries and investigation they have become familiarized with local conditions and the nature of problems to be solved during the execution of the Feasibility Study.

Offerors shall address all items as specified in this RFP. Failure to adhere to this format may disqualify an Offeror from further consideration.

Submission of a proposal shall constitute evidence that the Offeror has made all the above mentioned examinations and investigations, and is free of any uncertainty with respect to conditions which would affect the execution and completion of the Feasibility Study.

2.5 PROJECT FUNDING SOURCE

The Feasibility Study will be funded under a grant from USTDA. The total amount of the grant is not to exceed US$604,000.

2.6 RESPONSIBILITY FOR COSTS

Offeror shall be fully responsible for all costs incurred in the development and submission of the proposal. Neither USTDA nor the Grantee assumes any obligation as a result of the issuance of this RFP, the preparation or submission of a proposal by an Offeror, the evaluation of proposals, final selection or negotiation of a contract.

2.7 TAXES

Offerors should submit proposals that note that in accordance with the USTDA Mandatory Contract Clauses, USTDA grant funds shall not be used to pay any taxes, tariffs, duties, fees or other levies imposed under laws in effect in the Host Country.

2.8 CONFIDENTIALITY

The Grantee will preserve the confidentiality of any business proprietary or confidential information submitted by the Offeror, which is clearly designated as such by the Offeror, to the extent permitted by the laws of the Host Country.

2.9 ECONOMY OF PROPOSALS

Proposal documents should be prepared simply and economically, providing a comprehensive yet concise description of the Offeror's capabilities to satisfy the requirements of the RFP. Emphasis should be placed on completeness and clarity of content.

2.10 OFFEROR CERTIFICATIONS

The Offeror shall certify (a) that its proposal is genuine and is not made in the interest of, or on behalf of, any undisclosed person, firm, or corporation, and is not submitted in conformity with, and agreement of, any undisclosed group, association, organization, or corporation; (b) that it has not directly or indirectly induced or solicited any other Offeror to put in a false proposal; (c) that it has not solicited or induced any other person, firm, or corporation to refrain from submitting a proposal; and (d) that it has not sought by collusion to obtain for itself any advantage over any other Offeror or over the Grantee or USTDA or any employee thereof.

2.11 CONDITIONS REQUIRED FOR PARTICIPATION

Only U.S. firms are eligible to participate in this tender. However, U.S. firms may utilize subcontractors from the Host Country for up to 20 percent of the amount of the USTDA grant for

specific services from the TOR identified in the subcontract. USTDA's nationality requirements, including definitions, are detailed in Annex 3.

2.12 LANGUAGE OF PROPOSAL

All proposal documents shall be prepared and submitted in English, and only English.

2.13 PROPOSAL SUBMISSION REQUIREMENTS

The **Cover Letter** in the proposal must be addressed to:

Mr. Rashad Nabiyev
CEO/Chairman of the Board
Azercosmos OJSCo.
72 Uzeyir Hajibeyli Street
AZ1000, Baku, Azerbaijan

Phone: +99412-565-0055
Fax: +99412-565-0066
E-Mail: rashad.nabiyev@azercosmos.az

An Original and eight (8) copies of your proposal must be received at the above address no later than 16:00 Baku time, on October 24, 2013.

Proposals may be either sent by mail, overnight courier, or hand-delivered. Whether the proposal is sent by mail, courier or hand-delivered, the Offeror shall be responsible for actual delivery of the proposal to the above address before the deadline. Any proposal received after the deadline will be returned unopened. The Grantee will promptly notify any Offeror if its proposal was received late.

Upon timely receipt, all proposals become the property of the Grantee.

2.14 PACKAGING

The original and each copy of the proposal must be sealed to ensure confidentiality of the information. The proposals should be individually wrapped and sealed, and labeled for content including the name of the project and designation of "original" or "copy number x." The original and eight (8) copies should be collectively wrapped and sealed, and clearly labeled, including the contact name and the name of the project.

Neither USTDA nor the Grantee will be responsible for premature opening of proposals not properly wrapped, sealed and labeled.

2.15 OFFEROR'S AUTHORIZED NEGOTIATOR

The Offeror must provide the name, title, address, telephone number, e-mail address and fax number of the Offeror's authorized negotiator. The person cited shall be empowered to make binding commitments for the Offeror and its subcontractors, if any.

2.16 AUTHORIZED SIGNATURE

The proposal must contain the signature of a duly authorized officer or agent of the Offeror empowered with the right to bind the Offeror.

2.17 EFFECTIVE PERIOD OF PROPOSAL

The proposal shall be binding upon the Offeror for SIXTY (60) days after the proposal due date, and Offeror may withdraw or modify this proposal at any time prior to the due date upon written request, signed in the same manner and by the same person who signed the original proposal.

2.18 EXCEPTIONS

All Offerors agree by their response to this RFP announcement to abide by the procedures set forth herein. No exceptions shall be permitted.

2.19 OFFEROR QUALIFICATIONS

As provided in Section 3, Offerors shall submit evidence that they have relevant past experience and have previously delivered advisory, feasibility study and/or other services similar to those required in the TOR, as applicable.

2.20 RIGHT TO REJECT PROPOSALS

The Grantee reserves the right to reject any and all proposals.

2.21 PRIME CONTRACTOR RESPONSIBILITY

Offerors have the option of subcontracting parts of the services they propose. The Offeror's proposal must include a description of any anticipated subcontracting arrangements, including the name, address, and qualifications of any subcontractors. USTDA nationality provisions apply to the use of subcontractors and are set forth in detail in Annex 3. The successful Offeror shall cause appropriate provisions of its contract, including all of the applicable USTDA Mandatory Contract Clauses, to be inserted in any subcontract funded or partially funded by USTDA grant funds.

2.22 AWARD

The Grantee shall make an award resulting from this RFP to the best qualified Offeror, on the basis of the evaluation factors set forth herein. The Grantee reserves the right to reject any and all proposals received.

2.23 COMPLETE SERVICES

The successful Offeror shall be required to (a) provide local transportation, office space and secretarial support required to perform the TOR if such support is not provided by the Grantee; (b) provide and perform all necessary labor, supervision and services; and (c) in accordance with best technical and business practice, and in accordance with the requirements, stipulations, provisions and conditions of this RFP and the resultant contract, execute and complete the TOR to the satisfaction of the Grantee and USTDA.

2.24 INVOICING AND PAYMENT

Deliverables under the contract shall be delivered on a schedule to be agreed upon in a contract with the Grantee. The Contractor may submit invoices to the designated Grantee Project Director in accordance with a schedule to be negotiated and included in the contract. After the Grantee's approval of each invoice, the Grantee will forward the invoice to USTDA. If all of the requirements of USTDA's Mandatory Contract Clauses are met, USTDA shall make its respective disbursement of the grant funds directly to the U.S. firm in the United States. All payments by USTDA under the Grant Agreement will be made in U.S. currency. Detailed provisions with respect to invoicing and disbursement of grant funds are set forth in the USTDA Mandatory Contract Clauses attached in Annex 4.

Section 3: PROPOSAL FORMAT AND CONTENT

To expedite proposal review and evaluation, and to assure that each proposal receives the same orderly review, all proposals must follow the format described in this section.

Proposal sections and pages shall be appropriately numbered and the proposal shall include a Table of Contents. Offerors are encouraged to submit concise and clear responses to the RFP. Proposals shall contain all elements of information requested without exception. Instructions regarding the required scope and content are given in this section. The Grantee reserves the right to include any part of the selected proposal in the final contract.

The proposal shall consist of a technical proposal only. A cost proposal is NOT required because the amount for the contract has been established by a USTDA grant of US$604,000, which is a fixed amount.

Offerors shall submit one (1) original and eight (8) copies of the proposal. Proposals received by fax cannot be accepted.

Each proposal must include the following:

Transmittal Letter,
Cover/Title Page,
Table of Contents,
Executive Summary,
Firm Background Information,
Completed U.S. Firm Information Form,
Organizational Structure, Management Plan, and Key Personnel,
Technical Approach and Work Plan, and
Experience and Qualifications.

Detailed requirements and directions for the preparation of the proposal are presented below.

3.1 EXECUTIVE SUMMARY

An Executive Summary should be prepared describing the major elements of the proposal, including any conclusions, assumptions, and general recommendations the Offeror desires to make. Offerors are requested to make every effort to limit the length of the Executive Summary to no more than five (5) pages.

3.2 U.S. FIRM INFORMATION

A U.S. Firm Information Form in .pdf fillable format is attached at the end of this RFP in Annex 6. The Offeror must complete the U.S. Firm Information Form and include the completed U.S. Firm Information Form with its proposal.

3.3 ORGANIZATIONAL STRUCTURE, MANAGEMENT, AND KEY PERSONNEL

Describe the Offeror's proposed project organizational structure. Discuss how the project will be managed including the principal and key staff assignments for this Feasibility Study. Identify the Project Manager who will be the individual responsible for this project. The Project Manager shall have the responsibility and authority to act on behalf of the Offeror in all matters related to the Feasibility Study.

Provide a listing of personnel (including subcontractors) to be engaged in the project, including both U.S. and local subcontractors, with the following information for key staff: position in the project; pertinent experience, curriculum vitae; other relevant information. If subcontractors are to be used, the Offeror shall describe the organizational relationship, if any, between the Offeror and the subcontractor.

A manpower schedule and the level of effort for the project period, by activities and tasks, as detailed under the Technical Approach and Work Plan shall be submitted. A statement confirming the availability of the proposed project manager and key staff over the duration of the project must be included in the proposal.

3.4 TECHNICAL APPROACH AND WORK PLAN

Describe in detail the proposed Technical Approach and Work Plan (the "Work Plan"). Discuss the Offeror's methodology for completing the project requirements. Include a brief narrative of the Offeror's methodology for completing the tasks within each activity series. Begin with the information gathering phase and continue through delivery and approval of all required reports.

Prepare a detailed schedule of performance that describes all activities and tasks within the Work Plan, including periodic reporting or review points, incremental delivery dates, and other project milestones.

Based on the Work Plan, and previous project experience, describe any support that the Offeror will require from the Grantee. Detail the amount of staff time required by the Grantee or other participating agencies and any work space or facilities needed to complete the Feasibility Study.

3.5 EXPERIENCE AND QUALIFICATIONS

Provide a discussion of the Offeror's experience and qualifications that are relevant to the objectives and TOR for the Feasibility Study. If a subcontractor(s) is being used, similar information must be provided for the prime and each subcontractor firm proposed for the project. The Offeror shall provide information with respect to relevant experience and qualifications of key staff proposed. The Offeror shall include letters of commitment from the individuals proposed confirming their availability for contract performance.

As many as possible but not more than six (6) relevant and verifiable project references must be provided for each of the Offeror and any subcontractor, including the following information:

Project name,
Name and address of client (indicate if joint venture),
Client contact person (name/ position/ current phone and fax numbers),
Period of Contract,
Description of services provided,
Dollar amount of Contract, and
Status and comments.

Offerors are strongly encouraged to include in their experience summary primarily those projects that are similar to the Feasibility Study as described in this RFP.

Section 4: AWARD CRITERIA

Individual proposals will be initially evaluated by a Procurement Selection Committee of representatives from the Grantee. The Committee will then conduct a final evaluation and completion of ranking of qualified Offerors. The Grantee will notify USTDA of the best qualified Offeror, and upon receipt of USTDA's no-objection letter, the Grantee shall promptly notify all Offerors of the award and negotiate a contract with the best qualified Offeror. If a satisfactory contract cannot be negotiated with the best qualified Offeror, negotiations will be formally terminated. Negotiations may then be undertaken with the second most qualified Offeror and so forth.

The selection of the Contractor will be based on the following criteria:

Technical and Regulatory Experience and Expertise 35% – The Contractor and/or its team shall demonstrate: a) detailed experience and expertise with the frequency coordination and regulatory process, specifically with regard to C, Ku, and Ka-band satellites, including the ability to assess the status of its frequency coordination with neighboring satellite operators and terrestrial users of the same frequencies, and the ability to provide a detailed due diligence and execution plan to identify and ensure the availability of orbital positions for Azerspace-2 either through its own filings or that of third parties. This should include a risk assessment and mitigation plan for each filing; b) strong technical ability to validate the capabilities of the satellite, including the types and quality of the services it can provide; c) familiarity with high throughput and Ka-band spot beam technology, and their issues and challenges in the target markets; and d) ability to identify the technical and regulatory risks associated with the implementation of the system from the point of view of launch vehicle and satellite manufacturer's selection. In addition, the Contractor and/or its team shall demonstrate detailed knowledge of the U.S. firms which might be capable of supplying the satellite, and associated launch and ground segment. The Contractor shall also demonstrate knowledge of the competitive advantages and disadvantages of U.S. industry relative to the Grantee requirements.

Satellite Industry and Market Knowledge 25% - The Contractor and/or its team shall demonstrate knowledge of global trends in satellite telecomm and how those global trends might impact the derived economic value of the Azeri satellite, as well as demonstrate a strong market research capability and ability to assess the value of the satellite services the Grantee can derive from using the slot it is obtaining and correlate the slot selection to the design of the satellite, geographic coverage, market potential for each of a series of satellite services by demand growth in those regions, and expected market penetration, as well as provide a competitive market analysis of other satellite operators in the region offering similar services. The Contractor and/or its team shall demonstrate knowledge of end user market customers, channel distribution and political, regulatory and economic conditions for satellite communications in the target markets (e.g. oil and gas, Direct to Home, etc.).

Work Plan and Methodology 15% - The proposed work plan including the methodology for accomplishing the Terms of Reference. The proposed time frame for completing the feasibility study (shorter time frames will be viewed more favorably).

Economic Analysis and Regional Experience and Expertise 15% -- The Contractor and/or its team shall demonstrate experience and expertise in providing detailed analyses of the economic, legal and business factors associated with generation of satellite services to the wholesale market in the region, and a particular demonstrated understanding of the special political nuances within the region that might affect the Grantee's business objectives; this should include a risk assessment and mitigation program. This shall include an ability to model Supply and Demand in Fixed Service Satellite customized by countries and regions by frequency bands and by services.

Satellite Finance Experience and Expertise 10% - The Contractor and/or its team shall possess strong financial capabilities to develop the most appropriate financial model for a Ka-band satellite system through the full life cycle of the program and proficiency in satellite project financing and knowledge of U.S. Export Credit agency activity in the satellite sector

Proposals that do not include all requested information may be considered non-responsive.

Price will not be a factor in contractor selection.

ANNEX 1

Mr. Rashad Nabiyev, CEO/Chairman of the Board, Azercosmos OJSCo., 72 Uzeyir Hajibeyli Street, AZ1000, Baku, Azerbaijan, Phone: +99412-565-0055, Fax: +99412-565-0066.

Azerspace-2 Communications Satellite Project Feasibility Study

POC: Jennifer Van Renterghem, USTDA, 1000 Wilson Boulevard, Suite 1600, Arlington, VA 22209-3901, Tel: (703) 875-4357, Fax: (703) 875-4009, Email: RFPquestions@ustda.gov. Azerspace-2 Communications Satellite Project Feasibility Study. The Grantee invites submission of qualifications and proposal data (collectively referred to as the "Proposal") from interested U.S. firms that are qualified on the basis of experience and capability to develop a feasibility study for a satellite project in Azerbaijan.

This Feasibility Study will help Azercosmos Open Joint Stock Company to assess the technical, economic, and financial feasibility for a second communications satellite.

Azercosmos Open Joint Stock Company (Azercosmos) is a state-owned Azerbaijan satellite communications company. Azerbaijan established its space program in 2009 with the aim of improving communications in the country, diversifying the economy from oil and gas by establishing a satellite industry, and contributing to bridging the global digital divide. As part of this program, Azercosmos was created by the President of Azerbaijan that same year as the key implementation arm for the mandated space program. As such, Azercosmos is responsible for the design, implementation and management of the current and planned satellite projects of the Republic of Azerbaijan.

Azercosmos has already launched and is operating its first satellite, the Azerspace-1 communications satellite. Azercosmos partnered with MEASAT Satellite Systems, the leading satellite operator in Malaysia, to jointly operate this satellite, which has an orbital slot that covers not only the entire territory of Azerbaijan, but also the Caucasus, Central Asia and Europe as well as Middle East, CIS region and Africa. In order to meet the expected future demand in Azerbaijan, the region and Africa, the President of the Republic of Azerbaijan announced in 2012 the commitment to launch a second communications satellite, Azerspace-2. Azerspace-2 will meet this increased demand by using three different satellite frequency ranges, C-band, Ku-band and Ka-band; Azerspace-1 only uses C-band and Ku-band.

The U.S. firm selected will be paid in U.S. dollars from a $604,000 grant to the Grantee from the U.S. Trade and Development Agency (USTDA).

A detailed Request for Proposals (RFP), which includes requirements for the Proposal, the Terms of Reference, and a background definitional mission are available from USTDA, at 1000 Wilson Boulevard, Suite 1600, Arlington, VA 22209-3901. To request the RFP in PDF format, please go to: https://www.ustda.gov/businessopps/rfpform.asp. Requests for a mailed hardcopy version of the RFP may also be faxed to the IRC, USTDA at 703-875-4009. In the fax, please include your firm’s name, contact person, address, and telephone number. Some

firms have found that RFP materials sent by U.S. mail do not reach them in time for preparation of an adequate response. Firms that want USTDA to use an overnight delivery service should include the name of the delivery service and your firm's account number in the request for the RFP. Firms that want to send a courier to USTDA to retrieve the RFP should allow one hour after faxing the request to USTDA before scheduling a pick-up. Please note that no telephone requests for the RFP will be honored. Please check your internal fax verification receipt. Because of the large number of RFP requests, USTDA cannot respond to requests for fax verification. Requests for RFPs received before 4:00 PM will be mailed the same day. Requests received after 4:00 PM will be mailed the following day. Please check with your courier and/or mail room before calling USTDA.

Only U.S. firms and individuals may bid on this USTDA financed activity. Interested firms, their subcontractors and employees of all participants must qualify under USTDA's nationality requirements as of the due date for submission of qualifications and proposals and, if selected to carry out the USTDA-financed activity, must continue to meet such requirements throughout the duration of the USTDA-financed activity. All goods and services to be provided by the selected firm shall have their nationality, source and origin in the U.S. or host country. The U.S. firm may use subcontractors from the host country for up to 20 percent of the USTDA grant amount. Details of USTDA's nationality requirements and mandatory contract clauses are also included in the RFP.

Interested U.S. firms should submit their Proposal in English directly to the Grantee by 16:00 Baku time on October 24, 2013 at the above address. Evaluation criteria for the Proposal are included in the RFP. Price will not be a factor in contractor selection, and therefore, cost proposals should NOT be submitted. The Grantee reserves the right to reject any and/or all Proposals. The Grantee also reserves the right to contract with the selected firm for subsequent work related to the project. The Grantee is not bound to pay for any costs associated with the preparation and submission

A N N E X 2

FINAL REPORT: DEFINITIONAL MISSION FOR AZERBAIJAN

AZERCOSMOS SATELLITE MISSION II

Award Number: USTDA-CO201361037

August 7, 2013

This report was funded by the U.S. Trade and Development Agency (USTDA), an agency of the U.S. Government. The opinions, findings, conclusions, or recommendations expressed in this document are those of the author(s) and do not necessarily represent the official position or policies of USTDA. USTDA makes no representation about, nor does it accept responsibility for, the accuracy or completeness of the information contained in this report.

The U.S. Trade and Development Agency (USTDA) advances economic development and U.S. commercial interests in developing and middle income countries. The agency funds various forms of technical assistance, feasibility studies, training, orientation visits and business workshops that support the development of a modern infrastructure and a fair and open trading environment.

USTDA's strategic use of foreign assistance funds to support sound investment policy and decision- making in host countries creates an enabling environment for trade, investment and sustainable economic development. Operating at the nexus of foreign policy and commerce, USTDA is uniquely positioned to work with U.S. firms and host countries in achieving the agency's trade and development goals. In carrying out its mission, USTDA gives emphasis to economic sectors that may benefit from U.S. exports of goods and services.

Address: 1000 Wilson Boulevard, Suite 1600,
Arlington, VA 22209- 3901

Phone: 703 875 4357

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Web site: www.ustda.gov

Email: info@ustda.gov

Space Partnership International (SPI), is a highly specialized full-service space and telecommunications advisory firm established in 2008. Our expertise is sought by customers who require independent guidance and support on a full range of commercial, business, regulatory, technical, legal, and risk management matters related to satellite communications and Earth observation. The SPI Team has all of the necessary skill-sets to assist new and established companies across the entire satellite value chain in meeting their business objectives.

The company, formed by senior level executives, each with more than 20 years of experience in the space, telecom, and Earth observation sectors, has a unique cross section of talent including business development, space and ground system engineering, financial planning, procurement support and oversight, legal, regulatory (ITU and FCC), risk management, insurance, training, and program management. Over the past decade we have focused on emerging markets, specializing on the Eastern, Central, and Southeast Asian Regions, the Commonwealth of Independent States (CIS), Middle East and North Africa, and Sub-Saharan Africa.

Our deep understanding of these markets, along with our network of relationships with satellite operators and suppliers throughout North America, Western Europe, and Japan, places SPI in a unique position to bring the right strategic and technology partners as well as potential customers to satellite programs. We are committed to building effective bridges between satellite operators and projects in emerging economy environments. The SPI team of experts has extensive background evaluating project development potential in the specific economic and political realities of these countries. Acting as advisors primarily to existing and new satellite operators and with direct development experience ourselves, we bring the perspective of hands-on practitioners to each assignment.

Email: info@ustda.gov

Address: 4800 Hampden Lane - Suite 200
Bethesda, Maryland 20814
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Table of Contents

3.1 EXECUTIVE SUMMARY

The U.S. Trade and Development Agency (USTDA) contracted with Space Partnership International, LLC (SPI) to perform a Definitional Mission to evaluate a proposal from Azercosmos for a feasibility study regarding the financing and implementation of a second geostationary telecommunications satellite, "Azercosmos 2." The principal objective of this mission was to review the project and provide an independent recommendation to USTDA as to whether such project meets USTDA's funding criteria. SPI traveled to Baku, Azerbaijan from April 24 to May 4, 2013 to conduct the mission. Additionally, SPI contacted and interviewed prospective U.S. vendors for key components of the system, including the spacecraft, launch services, ground segment, and insurance as well as officials from potential financing institutions.

The Azerspace-2 program consists of the acquisition of a satellite; launch services; ground equipment in support of the operations and implementation of the program; technical and regulatory consultants; and financial services, including insurance. Azerspace-2 is an aggressive program made distinctive by government ownership.

According to Azercosmos, the satellite is expected to provide Ka-band and Ku-band services, pending final design to include C-band, which in turn is dependent upon securing the orbital location and associated radio frequencies for its required coverage area. The coverage area should back-up the existing satellite's footprint and provide coverage for Central Asia, Eastern Europe, and parts of Africa. Azercosmos contemplates a business model based on the sale of wholesale transponder capacity to customers in Azerbaijan and other countries within the satellite's service area. Currently Azercosmos is not considering a broader value-added role to end users.

SPI's meetings with stakeholders in Azerbaijan as well as prospective U.S. vendors and financial institutions have revealed a number of drivers that lead SPI to **recommend favorably** to USTDA that it fund a feasibility study for Azercomos' second satellite:

1. U.S. manufacturing firms we interviewed expressed interest in supplying goods and/or services for the project;
2. The President's "Azerbaijan 2020 – Future Outlook" directive frames telecommunications and this satellite program as a national imperative;
3. The current need and demand for satellite services is growing within the country and on a regional basis;
4. Azercosmos is well-placed to capture the existing demand and fill the current Azerspace-1 satellite with a potential backlog;
5. A substantial investment has already been made in the satellite program with the launch of Azerspace-1 and the acquisition of a very sophisticated ground station;
6. The Ministry of Communications and Information Technology (IT) has developed several initiatives that will require satellite services. These include introducing an e-government platform across Azerbaijan that will connect small mountainous villages to a network; back-up facilities to mitigate fiber interruptions caused by construction; and disaster preparedness in case of earthquakes.
7. Azercosmos management is young, ambitious, well-trained and thoughtfully incorporated to include key management positions;
8. The feasibility study will be used as a foundation for developing a formal and comprehensive business plan;
9. U.S. Export potential is between $122 – 297 million US dollars (USD), depending on the complexity of the satellite and how the awards are split for the satellite, launch services, insurance, ground equipment, and advisory services.

The chart below represents SPI's estimate of the U.S. export potential within the following three scenarios:

U.S. Export Potential by Cost Category: USD (millions)

Contract Awards:		Satellite	Launch Services	Insurance	Ground Equipment	Total Export Value
Scenario 1:	U.S.	175	65	27	30	**297**
	NON-U.S.	0	0	0	0	0
		Satellite	Launch Services	Insurance	Ground Equipment	Total Export Value
Scenario 2:	U.S.	175		27	30	**232**
	NON-U.S.		95			95
		Satellite	Launch Services	Insurance	Ground Equipment	Total Export Value
Scenario 3:	U.S.		65	27	30	**122**
	NON-U.S.	175	0			175

Note: Chart excludes margin for contingencies

3.2 PROJECT DESCRIPTION

The Contractor shall submit a description and history of the project, including, among other things, host country Project Sponsor, sector, project location, source of raw materials, infrastructure requirements, proposed technological approach, legal and regulatory framework (licenses, permits, etc.), implementation schedule, economic fundamentals (estimated capital cost, life cycle costs, expected revenues, etc.), and any other key variables or issues that the Contractor deems critical as part of a thorough activity/project evaluation. The Contractor shall also provide a step-by-step detailed explanation of how the project will be implemented following the recommended USTDA-funded activity, and explain how the recommended USTDA activity supports the project implementation process.

Introduction

USTDA retained the services of Space Partnership International (SPI) (Contractor) to assess and justify whether or not USTDA should provide funding for a geostationary telecommunication satellite feasibility study as requested by Azercosmos. The purpose of this review was to provide an independent recommendation to USTDA whether Azerspace-2 Satellite Project, proposed by Azercosmos, meets USTDA's funding criteria and to recommend and prepare projects for potential future grants.

SPI principals traveled to Azerbaijan for one week during April and May 2013 to meet with and interview project stakeholders. In advance of the visit to Azerbaijan, SPI conducted interviews with various companies and organizations in order to obtain insight into potential issues, opportunities, key points of contact, and prior lessons learned from the various Azerspace-1 project phases: business planning, financing, manufacturing, post-launch training, operations, and sales. Finally, the pre-visit discussions allowed SPI to gauge U.S.-company interest in participating in the Azerspace-2 program.

USTDA provides grants to foreign sponsors to support feasibility studies and technical assistance that advances the implementation of projects which promise significant export potential for U.S. companies, as well as supporting the development of regulatory bodies or other institutions that help create a positive climate for private-sector infrastructure investment.

USTDA's core funding criteria include: (1) the contribution of the project to economic, social, and environmental development objectives; (2) the commitment of the project sponsor to implementing the project; (3) the relative priority of the project; (4) project size and potential U.S. export opportunity; and (5) the likelihood of the project attracting implementation financing.

Most USTDA-reviewed projects typically generate U.S. export revenues below $10 million. Based on the $120-million U.S. contract awarded to U.S.-based Orbital Sciences Corporation for the construction of the Azerspace/Africasat-1a satellite, we expect potential export revenues for the Azerspace-2 program to significantly exceed this $10 million threshold.

SPI researched the overall context in Azerbaijan to identify any critical economic, political, technical, environmental, legal/regulatory, or resource-based activities—past, present, or future—that could impact the viability of the Azerspace-2 project, i.e. cost, schedule, level of service, sustainability, and the ability to promote a strong policy-based privatized telecommunications industry in Azerbaijan.

Description and History of the Project

Project Location

The Project will be located in the Republic of Azerbaijan, which is the largest country in the Caucasus region, located at the crossroads of Western Asia and Eastern Europe, with a population of 9,590,159 (July 2013 estimate).[1] The business development and pre-launch activities of the Project will be managed by Azercosmos, a company headquartered in Azerbaijan's capital city of Baku. Satellite operations will be managed through the primary satellite ground station outside of Baku.

Figure: Map of Azerbaijan

Background of Project and Host Country Sponsor

Sector: Space and Telecom

Prior to the first efforts by Azerbaijan's government to promote a domestic space industry, the country's telecommunications sector was comprised of licensed terrestrial cable operators, telephone companies, fiber providers, very small aperture terminal (VSAT) suppliers, wireless operators, and Internet access providers.

In August 2008, the President of the Republic of Azerbaijan, Ilham Aliyev, called for the creation of a national space program through the Ministry of Communications and Information Technology (MCIT). The following year, the President unveiled Azerbaijan's space program, known as the "State Program on Establishment and Development of Space Industry in the Republic of

1 Source: CIA.Gov

Azerbaijan."

Parallel to these developments, on May 3, 2009, the **Azercosmos Open Joint Stock Company (OJS Co),** or Azercosmos, was established as the state-owned satellite operator for the country of Azerbaijan. Functioning under the MCIT, Azercosmos is the key implementation arm of MCIT for the state-mandated space program, and is responsible for the launch, operation, and commercialization of telecommunications satellites serving the Republic of Azerbaijan. This includes the delivery of satellite-enabled communication services and platforms to public and private sectors, including broadcasting, broadband, government customers, and customers in other countries.

To meet these objectives, Azercosmos already has in place plans to launch a low Earth orbiting (LEO) satellite in the near future, as well as other telecommunications satellites in the coming years.

Azercosmos Created in Response to National Telecommunications and Economic Strategy

Like its parent MCIT, the creation of Azercosmos can be attributed to changes in underlying government policies, which have come to place high priority on information and communications technology (ICT) as an engine of economic growth. Azerbaijan's President recognizes that ICT has rapidly evolved into a multibillion-dollar industry that contributes appreciably to the country's gross domestic product (GDP).

During our first interview, Rashad Nabiyev, Chairman of Azercosmos, stated that his organization was established as part of a wider economic diversification plan citing:

(1) State policy on diversification of the economy and prioritization of ICT as the second main sector of the Azerbaijan economy after the oil-gas industry;

(2) Determination that satellite technology is the best way to provide connectivity and information securely in Azerbaijan; and

(3) State-identified need to use satellites to build capacity and "contribute to closing the gap in the global digital divide." [2]

Economic Diversity

The need to reduce economic dependency on Azerbaijan's oil-gas revenues was addressed during our visit with the U.S. Economic Advisor to Azerbaijan at the U.S. Embassy in Baku in April 2013. These concerns are echoed by various reports and studies dating to 2011, which show that the government will not be able to depend on stable revenues streams from oil exploitation due to the drop in oil production. In 2012, President Aliyev revealed that Azerbaijan had lost $8 billion in revenues due to an "unexpected decline" in oil extraction by BP, [3] and that Azerbaijan's oil production had fallen for a second straight year, to 43 million tons.

Regardless of whether this is an unexpected slump or a premature peak, the drop in oil extraction

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2 Source: Azercosmos, 2013

3 BP is the largest investor in Azerbaijan and operator of both the Azeri-Chirag-Guneshli (ACG) and Shah Deniz mega-fields. (source: http://platformlondon.org/2012/10/15/bust-up-between-aliyev-and-bp-reveals-corporate-profits-and-vulnerable-economy/)

will mean lower oil revenues paid to the Azeri government, which translates to less budgetary flexibility and greater limits on both social and defense spending.

Azercosmos Organization

Azercosmos has evolved as a relatively flat, non-hierarchical organization, which Contractor believes is appropriate at its current state of development. Operations are conducted out of three main locations: the Azercosmos headquarters in Baku, the primary ground control station outside of the capital city, and the backup ground control station in Nakhchivan.

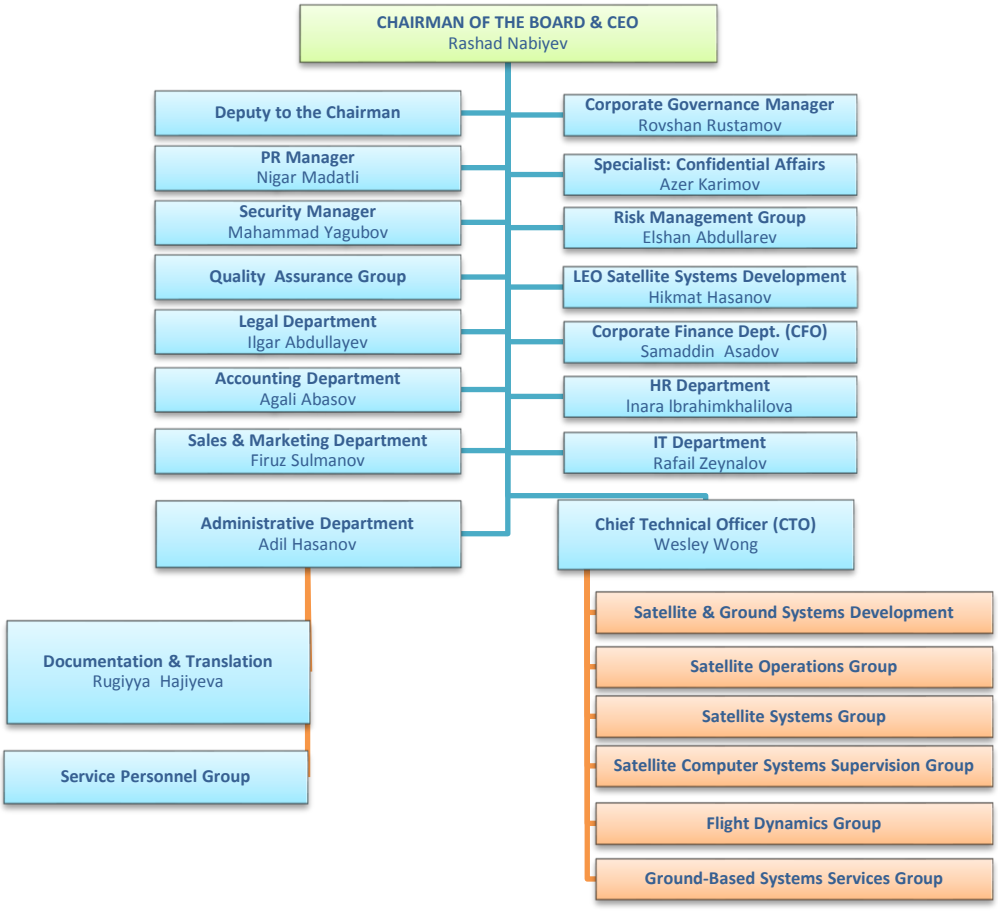


Figure 1: Azercosmos Organizational Structure

Azercosmos Board Management, Accountability, and Transparency

The High Management Body of Azercosmos is the General Assembly of its shareholders. The Management Board is a joint executive body which includes a chairman appointed by the President of the Republic of Azerbaijan and two Deputy Chairmen appointed by MCIT. The Chairman of the Management Board heads Azercosmos; however, the decisions of the Board are taken on the basis of majority rule.

Azercosmos has established an internal audit service accountable to the Chairman. Independent financial audits are carried out in accordance with the legislation of the Republic of Azerbaijan.

Azerspace-1 Satellite Program

In 2008, MCIT initiated the telecommunications satellite project[4] for the Republic of Azerbaijan, the scope of which included the creation of a domestic Azeri space industry and the launch of telecommunications satellites into orbit. First steps to define new space policies for the emerging space industry followed nine months later. In 2009, MCIT began the foundational work to create a new satellite organization, which formally came into existence in 2010.

MCIT required a functional orbital slot from which to provide coverage for its target national and international markets. MCIT proceeded to submit the requisite orbital slot appropriation applications with the International Telecommunications Union (ITU) to obtain its own orbital slot(s). This entailed coordination of the Azeri satellite's frequencies with those of neighboring satellites to avoid interference to existing satellite networks—a process that can take up to three years to finalize.

Approximately one year after it was created, control and operation of the telecommunications satellite program was reassigned to the new Azercosmos entity.[5] Azercosmos would continue to operate under MCIT as the main executor of the program.

Azerspace-1 Cost and Financing

The cost of the Azerspace-1 program (including launch, satellite, insurance, and ground equipment) was approximately $280 million USD. The award was split between U.S. and French space industry participants. In 2011, the U.S. Export-Import Bank agreed to finance $110 million USD, representing 85% of the value of the satellite, whose manufacturing contract was awarded to U.S. prime contractor Orbital Sciences Corporation. The remaining 15% was paid for by Azerbaijan government funds.[6] The French company Arianespace was awarded the launch contract, and was provided a similar loan through the French export credit-financing agency, Coface.

Sources of Financing [7]	USD (millions)
U.S. Exim Debt for satellite	114
Coface Financing for launch services	87
Azerbaijan Government Financing	42

Azercosmos estimated that these loans would be paid back within five to seven years, based on the Azerspace-1 projected service life of 15 years and anticipated take-up rate.

Azerspace-1 Orbital Slot

In order to meet Azerspace-1's aggressive launch schedule, in parallel to the lengthy ITU process,

4 By the President of the Republic of Azerbaijan; by Presidential Order #27

5 Chapter 4.1 (a amended b) Presidential Order # 1093 on September 13th, 2010)

6 Source: Azercosmos, Website 07.14.11: http://azercosmos.az/media-center/press-releases/azerbaijani-communications-and-it-ministry-agrees-on-terms-of-leasing-azerspace/

7 Azercosmos Summary of Business Plan

MCIT entered into a partnership with MEASAT, the sole licensed commercial satellite operator in Malaysia, to operate its first satellite (Azerspace/Africasat-1a) jointly from one of MEASAT/Malaysia's already-coordinated orbital slots located at 46° East Longitude (EL).[8] As part of this arrangement, MEASAT agreed to support Azercosmos' goal of launching its first national satellite to cover not only the territory of Azerbaijan, but also Central Asia and Europe. This arrangement coincided with MEASAT's own plan to replace its Africasat-1 satellite, which was reaching end of life. MEASAT also closely collaborated with MCIT's staff and later Azercosmos in knowledge and skills transfer, technical assistance, and capacity-building activities.

Azerbaijan's first satellite, Azerspace-1, was launched on February 7, 2013. Once placed in orbit, experts from Azercosmos in collaboration with MEASAT controlled the satellite from the Primary Satellite Ground Control Centre and Back-up Satellite Ground Control Centers in Azerbaijan and Malaysia. On April 2, 2013, full control of the satellite was transferred to Azercosmos after the successful completion of the satellite in-orbit testing.

Azerspace-1 Orbital Position

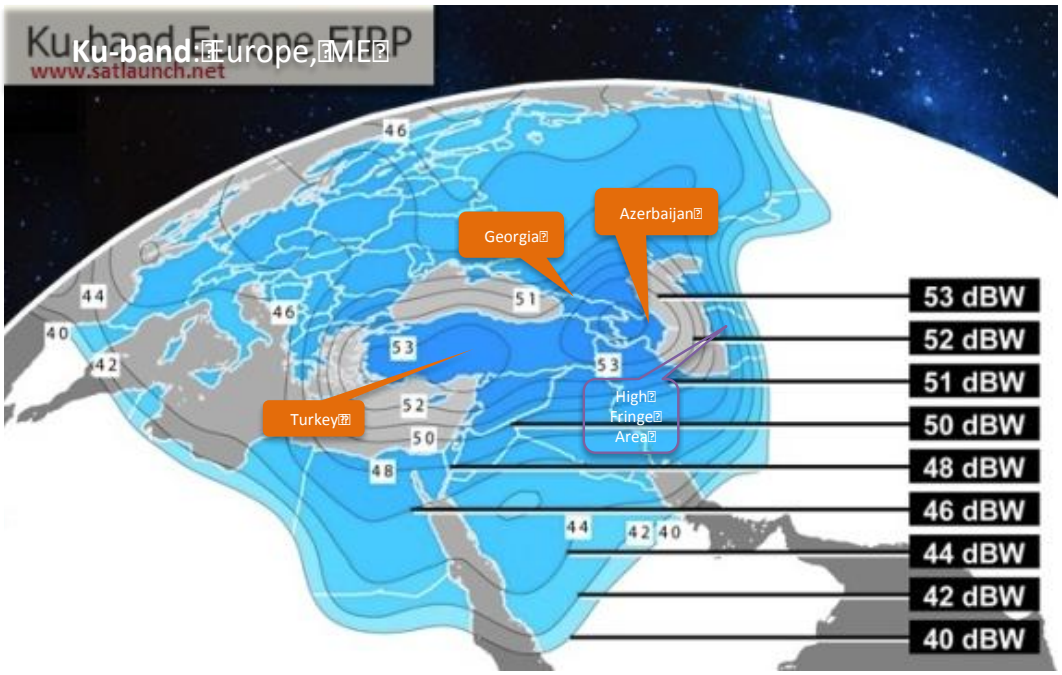
Azerspace-1 is currently located in geostationary orbit at 46° East, and can provide high quality broadcasting services to Europe, Africa, Central Asia, the Caucasus, and the Middle East. It currently provides active beam coverage over Azerbaijan, Europe, and Africa. Beams over India, Malaysia and the Philippines have been retired.

Azerspace-1 Coverage and Contour Maps

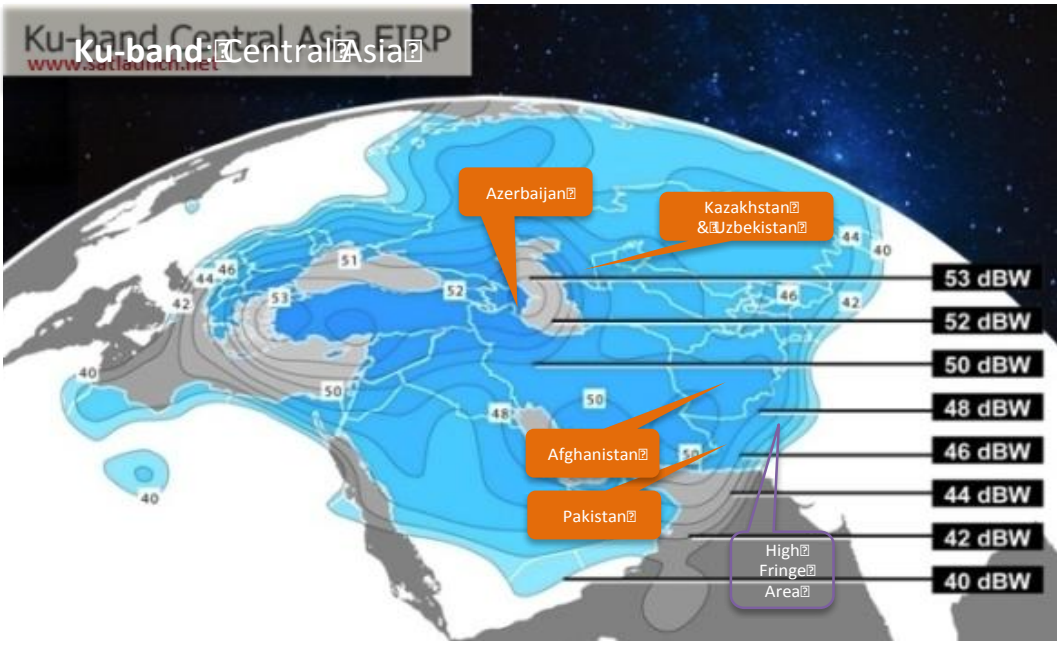
The following satellite contours show the reception signal strength / Effective Isotropic Radiated Power (EIRP) of the Azerspace-1 transponders for the various geographic regions. The contour lines signify the actual transmission power of the Azerspace-1 Ku-band and C-band beams. The centermost area of each contour provides the highest power transmission (i.e. the higher the power, or EIRP, the smaller the dish). The same satellite contours also indicate "fringe" areas, those areas under contour lines that are spaced close together. Customers in these areas often need to increase the size of their satellite dish to ensure adequate reception and quality of service.

8 Azerspace/Africasat-1a is positioned at 46 degrees east; Measat and Azercosmos mutually cooperate in connection with that orbital slot.

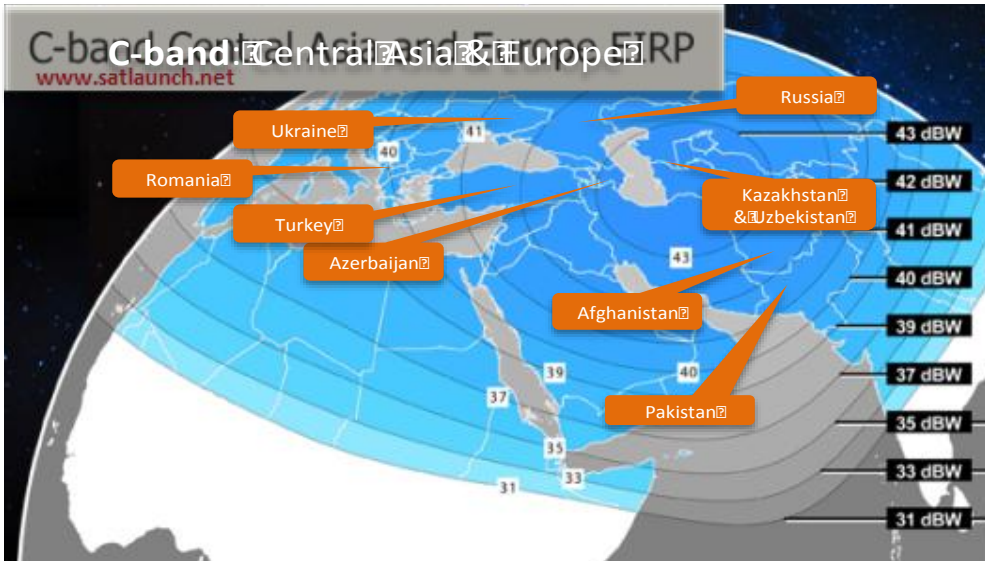
Azerspace-1: Europe Ku-Band Beam EIRP



Azerspace-1: Central Asia Ku-Band Beam EIRP



Azerspace Europe & Central Asia C-Band Beam EIRP



Africa C-Band Beam EIRP

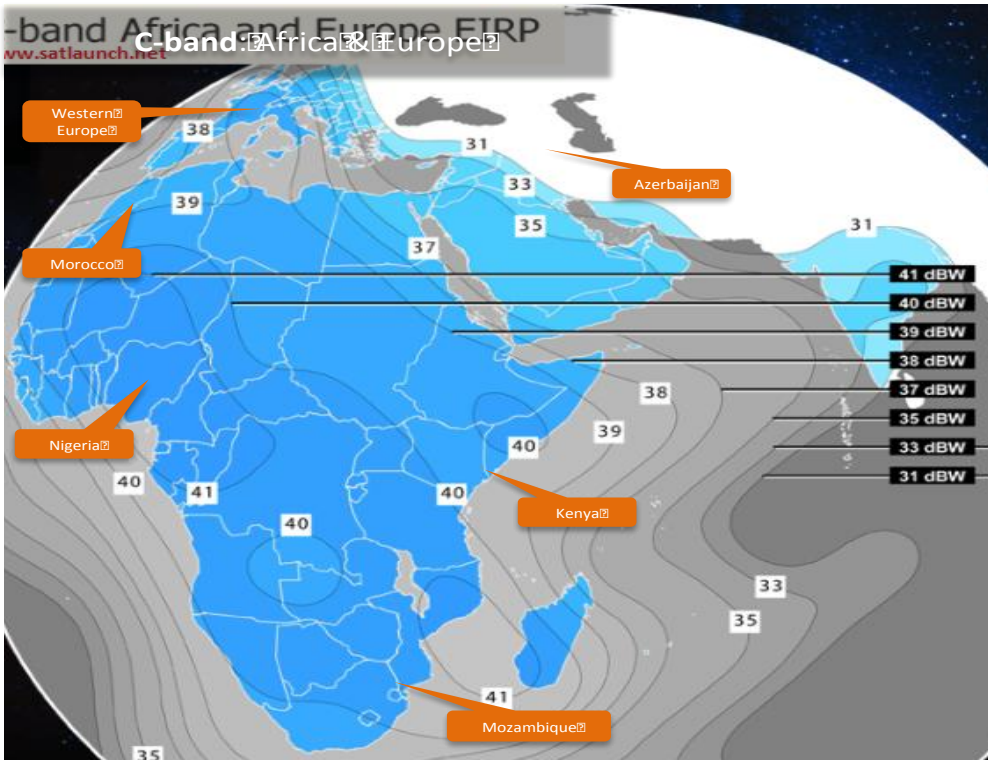


Figure 2: Image of Azerspace-1 Satellite

Current Project: Azerspace-2

Background

In late 2012, months before the successful February 2013 launch of Azerspace-1, Azercosmos committed to launch a second satellite, Azerspace-2, to "bolster its space asset base and capabilities."[9] The President of Azercosmos announced that Azerspace-2 would follow within 2-3 years of Azerspace-1.[10]

Technical Approach

Satellite Design

Design details for Azerspace-2 will be made available once Azercosmos' Chief Technical Officer (CTO) has completed work on the design concept. The Contractor selected for the feasibility study will be required to assess the suitability of the Azerspace-2 orbital position, design concept specifications, capacity plans, platform compatibility, transponder sizing and configuration, frequency plan, interference assessment, and ground segment design requirements.

Contractor expects that there will be changes to the spacecraft configuration in response to the evolving demands of the global marketplace for satellite services. The new design intends to incorporate C-, Ku- and Ka-band frequencies. Whereas the first satellite was based on Orbital Sciences Corporation's successful Geosynchronous Earth Orbit (GEO) Star spacecraft bus, the new Azerspace-2 design, with its incorporation of Ka-band, will potentially add to the project's complexity, which could translate into longer manufacturing times and higher costs.

We do, however, expect the second satellite platform to include the standard components for the following subsystems:

1. Propulsion
2. Electrical Power
3. Thermal control
4. Mechanisms
5. Avionics
6. Attitude Determination Control

Additional specifications and capabilities, however, will be determined upon the completion of several factors, including the feasibility study:

9 USTDA DM Application

10 Ibid.

- Universal services;
- Platform designed for compatibility; able to accommodate all types of commercial communications payloads and all major commercial launchers.
- Payload Power: TBD
- Manufacturer: TBD
- Transponders: TBD
- Weight: TBD
- Satellite Life: 15 years

Services and Beam Coverage

Based on interviews with the Azercosmos CTO, Contractor expects that Azerspace-2 will provide C-and/or Ku-band transponders covering Africa, providing digital video and audio broadcasting, backhaul and trunking services, VSAT and telecommunication services, and high-speed internet access trunking. In addition, Ka-band transponders will provide TV broadcasting and telecommunications services, high-quality and stable communication platforms for government and corporate clients, and low-cost, transportable network access for government, businesses, and consumers. Upon completion of the Azerspace-2 design concepts by the CTO, the contractor selected for the feasibility study will be required to review the proposed beam coverage plans.

Terrestrial infrastructure

Azercosmos will use the existing main and backup ground control centers to manage and operate Azerspace-2, with the addition of Ka-band equipment as necessary.

Benefits resulting from the Azerspace-2 design versus the Azerspace-1 satellite

The stated use of the Ka-band spot beam architecture on Azerspace-2 would enable Azercosmos to service significantly more customers compared with Azerspace-1. Spot beam architecture can support broadband internet access that uses both Ka-band frequencies for the data transmission. Additionally, the focused spot beams would enable the re-use of frequencies, or the ability of Azerspace-2 to re-use the same frequency multiple times for different users or applications without interfering with itself. This new capability potentially translates to lower per/Mb costs to the customer.[11]

Depending on how the design is implemented, would determine the specific mix of performance, capacity, and flexibility. For example, the use of Ka-band, spot beams, steerable beams, and shared VSAT hubs will enable Azercosmos to become a full-service satellite operator by being able to offer multiple managed satellite applications and Virtual Network Operator (VNO) support to users in different user segments across multiple regions from a single shared platform.

Legal and Regulatory Framework

Satellite technology falls under ITAR regulations whose purview has recently migrated from U.S. State Department to the Department of Commerce. On May 24, 2013, the Departments of Commerce and State issued important proposed changes to U.S. satellite export controls. These changes are expected to reduce significantly the administrative and licensing burdens associated

[11] The smaller and more concentrated spot beams support higher performance in a clear sky environment.

with the current export control regime. In particular, commercial satellites and related items would be transferred to the Commerce Department's less-restrictive export control regulations, and exports to many U.S.-aligned countries would be eligible for license exceptions. A satellite manufacturer will have to obtain export licenses, which historically have not been unreasonably withheld for satellites providing communications services to non-sanctioned countries.

To our knowledge, there are no sanctions imposed on Azerbaijan for this type of satellite, as demonstrated through the successful export of the Azerspace-1 satellite by U.S. company Orbital Sciences. Consequently, we do not see export licenses as a risk factor at this time.

Implementation Schedule

The timeline of a typical satellite system commences upon receiving the authorization from the ITU to use a specific orbital slot.

Only once obtained can a satellite owner finalize its technical design, coverage areas, and business plan. Moreover, depending on the complexity of the satellite design, the construction of a satellite can take from 2.5 to more than 3 years. Additionally, the procurement process can require as much as a year before finalization of the satellite contract.

The President of Azerbaijan stated in a speech that Azercosmos will launch its next satellite by 2016, taking into account the time traditionally required to build and launch a satellite. In order to fulfill that schedule, Azercosmos needs to issue a satellite request for proposal (RFP) and finalize its negotiations with the ITU (or a potential partner, such as the current owner of a designated orbital slot) no later than December 2013.

Azercosmos is currently in discussions with several satellite manufacturers to obtain preliminary support and ideas on how to optimize its next satellite design and services. In parallel, Azercosmos is in discussions with a half dozen third-party orbital slot holders and hopes to down-select its potential options to three by the autumn of 2013, with the intent to finalize its negotiations for an orbital slot by December 2013.

According to ITU experts, there are currently 2,388 ITU filings for Ka-band at the Advance Publication Information ("API") stage from 56 countries. The likelihood of obtaining a slot without an economic agreement with a prior filer is, in our minds, very low. The ITU operates on a first-come, first-served basis, and grants the filers a 7.5-year window to launch their satellite before awarding that specific slot and those frequencies to the next in line. The possibility of Azercosmos reaching an agreement for a slot with a third party represents a promising option, in our opinion, because many of filers lack the will or ability to build and operate their own satellite, and are therefore likely to seek partnering opportunities.

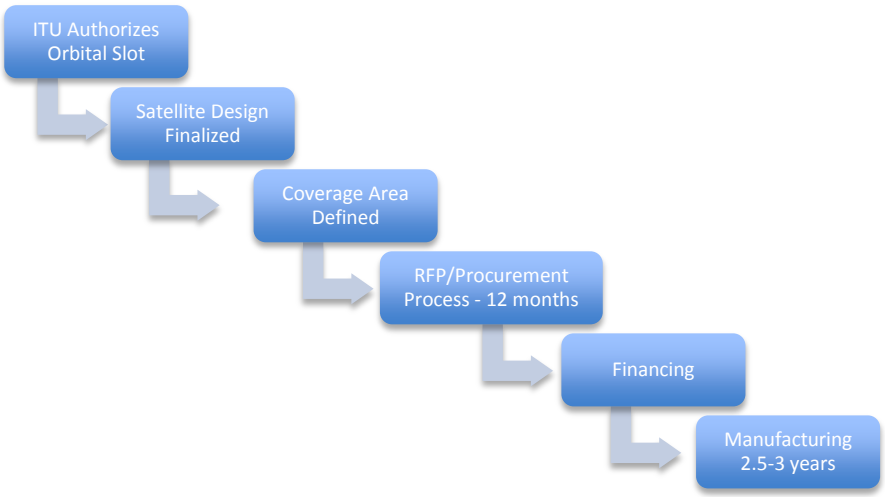


Figure 3: Implementation Timeline: Concurrent Activities

Economic Fundamentals

The funding needed to implement and operate the second Azerspace satellite system—including satellite, launch services, insurance, and ground systems—is expected to reach up to $365 USD in Capital Expenses (CAPEX), depending on the satellite's final design (see implementation financing below).

The Chief Financial Officer (CFO) of Azercosmos estimated the lifecycle cost for the Azerspace-1 and -2 projects at ~$5 million per year over a 15-year life. This cost specifically addresses operating and maintenance costs. It is recommended that the selected feasibility study (FS) Contractor develop a comprehensive business plan, revenue model, and forecast once the satellite design concept is finalized. The standard industry benchmark for revenues generated from one 36-MHz transponder is ~$1 million U.S. per year.

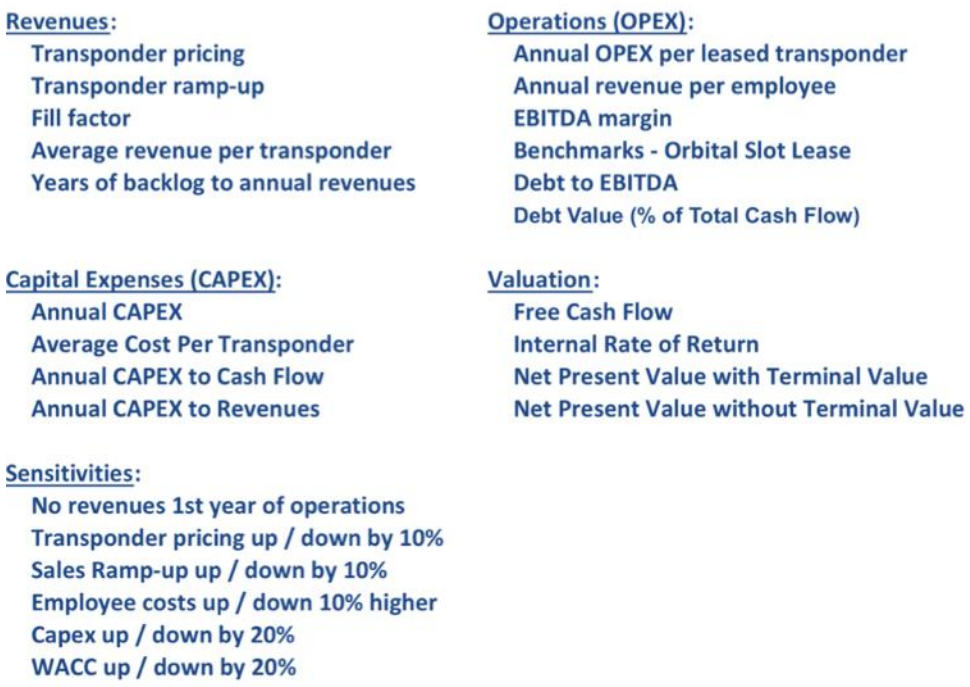


Figure 4: Key Metrics Required for Feasibility Study

Key Variables or Issues Critical to Program

Some of the key challenges critical to the program include:

Orbital Slot Procurement: Assignment of a suitable slot and frequency by the ITU to support business objectives for Azercosmos has not been finalized. The filing process is on a first-come, first-served basis. Contractor understands that Azercosmos has not made any filings for the second satellite yet. Consequently, negotiation with a third party who has a fully coordinated slot and frequencies will be required. Contractor understands that an orbital slot within the arc of 15° and 90°EL is preferable in order to meet preliminary Azercosmos business objectives of supplying capacity to sub-Saharan Africa and Eastern Europe/ Caucasus region.

Note: The activities involved in the procurement of the orbital slot and frequency assignment for Azerspace-1 are discussed earlier in this report (see Azerspace-1 Orbital Slot).

Rain Fade: the design for the second satellite must take into consideration the challenges caused by rain fade resulting from high levels of rainfall in sub-Saharan Africa. Azercosmos' CTO is cognizant of this and is making the necessary design changes required for the planned Ka-band services.

Market Access: The various barriers that can restrict open market access in emerging satellite markets are discussed throughout this report. The actual types of market access barriers are quite varied and are determined by the geographic and functional market types. Overcoming these barriers will require a strong relationship with the right channel distribution partners.

In-Country Market Access: In the case of in-country commercial barriers to market access, Contractor has identified the need for market-oriented reform to support open market access for new entrants into the satellite service market, required for long-term and sustainable growth as discussed below in the section covering the impact on the environment. The planned Azercosmos deployment of lower-cost, higher-power Ka-band broadband satellite services into national,

regional markets brings with it new regulatory challenges.

Barriers to Entry for Commercial Customers: Policy for new commercial players must be updated as the Azerspace programs are implemented to avoid creating artificial market constraints on the country's satellite-enabled capacity development. This can be addressed through the creation of new telecommunications policy, including the creation of new open licensing and access practices for satellite systems and earth stations, open market access, open skies, international gateway liberalization, regional harmonization of regulatory networks, and orbital slot procurement.

Government Satellite Sales: Another main source of demand for satellite capacity and services derives from Azerbaijan's government agencies. The various programs represented under the MCIT plans are discussed in detail later in this document. Contractor believes that the aggregate demand for capacity, represented by the various programs, could easily exceed the unsold transponder capacity available on the first satellite and would demand considerable bandwidth on the second as well. This bandwidth and the related satellite services, custom-tailored for the various governmental departments, could be easily served by Azercosmos from a centrally-managed VSAT platform owned and operated by MCIT. Contractor suggests that the government must do what it can to encourage open and transparent business relationships between the various ministries. Without such relationships, it will be impossible to implement and sustain a centralized VSAT platform for the government's national services.

Regional Market Access: See Section 3 below on sales and marketing skills and resources required to capture the new regional markets targeted in Azercosmos business plan. In addition, to deliver its capacity and services at an international level, the Azercosmos regulatory team must obtain appropriate operating licenses (e.g. landing rights) from the telecommunications authorities of each country within the region targeted for satellite services.

3.4. PROJECT SPONSOR'S CAPABILITIES AND COMMITMENT

The Contractor shall submit a description of the host country Project Sponsor's authority to receive and manage a USTDA grant. The Contractor also shall assess and describe the Project Sponsor's business/government operations, and commitment and ability to implement the project. This should include a description of the Project Sponsor's previous commitments; work with U.S. companies, overall responsiveness, business activities, and government mandate.

Azercosmos Capabilities

Azercosmos has been directed to develop a complex and dynamic national and regional satellite communication business in a very competitive commercial environment. Its capabilities must meet the critical demands required by this project.

Based on our review of the organization, we feel that Azercosmos has the resources, expertise, and positive local experience to meet its objectives. It has a qualified local staff to meet technical and operational requirements for its current program, but may need to enhance its knowledge or add managerial positions for the proposed Azerspace-2 program through additional training and expansion in IT, engineering, sales, and services. Refer to Appendix 1 for staff listing by function and location.

Contractor has identified asymmetry in the organizational structure, with major human resources gaps in sales and marketing functions. In order for Azercosmos to grow in this emerging market, both nationally and regionally, it will need to immediately develop a skilled and globally-networked sales and marketing force to compete in an ever-changing and competitive satellite services marketplace. Although Azercosmos started its business relatively recently, in February 2011, it has already achieved great progress. It has hired dozens of employees from the telecommunications industry, the majority of whom hold advanced degrees from universities outside of Azerbaijan.

Azercosmos believes that a service-oriented focus, a politically neutral approach, possession of language skills commensurate with its target markets, and an understanding of the culture of those markets will provide the company with a unique competitive advantage.[12] Satellite operators in the area that Azercosmos covers with Azerspace-1 and/or plans to cover with Azerspace-2 who may constitute direct competitors are listed in the table below.

Top Satellite Service Operators: Africa	**Top Satellite Service Operators**: Central Asia
• Intelsat • Eutelsat • SES • Hispasat • Measat • Telesat Canada • Turksat	• Turksat • Intersputnik • JSAT • Telesat Canada • ABS • AsiaSat • Measat

[12] Source: Interview with Azercosmos Sales & Marketing Management

Azercosmos has also been engaged in the construction of double-redundant ground facilities in Baku and Nakhchivan. These stations will play critical roles in telemetry, tracking, and command (TT&C) of Azerspace-1 and -2, as well as further GEO or LEO Earth observation satellites.

Beyond these attributes, strong managerial skills and expertise gained from the Azerspace-1 satellite will enable Azercosmos to implement the Azerspace-2 project.

Sales and Marketing Capabilities

Azercosmos indicated that it has already pre-sold 40%[13] of the capacity on Azerspace-1[14] and is on track to reach 80% within two years. The FS Contractor should validate this claim. The organization will need to build capacity to support the following sales and marketing objectives for both national and regional success. Our interviews with Azercosmos management indicated:

- That they have 6 customers who will use 50% of Azerspace-1's Ku-band capacity; and,
- A longer-term perspective to capture customers currently utilizing TurkSat capacity due to TurkSat's satellite in-orbit technical issues.

Contractor believes that Azercosmos is fortunate to have an anchor customer for 40% of the capacity. This represents a significant amount of capacity to have pre-sold already at commencement of operations. Typically, satellite operators reach a 75-85% fill rate only at the end of 4 to 5 years following commencement of commercial services.

It is important to note that post-launch commercial testing on Azerspace-1 only began in March 2012, conducted by one or more of their larger commercial prospects. Once completed, assuming the testing is successful, this could enable additional commercial sales.

During our interviews we were also told that Azercosmos is finalizing bandwidth sales with several Azerbaijan government ministries. These included approximately 6 or more transponder equivalents (TPE) for e-government applications, 2 TPEs for the Ministry of Energy, and 2 TPEs for national video services for national television or radio under the Ministry of Communications, supporting Turkish or Kurdish TV and radio broadcasts.

Additionally, potential large-capacity sales have been forecast by Azercosmos' CEO/CTO as well as MCIT within the next six to eight months. Azerspace-1 capacity would be used for high-priority MCIT programs. Examples include 1) A Ministry of Finance (MOF)/MCIT initiative to extend bank ATMs to reach last-mile population throughout the country's 60 regions; 2) MOF/MCIT last-mile satellite services to fill connectivity gaps for many of the bank's 3,500 branches, many of which are located in remote locations and lack the connectivity required for critical money transfer applications important to Azerbaijan's Central Bank; 3) A Ministry of Health plan to provide satellite backup for existing fiber and low reliability copper links to the country's 15 main hospitals; 4) Bandwidth for the Ministry of Education, which this year began a major internal re-organization, and is expected to implement a national fiber and satellite-enabled e-Learning platform requiring an additional 2 TPEs of commercial data services; or 5) Approximately 4 to 5 TPEs to support international direct-to-home (DTH) satellite operators, such as Iraqi TV, Arabsat, Dubaisat, Georgian TV, and other providers in the Middle East.

National Sales Goals Established by Azercosmos

[13] Azercosmos Interview with Peter B. de Selding | Source: Spacenews, Jan. 28, 2013.: http://www.spacenews.com/article/profile-rashad-nabiyev-chairman-azercosmos#.UYwCiCt4bT0
[14] Source: AZ press release

- Act as a commercial global player.
- Recognize that unless it is aggressively commercialized, the benefits of the Azerbaijan national space program may remain under-exploited.
- Achieve capacity leasing targets by the end of 2014, after the start of Azerspace-1 operations.
- Work closely with MEASAT on a number of issues, including possibly developing a joint marketing and sales strategy for C-band capacity.

Regional Sales Goals Established by Azercosmos

- Offer services in neighboring countries with a competitive advantage that stems mainly from Azercosmos' flexible transaction costs and common language with the principal players in the regional markets.
- Focus on "neglected emerging markets," which have not been attractive to industry giants.

Contractor recommends that FS assess the strengths, limitations, and skills of existing sales/marketing organization and determine the requirements Azercosmos would need to lead, develop, and retain the right sales team required to sustain and grow the business.

Description of MCIT/ Azercosmos Business & Government Operations Capabilities, Commitment and Ability to Implement Project

Satellite Operational Support and Human Resources

Azercosmos has demonstrated its ability to manage a satellite on orbit. Orbital Sciences Corporation, which manufactured Azerspace-1, turned over its day-to-day satellite operations to Azercosmos as soon as the satellite was positioned at its 46° East Longitude orbital location after successfully completing all initial in orbit testing.

Contractor was able to visit the current Ground Station outside of Baku and verify that Azercosmos employees are currently managing the operations of the satellite. Typical operations include:

- Orbital maneuvers and corrections
- Telecommunications
- Facility management
- Security
- Training

Facility Description & Capabilities

Satellite command and control operations are currently carried out at control centers in Baku and Nakhchivan, Azerbaijan.

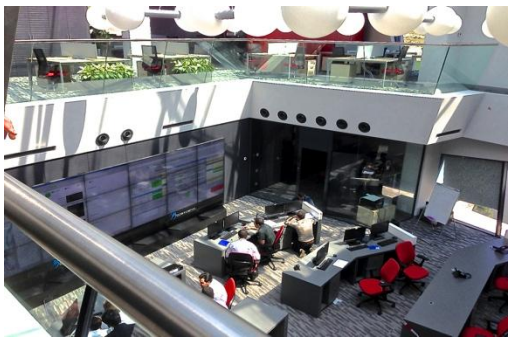
The two facilities were designed and built by Azercosmos and equipped with ground control systems provided by Orbital Sciences and U.S. supplier GlobeComm. These included ground antennas, radio frequency electronics, computer platforms, software used to command, monitor and control the satellite, as well as the telecommunications electronics needed to support the radio frequency ground services for the satellite.

Image: Location of Azercosmos Ground Station

Images of Primary Satellite Ground Station: Outside of Baku

View of Entrance

View of RF Building and Antenna Farm



View of Main Control Center

View of Telco Room and RF Racks

View of Training / Meeting Room

Training

During of visit, Contractor interviewed the responsible managers at Azercosmos to identify current training programs designed to support the business and operations of the two satellites and plans for new programs to augment existing Azercosmos capacity.

Contractor confirmed that Azercosmos management is well on its way to meeting its first-year training requirements and goals, which included training curriculum for ground engineering, advanced space technology, maintenance, satellite operations, telecommunications, and customer support. Training was provided to the Azercosmos team in two phases:

Phase 1: Azerspace-1 Pre-Launch Training

Prior to the launch of Azerspace-1, the management of Azercosmos worked closely with their primary partner (MEASAT) and satellite manufacturer (Orbital Sciences) to develop a targeted training curriculum and course plan, which was developed by expert engineers and satellite operators.

MEASAT and Orbital Sciences provided over 90 days of comprehensive modeling, proprietary technology training, and knowledge transfer to the Azercosmos team.

The focus was to build in-country operational expertise and to help trainees overcome knowledge gaps in technical engineering, platform monitoring and control, operations and logistics, customer service, systems integration, and resource management.

Phase 2: Post-Launch Training

Additionally, the new Azercosmos operational and sales teams received training at various local and foreign educational institutions, and continue to participate in training courses to increase their technical capacity.

Since the launch of Azerspace-1 in February 2013, Azercosmos has continued to provide onsite training to new employees. Managed by the Head of Human Resources, and coordinated by the organization's CTO along with four onsite engineers provided by MEASAT, the training program provides advanced classes in satellite operations, including flight dynamics and orbital control, satellite operations, telecommunications, advanced troubleshooting, maintenance, facilities management, and customer service. To date, training was delivered to 97 employees currently supporting Azerspace-1. Training will continue to support 50 additional employees over the next two years.

Sales Support and Customer Support Training

Technical training has also been provided for the new sales and marketing teams, albeit at a less advanced level. Training included sales and customer communications skills transfer for salespeople, sales engineers, and customer support/help desk engineers. Additional training materials are being developed to support the Azercosmos financial and legal departments.

Description of Previous Commitments

Azercosmos has demonstrated its ability to successfully design, implement, finance, launch, test, and operate its first satellite program. The company received major financial commitments from the following:

Sources of Financing [15]	US$ (in millions)
U.S. Exim Debt	116
Coface Financing	90
Azerbaijan Government Financing	76

List: Financial commitments: Azerspace 1 Mission

Work with U.S. Companies

By 2011, 7 of the top 20 American ICT companies were operating in Azerbaijan. These companies included Microsoft, HP, IBM, Apple, Intel, Oracle, and Google.

Examples of U.S. involvement during the Azerspace-1 mission included:

- Orbital Sciences designed, built, and tested the Azerspace-1 satellite for Azercosmos.
    - Orbital worked with the Azercosmos engineering team during the satellite design and manufacturing phases, conducted in-orbit testing to verify all subsystems were operating as planned, and provided training to Azercosmos employees.
- The contract signified an important commercial relationship between U.S. industry, the Ministry of Communications and Information Technologies of the Republic of Azerbaijan, and the U.S. Export-Import Bank.
- The contract provided sustained jobs for hundreds of Americans who worked to put this satellite in space.

The Global Information Technology Report published in 2010-2011 by the World Economic Forum (WEF) in Davos, Switzerland rated Azerbaijan 69th of 139 countries in foreign direct investment (FDI) and technology transfer. This result placed Azerbaijan into the leading position for the Caucuses region.

Overall Responsiveness During the Definitional Mission

Contractor traveled to Azerbaijan for a one-week period (April 27 – May 3, 2013) and conducted interviews with representatives of the Ministry of Communications and Information Technology and Azercosmos. Generally, Contractor found the participants in the interviews to be very

15 Azercosmos: Summary of Business Plan

responsive. Contractor did not have access to all of the required information due to internal or external nondisclosure agreements in place with third parties. This is often the case with high-visibility projects sponsored by governments internationally.

Additionally, Contractor coordinated the visit with the Commercial Section of the U.S. Embassy in Baku. An overview of the meetings held is contained in Appendix 7 of this report.

3.5. IMPLEMENTATION FINANCING

The Contractor shall submit a review of the financing options for project implementation, including an assessment of the overall cost estimate of the project including the LCCA and, for projects involving potential U.S. equity investment, the project's proposed debt-equity structure to ensure that it corresponds to the requirements of the prospective lenders (this aspect is critical to USTDA's decision making). The Contractor shall analyze the proposed financing options and delineate which option represents the best value to the Project Sponsor and will take into account quality and overall value when implementing the project. As part of this review, the Contractor is required to contact officials from the potential financing institutions, including, where appropriate, multilateral lending institutions, the U.S. Export-Import Bank (Ex-Im), the Overseas Private Investment Corporation (OPIC), and private/commercial sources, to ensure that the Project Sponsors have adequately explored their financing options. The Contractor shall provide names and contact information for contacts at the potential lending institutions and summarize their comments. The Contractor must determine the most likely source(s) of implementation financing and ensure that the terms of reference for any proposed activity fulfill the requirements of the most likely source(s), or suggest appropriate revisions to ensure that they do.

Assessment of overall cost of the project

Based on SPI's discussions with Azercosmos and U.S. vendors, estimated funding requirements to implement and operate the second Azerspace Satellite System—including satellite, launch services, insurance, and ground system, assuming a 40 to 50 transponder satellite with a low- to medium-level of complexity—is expected to range from $250 million to $365 million USD in Capital Expenses (CAPEX), broken down as follows:

Ku/Ka-Band Satellite:	**$125M to $175M USD**
Launch Services:	$65M to $95M USD
Insurance:	$19M to $27M USD
Ground equipment:	$15M to $30M USD
Advisory Services:	$3M to $5M USD
Contingency	$23M to $33M USD
TOTAL	**$250M to $365M USD**

Azercosmos has a line budget within the Azerbaijan State Budget of $5 million USD per year for their operational expenses (OPEX). This OPEX is intended to cover an organization that currently has 97 employees, due to be expanded by 50 individuals in the next couple of years to operate a variety of satellite programs. Additional funds to operate the system until it becomes cash flow positive would therefore be necessary, i.e., generating sufficient revenues to cover operating expenses including debt repayment, in-orbit insurance, and orbital slot / spectrum fees if any. A detailed financial model should indicate cash flow expectations including payment of debt for Azerspace-1 that is to begin in the mid-summer of 2013; a sensitivity analysis to determine capital costs against various levels of the lease capacity will also be stipulated by the Terms of Reference.

The model should assume that the CAPEX for satellite system is paid based on industry-standard construction and implementation milestones over a two to three year period, from the Execution Date of the Contract to Contract Completion, along with incentive payments after the satellite is launched.

Aside from additions to personnel for sales, marketing, operations, etc., the bulk of management and personnel costs, as well as facilities operations, rent, utilities, etc., will already be covered by the cost of operating Azerspace-1. However, there could be additional material costs in terms of orbital slot / spectrum fees, outside advisory services, Ka-band equipment, and other miscellaneous expenses.

Unless Azercosmos is able to negotiate a revenue-sharing or other strategic relationship with an operator who has an existing orbital slot for the Azerspace 2 satellite, the orbital slot / spectrum fee could add significantly to Azercosmos' cost. Orbital slot / spectrum fees can be lump-sum and treated as part of CAPEX, or paid on a periodic basis over the life of the satellite. Depending on the perceived market value of the slot and amount of associated spectrum, annual fees can range from $1 million USD to as high as $5 million USD per year.

In-orbit insurance is based on the value of the satellite, which is generally depreciated on a straight line basis over the satellite lifetime of approximately 15 years, and the cost of re-launch as well. The current premium for in-orbit insurance is approximately 1%, so in this case the annual cost would be in the range of $2.5 to $3.7 million USD, gradually reducing to zero over 15 years.

Type and Sources of Funding

More than likely, Azerspace-2 will be funded with a combination of equity and low-interest debt, with the best terms for debt likely to come from one or more Export Credit Agencies (ECAs) tied to the vendor selection. This is how Azerspace-1 was financed. Specifically, for Azerspace-1, our research indicates that the U.S. Export-Import Bank (U.S. Ex-Im) provided a loan of $116.6 million USD with a 10-year repayment period for Azerspace-1. This amount represented 85% of the satellite construction cost; the remaining 15% is reported to have been provided by Azerbaijan state funds. The New York-based branch of BNP-Paribas applied for the financing on behalf of the borrower, Azercosmos OJS Co., who successfully obtained guarantees from the Azerbaijan Ministry of Finance. Furthermore, BNP Paribas negotiated with France's Coface export-credit agency to back the launch-services contract, valued at $93 million USD.

Azercosmos has indicated with a high level of confidence that the second satellite financing will mirror its first, with a sovereign guarantee for ECA financing, and that the 15% equity requirement could come from a variety of sources, including the Government of Azerbaijan (State Budget, Pension Fund, State Oil Fund), corporate entities (e.g., hosted payloads, satellite operators, and/or service providers) interested in a strategic investment, and passive investment from public or private equity funds. In this instance the financing for Azerspace-2 would be most likely structured as follows:

ECA Financing:

Up to 85% debt with ECA guarantees for CAPEX (spacecraft, launch services, insurance, and ground segment) (from approximately $200 million to $300 million USD depending on overall system cost);

A Sovereign guarantee will be issued from the Government of Azerbaijan for the full amount of

debt; the Ministry of Finance has already furnished a sovereign guarantee for the purchase of Azerspace-1 and is very familiar with its process;

ECA financing can take up to six months from the time of vendor contract, so equity or government funds will be required to fund the project until ECA funding is available.

Equity and / or Debt Investment From Azerbaijan

Approximately $35 million to $55 million USD in Equity or Debt from Azerbaijan, depending on the overall system cost, to cover at least 15% of CAPEX will be required to be furnished either from the State budget directly as a line item for Azercosmos, or through the Ministry of Communications and Information Technology or the State Oil Fund. Additional Equity and/or Debt will be required to cover any OPEX associated with Azerspace-2 not already covered by financing for Azerspace-1.

The State Oil Fund (SOFAZ) is a special purpose state organization in which Azerbaijan's oil and gas revenues are accumulated and managed. It was established by a Presidential decree on 29 December, 1999 to not only manage the oil and gas income efficiently but also invest in the development of socio-economic projects. SOFAZ has already funded major national projects within and outside its energy sector such as:

- Azerbaijan's equity share in the Baku-Tbilisi-Ceyhan Baku-Tbilisi-Ceyhan (BTC) oil pipeline project;
- The building of housing for the socio-economic improvement of refugees and internally displaced persons who were forced to flee their native lands due to the Armenian-Azerbaijan conflict;
- Oguz-Qabala-Baku water supply system;
- Reconstruction of the Samur-Absheron irrigation system;
- Formation of the statutory capital of the State Investment Company;
- Financing Baku-Tbilisi-Kars railway;
- Financing “The state program on the education of Azerbaijan youth abroad in the years 2007-2015.”

SOFAZ's activities are currently overseen by a Supervisory Board. The Board reviews the Fund’s reports on the draft annual budget prepared by the SOFAZ’s Executive Director, annual reports, and financial statements along with independent auditor's opinion and provides its comments. Members of the Supervisory Board, including SOFAZ’s Executive Director, are appointed by the President of Azerbaijan. The Fund's Executive Director represents the Fund, carries out operational management of the Fund's activities and ensures the management and investment of the Fund’s assets are in accordance with the Guidelines approved by the President of the Republic of Azerbaijan.

Due to the outspoken Presidential support for Azerspace-2, Azercosmos is well positioned to obtain financial support from the State Oil Fund in the event the State Budget does not accommodate its request. It is worth noting that in the case of Azerspace-1, the overall budget did not include a line item for insurance. The funds to pay the insurance premium of approximately $16 million USD were nonetheless provided quickly and with minimal bureaucracy.

Background and General Requirements for ECA Financing

Export Credit Agency (ECA) financing is only available for exports from the country where the goods are supplied.

Co-Financing

ECAs frequently co-finance with each other. For example, if the U.S. content is insufficient to allow U.S. Ex-Im Bank to support the full funding requirements and another country such as France has significant content, Coface could co-finance with Ex-Im Bank. Generally the ECA with the largest domestic content will be the lead financing entity. This was the case with Azerspace-1.

Collateral Security Package

ECAs would most likely require a complete collateral security package, which will include a mortgage on the financed asset (e.g. the satellite), assignment of the lease (if the project is done on a lease basis for tax or other reasons), assignment of the receivables from customers, a pledge of the stock in Azercosmos, assignment of the U.S. supply contract(s) and an assignment of any ancillary contracts like the O&M Agreement, and insurance contracts. Typically, ECAs will ask for guarantees from creditworthy related parties if the project sponsor is not considered creditworthy. The vendors may be asked to give guarantees or subordinated loans in lieu of a related party guarantee.

It's important to note that no such collateral security was put in place for the Azerspace-1 satellite project, as it was substituted by the sovereign guarantee that was provided by the Azeri Government.

Overall Financing Issues

In Contractor's interview with the U.S. Ex-Im bank official, Contractor confirmed Ex-Im's interest in providing support to U.S. suppliers for this program, provided the borrower can demonstrate:

- A credible business plan
- Confirmed orbital slot
- Previous debt is paid on time directly from the borrower as opposed to the guarantor
- Good financial statements
- Regulatory approvals in place
- Projected cash flows (reasonableness)
- Market to non-sanctioned countries
- Solid customer contracts from good creditworthy companies (if they can be obtained); and
- Assignment of insurance proceeds.

Examples of banks with experience participating in ECA financings include: BNP Paribas, CIB, Citibank, Crédit Agricole, HSBC, ING, JP Morgan, Natixis, and Société Générale.

ECAs will review the organizational structure, management, and mission as part of due diligence on a program's overall viability and potential for success. An ECA's due diligence criteria typically includes confirmation of a commercially viable organizational structure and a seasoned management team with proven track record of success.

3.6. U.S. EXPORT POTENTIAL

The Contractor shall describe how procurements are typically conducted in the sector, by the project sponsor, in the country. The Contractor shall confirm whether there are local content requirements or procurement restrictions in this sector or for the project and whether a local provider/distributor will be involved in project implementation. The Contractor shall also list any import licensing requirements or permits needed by U.S. companies to participate and supply goods for the project. The Contractor shall also identify any U.S. companies already working with the Project Sponsor or working in the respective sector in the host country.

The Contractor shall submit a best estimate of the potential procurement of U.S. goods and services for project implementation. This estimate should be broken down by category and dollar value of goods and services likely to be imported for the project and a list of potential U.S. suppliers of the goods and services listed that are likely to be sourced from the United States.

A report of discussions with a reasonable number of U.S. companies that could be exporters, and their level of interest in the project, must also be included. In characterizing a given company's interest, care should be taken to note not only the general interest in a sector or country, but also interest in the specific project and the candid opinion as to how competitive the company's offerings would be were the project to reach the implementation stage. The Contractor should be sensitive to disclosing information about the proposed USTDA activity, to ensure no one is given unfair advantage to compete for USTDA's funding or the end project implementation. The Contractor shall submit a complete list of U.S. companies contacted, with the name and contact information of individuals interviewed and their responses for each Project recommended for USTDA funding. If any U.S. company wishes to keep its contact information or the details of the interview confidential, the Contractor shall submit the required list of contacts with the interviewee's comments in a confidential attachment at the end of the DM Final Report clearly marked "Confidential". Please reference Annex VII for an example of the list required for submission.

From our interview with Azercosmos General Counsel, and based on Azercosmos Corporate Governance, we understand that there are two procurement practices Azercosmos can pursue: an RFP process or a Tender process. Both practices follow strict rules and guidelines. The Tender process follows standard World Bank practices in which bidders must submit their financial package in a separate envelope from the technical package for evaluation, and the selection process can take up to one year.

Azercosmos intends to pursue an RFP process, which requires special authorization from the Public Procurement Agency. The RFP process provides for more give and take with the bidders from an informational perspective as well as a financial one that culminates in a best and final offer.

In both RFP and Tender cases, the rules for bidding as well as the evaluation criteria are well explained. This was corroborated by winning and losing bidders from the first Azerspace-1 procurement. In either case no requirement for local content is necessary or valued as a benefit for the bidders. Transfer of technology, however, in the form of training would be required to support the operations of the satellite.

Procurements above a certain value are, by law, conducted by committee. Azercosmos of the MCIT organizes all tender issues and organizes the Evaluation Committee, which is led by the Chairman of Azercosmos. Importantly, the Chairman of Azercosmos cannot be the Chairman of the Tender Committee. The Chairman of Azercosmos does, however, appoint the Chairman of the Tender Committee, which is a working group to perform the procurement.

The Evaluation Committee consists of the following membership:

- 2 members from MCIT
- 7 members from Azercosmos, including appointment of the Chairman
- 1 member from the Ministry of Finance
- 1 member from the Ministry of Economic Development

Each member carries a vote. Decisions are made based on a 75% majority. In addition, subcommittees are formed that are headed by field experts in finance, engineering, and law who report their comparative findings from the bidder's response to the evaluation committee.

Regulatory Issues

The U.S. National Defense Authorization Act of 2013, signed by the President earlier this year, allows the President to remove satellites and related equipment from the U.S. State Department's Munitions List, which restricts the weapons material from export to other countries. With the President's approval, satellites and their components can be moved to a list managed by the U.S. Commerce Department, giving manufacturers more flexibility to export the hardware. The technologies on the Commerce Department list are identified for use by military and civilian programs.

The munitions list is part of the International Traffic in Arms Regulations (ITAR), which was expanded in 1999 to include satellites after a congressional investigation found that China received technical data from U.S. satellite manufacturers during failure investigations of Chinese launch vehicles carrying US satellites. Subsequently, numerous studies conducted on behalf of the U.S. government have concluded that most communications satellites and related components could be removed from the U.S. munitions list without harm to national security.

The system performance and design specifications of the Azerspace-2 satellite will determine the extent which it will be subject to ITAR restrictions. The satellite's final design will also determine which licensing requirements—the State Department Munitions List, or the more relaxed export controls of the Commerce Department list—will be followed.

SPI is confident that satellite manufacturers are now well versed in ITAR procedures and, like Orbital Sciences for Azerspace-1, will be able to satisfactorily navigate through the export licensing process.

U.S. Export Opportunities

Currently there are a number of U.S. companies providing equipment and operational support for activities relating to Azerspace-1. These include: Orbital Sciences and its US subcontractors (spacecraft); GlobeComm Systems (ground station equipment); Marsh & McLennan; XL Specialty; Partner Re; Starr Aviation (insurance broker and underwriters); Milbank Tweed (law firm); and Avascent (consultant).

Azerspace-2 offers a similar opportunity for U.S. vendors. SPI interviewed a number of potential U.S.-based spacecraft and ground segment manufacturers, launch service providers, and insurance providers, who expressed genuine interest in bidding for the Azerspace-2 satellite program upon the issuance of the RFP. Companies interviewed included:

Satellite Manufacturers		
Orbital Sciences Corporation	Boeing Satellite Systems	Ball Aerospace
Lockheed Martin	Loral Space and Communications	SES Government Services
Launch Service Providers		
SpaceX		
Ground Station Electronics		
Hughes Network Services	iDirect	Honeywell International
EADS for Surrey, USA	Sierra Nevada Corp	GlobeComm

Export Potential in U.S. Dollar Terms

The potential for U.S. exports is significant. It is reasonable to expect that U.S. vendors have a strong chance of winning the launch service contract (valued at $65 million to $95 million USD), the spacecraft contract ($125 million to $175 million USD) or both. Ancillary services, such as insurance, advisory services, and ground equipment (collectively worth $37 million to $62 million USD) also represent good possibilities for U.S. vendors. It is very rare that a foreign government

concludes 100% of its procurement from one country.

Some of the main potential U.S. vendors of the export equipment and services are identified below.

Component	Company	U.S. CONTENT			Approximate Value of Component (USD millions)	Description
		U.S. HQ	U.S. Owned	Ability to Export		
Spacecraft Manufacturer	**Boeing Space Systems**	CA	Yes	Yes	**125 - 175**	Ranges from small, relatively simple satellites with 24 to 40 C- and/or Ku- band or / Ka- band transponders and mass of 5,000 lbs. at the low end, to complex broadband and MSS satellites with large antennas (up to 22 meters) and total mass of *L* 13,000 lbs. Example satellite platforms include the SS Loral 1300, the Boeing 702 HP and the Astrium E3000.
	Orbital Sciences Corporation	VA	Yes	Yes		
	Lockheed Martin	CO	Yes	Yes		
	Loral Space and Communications	CA	No	Yes		
Launch Service Provider	**SpaceX**	CA	Yes	Yes	**65 - 95**	Ranges from shared ride on SpaceX Falcon 9 at low-end, to dedicated launch on Falcon 9, Sea Launch Zenit, Mitsubishi H2a, ILS Proton, to the most expensive, a shared launch on an Ariane 5 ECA. All of these launch vehicles are capable of carrying the low-end satellites to GTO.
	United Launch Alliance	CO	Yes	Yes		
	International Launch Services	VA	No	Yes		
	Sea Launch	CA	No	Yes		
Space Insurance Broker	**Willis**	NY	No	Yes	**19 - 27**	Insurance rates are based on the sum insured, and typically include the replacement value of the satellite, launch and insurance. Current rates are ~8.5% to 10%, depending on the launch vehicle and spacecraft, but may increase in the near term as a result of several recent launch failures.
	Aon Space	IL	No	Yes		
	Marsh & McLennan	NY	Yes	Yes		
Ground Segment Network Equipment Provider	**Globecomm Sys.**	NJ	Yes	Yes	**15 -30**	A Ground Network Segment for the first satellite has the following key components: Network Operations Centers (primary and backup) @ $4.1M; TI&C Facilities and Equipment @ $13M; Satellite Operations Center (primary and backup) @ $4.8M; Satellite Operations Procedures@ $1.0M; and miscellaneous equipment at $1.1M. If additional satellite and value-added facilities and equipment are added, the price could easily exceed $5OM to $1OOM
	Hughes Net. Sys.	MD	Yes	Yes		
	ViaSat	CA	Yes	Yes		
	iDirect	VA	Yes	Yes		
	Winegard	LA	Yes	Yes		
	Prodelin	NC	Yes	Yes		
	Comtech EF Data	AZ	Yes	Yes		
	General Dynamics	VA	Yes	Yes		
	STM Systems	CA	Yes	Yes		
	Motorola	AZ	Yes	Yes		
	Cisco	CA	Yes	Yes		

Impact on US-Trade and Export

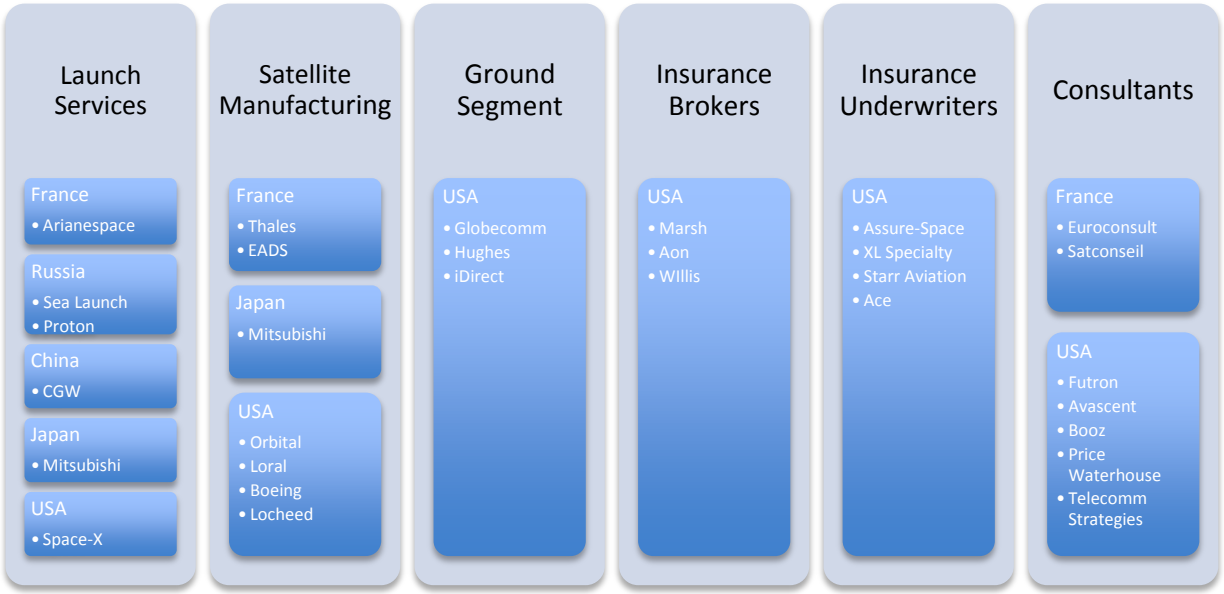
The growth of ICT significantly increased the flow of FDI within Azerbaijan and created export opportunities for U.S. ICT giants. By 2011, seven major U.S. ICT companies, including Microsoft, HP, IBM, Apple, Intel, Oracle, and Google, were operating in Azerbaijan.[16] This was the reason why the Global Information Technology Report 2010-2011 of the World Economic Forum in Davos, Switzerland rated Azerbaijan 69th of 139 countries in FDI and technology transfer—placing Azerbaijan into the leading position for the region.

16 Major European counterparts: Nokia-Siemens and Ericsson.

3.7. FOREIGN COMPETITION AND MARKET ENTRY ISSUES

The Contractor shall discuss the foreign competition for goods and services likely to be procured for project implementation by category, including a discussion of U.S. industry competitiveness in each category, taking into account geographic factors, local industry capabilities, technology and licensing issues, past procurement tendencies of the Project Sponsor, and how the procurement is likely to be conducted. The Contractor shall discuss the extent to which market entry issues impede trade and how the project will help overcome these obstacles.

The U.S. space industry is well-regarded and trusted in Azerbaijan as providing best-in-class satellite solutions. However, foreign competition in the satellite sector is fierce and often quite political. We can expect strong international interest in bidding for the Azerspace-2 program—especially since satellite program opportunities are few and far between, typically numbering at best 30 new GEO communications satellite orders per year.



The strongest competitors in Azerbaijan seem to be the French satellite and launch services companies, with very aggressive and involved support from their local Embassy. We understand from Azercosmos that the French ambassador himself has often reached out to Azercosmos management and MCIT officials in support of French industry, keeping in mind that Arianespace launched Azerspace-1. Through our interviews, we understood that the U.S. firm SpaceX was considered to launch Azerspace-1, but fell short by not having sufficient flight experience to demonstrate high reliability of their launch capabilities. We believe that since then, and by the time Azerspace-2 will be launched, SpaceX will be a very strong contender. Similarly, at the time of the Azerspace-1 bid, Boeing did not have a competitive small satellite program. Since then, it has developed a unique and very capable small- to medium-capability that is priced competitively. Depending on the final configuration and size of Azerspace-2, we believe that this could provide Boeing with an interesting edge over its competitors. Likewise Orbital Sciences, being the incumbent and having Ka-band experience, may already be well positioned to capitalize on Azerspace-2.

By funding this feasibility study, USTDA will provide a platform for U.S. equipment and service suppliers to pursue this project with access to better information that can be used to improve U.S. manufacturers' and vendors' bids.

3.8. EVALUATION STRATEGY

The Contractor shall recommend how USTDA should evaluate the effectiveness of its funding for this activity. Specifically, the Contractor shall recommend benchmarks to measure whether the activity helped the proposed project move towards implementation and helped the Project Sponsor achieve its goals, timelines, and expected accomplishments based upon industry standards. The Contractor shall recommend where this information could be gathered. The Contractor shall address the following questions, at a minimum, within the Evaluation Strategy: (1) what is the proposed project implementation timeline; (2) how will the project likely be developed (Engineering, Procurement and Construction, Turnkey, Build-Own-Transfer, Build-Own-Operate, etc.); (3) what potential difficulties may the Project Sponsor encounter during project implementation and how can these challenges be mitigated;

- *What regulations, if any, should be in place before the project can be implemented; and*
- *What other entities must authorize or approve the project for implementation.*

The timeline of typical satellite systems commences upon receiving the authorization from the ITU to use a specific orbital slot. Only once a slot is obtained can a satellite owner finalize its technical design, coverage areas, and business plan. Furthermore, depending on the complexity of the satellite design, the construction of a satellite can take from 2.5 to over 3 years. Additionally, the procurement process chosen can also take as much as a year before finalizing the satellite contract.

The President of Azerbaijan stated in his speech that Azercosmos would launch its next satellite by 2016 to take into account the time traditionally required to build and launch a satellite. To meet that date, Azercosmos needs to issue a satellite RFP and finalize its negotiations with the ITU no later than December 2013.

Azercosmos is currently in discussions with several satellite manufacturers to obtain preliminary support and ideas on how to optimize its next satellite design and services. In parallel, Azercosmos is in discussions with a half-dozen third-party orbital slot holders and hopes to down-select to three options by fall 2013, with the intent to finalize negotiations by December 2013.

The Azerspace-2 project is to be developed as a traditional procurement and construction implementation. Azercosmos intends to issue several RFPs, including one for the satellite for on-ground delivery at the launch site; one for launch services; one for ground equipment; and one for insurance brokers. We believe Azercosmos is currently favoring Telecomm Strategies, a U.S.-based consultant, to support its ITU filing and third party orbital slot negotiations.

For reasons stated above, Contractor believes that the FS funding should begin immediately per the timeline outlined in the Section 3.5 Budget (timeline of proposed work package activities: 12 weeks). We understand from the Azercosmos legal counsel that Azercosmos will need to request permission from MCIT to conclude the grant agreement with the USTDA. MCIT will forward the request to the Cabinet of Ministries, which in turn commences the process for the domestic procedures required in connection with such request. We understand that the duration for this process is approximately two weeks.

3.9 DEVELOPMENTAL IMPACT

The Contractor shall identify which development impact measures — listed below — may result from the USTDA funded activity, and/or project. The Contractor shall identify how the proposed USTDA activity and project will result in the development impact, and explain how the impact can be measured when the USTDA activity is completed and project is implemented.

1. *Infrastructure & Internet Development*
2. *Technology Transfer and Productivity Improvement*
3. *Human Capacity Building*
4. *Market Oriented Reforms*
5. *Other*

The definitions and guidance for each of these will be provided by the COR and/or Program Evaluation Office.

Since it became an independent state 20 years ago, Azerbaijan was able to leverage its position in the oil and gas industry to help build its economy as well as develop strong regional ties. Soon after it became independent, the government realized that it needed to develop a strong economic diversification plan to eliminate its dependence on oil and gas. The government expects that the revenues generated from national and regional ICT projects carried out in accordance with government programs and strategies will catch up with revenues from Azerbaijan's oil and gas reserves by 2025.

One of the main strategies, initiated in 1993, was to take steps to establish ICT as a priority sector. This has already started to pay off to the extent that ICT has become one of the top national programs of the country. The more recent creation of a regional fiber hub in Baku, and the introduction of the Azercosmos programs, has enabled the country to become a major player in the European, African, Middle Eastern, and Central Asian telecommunications markets. The government further expects that its fledgling space program will provide value beyond its borders by helping to eliminate the digital divide in less developed regions of Europe, Africa, and Central Asia.

Resultant Impact

Contractor believes that the following development impact may result from the USTDA-funded activity and resulting Azerspace-1 project:

Infrastructure Development

The primary components of Azerbaijan's telecommunication's infrastructure include Azerspace-1, fiber cable[17], backbone, and regional fiber hub (known as the "Transnational Eurasian Information Superhighway", or TASIM). While the national mobile network[18] reaches up to 99% of the

17 Delta Telecom is AZ's largest fiber operator and has external fiber-optic connections with Russia via Trans Telecom and with Turkey via RosTelecom.12 (Indirectly, Delta Telecom serves Georgian users because a local ISP, Trans-Euro Com, buys international traffic from Delta and carries it by fiber to Georgia.

18 The major mobile operator in the country is Azercell with more than 35% MCIT participation. Holds ~ 57.6% of the market share in mobile telecommunications with a network covering 80% of Azerbaijan's territory and 99.7% of the populated area.

population, terrestrial copper phone lines serve only 16% of the population[19], and emerging wireless communications services (such as Internet Exchange Points, or IXPs, or broadband internet access) service only 1% of the population.[20]

One key area where satellite communications can benefit Azerbaijan's infrastructure is the ability of operators to provide backup and trunking services. Satellite backup for fiber backbone ensures service continuity in cases of fiber failure. Azerbaijan's Ministry of Communication and Information Technology expects both satellites to be able to deliver connectivity where optic cable is not practical, (e.g. where the deployment and maintenance costs of bringing optic cable to last mile are high.)[21]

- Satellite trunking for cellular operators provides ability to extend cellular coverage to increase the subscriber base and expand into rural areas to meet the growing demands of outlying cities and villages.
- Satellite backup for cellular networks allows operators to quickly establish backup capabilities over satellite at fixed points in their cellular network.
- Satellite trunking or backhaul for remote/rural wireless gateways.

Infrastructure Benefits for Africa

The planned coverage over Africa provided by Azerspace-1 and Azerspace-2 will help governments, telecommunications operators, businesses, and end-users in Africa meet their telecommunications challenges. Azerspace-1 and -2 will complement land networks with satellite connectivity to reach areas with poor infrastructure at a fraction of the cost compared to the comparable terrestrial infrastructure that would be required to cover the last-mile customer markets.

The continental C-band and Ka-band coverage will support the rapidly emerging and growing economies in Africa's 54 sovereign countries, which reach a population of over 1 billion.[22] Azerspace-1 and -2 will provide a blend of needed wholesale capacity and retail satellite services, enabling public and private customers throughout Africa to deploy market-relevant satellite-based services and networks. The Ka-band services should help drive new lower-cost retail telecommunications, internet access, and media solutions for economically constrained and remote small and medium businesses (SMBs) and consumers.

Enabler of Satellite-based National ICT Programs and Systems

During our meeting, we discussed the possible ways that satellite could support many of the country's 52 technology initiatives:

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19 Around half of the telephone lines in Azerbaijan are analog, and more than 85% of the main lines are in urban areas. Source: OpenNet https://opennet.net/sites/opennet.net/files/ONI_Azerbaijan_2010.pdf

20 Delta Telecom controls the only IXP and charges the same amount for local and international traffic. Providers have not been able to agree on setting up another IXP. The external traffic of Azerbaijan is now 6 Gbit/s, which is a notable increase from the 75 Mbit/s capacity of 2006. Source: wwwdelta-telecom.net/graph.html

21 Source: interview with Deputy Minister, MCIT, 2013.

22 Source: United Nations, 2011

Post Offices

MCIT has identified Azerbaijan's many postal service centers offering financial services as a prime candidate for satellite usage. Today the country has 1,800 post offices, many of which serve multiple villages. MCIT plans to bring approximately 10 Mb connectivity to each of the country's 1,800 post offices. Satellite will be used to deliver services to those offices that are located beyond the reach of the fiber, and also to back-up the more critical sites.

School Networks

MCIT plans to provide connectivity to all of the schools in the country. The schools will require reliable communications, including satellite services. MCIT plans to deploy C-band in the higher precipitation zones and Ku-band in drier environments. Depending on the specific case requirements, services can be delivered as a point-to-point or one-to-one solution, or distribution gateway.

Multi-use Gateways to Connect Remote Villages

The Deputy Minister stated that there are currently 70 villages that 1) are in immediate need of connectivity and 2) cannot be connected without satellite. MCIT is also seeking to share a single VSAT gateway/terminal for school, post office, and internet kiosks.

MCIT plans to use each of these stations as universal access points, because in many of these villages the local inhabitants cannot afford Internet access. The online access will allow the last-mile inhabitants to access their personal records, obtain entitlement data, retrieve online documentation, submit requests to various ministries, and conduct training, certification, and other functions. MCIT stated that without satellite support, occupants of remote villages would not be able to access the required national services.

Network-Services Development

Azercosmos recently indicated that it plans to offer Ka-band services on the Azerspace-2 satellite. If properly implemented, Ka-band should provide increased spectrum compared to C-band and Ku-band, enabling greater volumes of traffic to be transmitted. This would be ideal for Azercosmos customers who are looking for smaller end-user antennas (VSATs), increased mobility, and higher bandwidths and speeds to support today's internet and intranet applications and services.

Azerspace-2 Ka-band satellite services are expected to offer improved last-mile support for new services. This should help the development of public services. For example, Ka-band will facilitate the rapid deployment of applications for disaster preparedness or asset/facility management.

The new Ka-band should also help the Azerbaijan government sell services to international customers, since Ka-band's more powerful, focused, and dedicated beams should address most regional customers' requirements for network security and autonomy. Ka-band on Azerspace-2 will provide increased spectrum compared to C-band and Ku-band, enabling greater volumes of traffic to be transmitted. For this reason, this satellite should address demand for new next generation Ka-band satellite capacity through Africa, where supply cannot keep up with demand. Ka-band growth in regional markets is expected to increase over the next decade.

In the commercial sectors, Ka-band will help enhance manufacturing capabilities through more advanced networking, enable the distribution of new retail and point-of-service networks, and enhance related distributed financial solutions. Ka-band should also open up new sales opportunities and markets, such as in broadcasting of video, where Azercosmos has indicated that it intends to offer DTH service over Ka-band satellite beams and low-cost terminals. This is a

potential risk, since Ka-Band is more sensitive to rain fade than the equivalent C-band and Ku-band frequencies. Azercosmos' CTO understands that design measures will be required to mitigate this potential problem. Rain fade may in certain markets have a significant impact on customer's quality of service and the ultimate choice of frequencies for the satellite design. Despite many of the claims by satellite and ground segment electronic manufacturers that the latest deductive coding and modulation "solve the problem," rain attenuation affects Ka-band more so than Ku- and C-band (which is typically not impacted by rain fade) in heavy rain areas. Underpowered Ka- or Ku-band solutions can result in either lower availability and/or lower throughput unless the satellite has sufficient power and/or antenna size to compensate for this loss as well as bigger receiving antennas.

Before the launch of Azerspace-1, all satellite capacity and services were purchased from foreign satellite operators. Services are re-sold by any of the three licensed operators. During our interviews with Azercosmos, the company management discussed their plan to migrate satellite users in Azerbaijan over to Azercosmos 1 and 2 once they are available for service.

Benefits resulting from the feasibility study

Human Capacity & Skills

In addition to building networking opportunities with U.S. companies and developing a comprehensive business plan for the funding of the Azerspace-2 program, Azercosmos stakeholders will benefit from the potential knowledge transfer between consultants performing the Feasibility Study and the employees tasked to work with them. The areas of focus are discussed later in the Terms of Reference.

3.10 IMPACT ON THE ENVIRONMENT

The Contractor shall submit a statement regarding the likely consequences that the proposed project(s) may have on the environment and ensure that the terms of reference for the activity include, at a minimum, a preliminary review of the project's impact on the environment, with reference to local environmental requirements and those of potential lending agencies. The activity should identify potential negative impacts and discuss the extent to which they can be minimized.

Impact on the environment with space related activities could be serious in the case of a catastrophic launch failure. While this poses a risk, launch campaigns are well-monitored by the launch pad safety officer, who has the sole ability to destroy a launch vehicle if it is deemed anomalous. Launches take place from secure facilities following approved trajectories over safe areas. In the case of a U.S. launch, the Federal Aviation Administration Office of Commercial Space Transportation's mission is to protect U.S. personnel and property and determine the economic and environmental impact of a launch failure for any given launch vehicle. A specific Environmental Impact Statement looks at direct and indirect impacts (constructions and operations, trans-boundary impacts, thresholds, etc.) and is imposed on the launch vehicle providers. Environmental effects include:

- Compatible Land Use (Including Farmlands and Coastal Resources)
- Section 4(f) Properties
- Noise
- Visual Resources and Light Emissions
- Historical, Architectural, Archeological, and Cultural Resources
- Air Quality
- Water Resources (including Surface Waters, Groundwater, Wetlands, Floodplains, and Wild and Scenic Rivers)
- Biological Resources (Fish, Wildlife, Plants)
- Hazardous Materials, Pollution Prevention, and Solid Waste
- Socioeconomics
- Environmental Justice
- Children's Environmental Health Risks and Safety Risks
- Natural Resources and Energy Supply
- Secondary (Induced) Impacts
- Cumulative Impacts

Impact from Infrastructure

The launch of the second telecommunications satellite, Azerspace-2, will bring new satellite capacity and services to the country, and will extend the capabilities of Azerspace-1 and the country's existing network infrastructure. Based on preliminary data collected during the interviews with Azercosmos, we expect Azerspace-2 to impact the national infrastructure in the following ways.

- Last-mile connectivity, including cellular trunking and backhaul for the country's cellular operators
- Lower-cost Ka-band solutions that will significantly extend the reach of national e-government and related public services to critical last-mile users
- Backup for terrestrial fiber that will provide needed redundancy for existing and planned cable
- Backhaul for wireless services

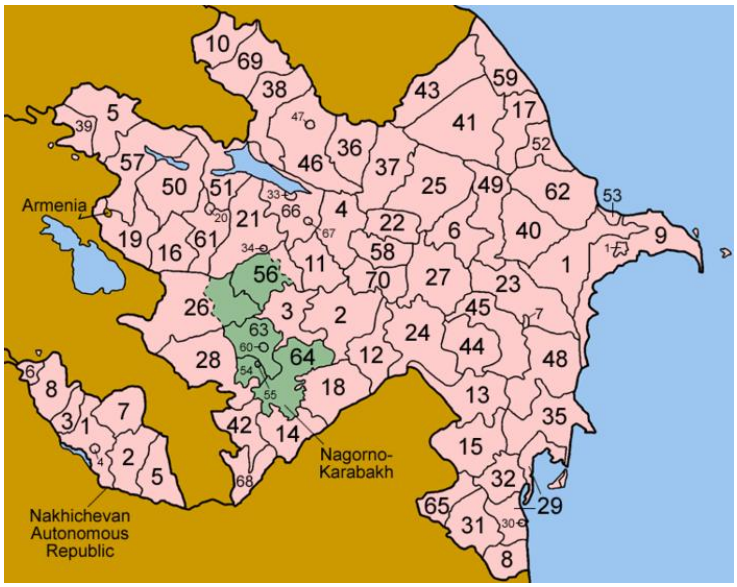
Land disturbance that may occur during construction of ground-based equipment is offset by the benefits listed above, as well as other positive effects resulting from the additional capacity offered by satellite service offerings. Moreover, these benefits are highly compatible with current Azerbaijan ICT strategy and programs.

Azerspace as an enabler of ICT Growth

Azerbaijan has been one of the top 10 dynamic environments for ICT development over the last 5-7 years, with average annual growth in the ICT sector between 2004 and 2010 roughly 2.5 to 3 times higher than the global average. Based on data from the State Statistical Committee and according to many experts, revenue from the Azerbaijan ICT sector in 2020-2025 will be able to catch up with the country's oil sector revenues.[23] The Government of Azerbaijan clearly understands how the Azerspace-1 and -2 missions are required to meet these financial objectives. Not only will the second geostationary satellite enable a more rapid diversification of the economy to reduce the reliance on oil; the Government fully understands that the Azerspace-2 program will be a major contributor to growth, competitiveness, and risk reduction for most of the country's public-sector activities.

Last-mile Internet and Voice

At present, internet and broadband services are expanding rapidly throughout Azerbaijan. Many settlements in Azerbaijan have access to high speed broadband access. However, Contractor was not able to substantiate published claims that high-speed broadband access is available throughout the entire country.[24]



23 Source: 2010 Study By Regional Innovative Technologies Academy (R.I.T.A.); http://www.eeca-ict.eu/uploads/new_documents/The_National_ICTSector_inAzerbaijan_march2012_v2.pdf

24 http://www.eeca-ict.eu/uploads/new_documents/The_National_ICTSector_inAzerbaijan_march2012_v2.pdf

Map of the administrative divisions of Azerbaijan

As is often the case in countries with emerging broadband, Azerbaijan's national fiber network does not typically extend beyond the 70 districts (*rayonlar*), 11 cities (*şəhərlər*), or autonomous district (featuring 7 districts and 1 city), to reach last-mile users.

MAP	DISTRICT	AZ NAME	Area (km²)	Population (2011 est.)	MAP	DISTRICT	AZ NAME	Area (km²)	Population (2011 est.)
1	Absheron District	Xirdalan	1,360	192,900	36	Oghuz District	Oghuz	1,220	40,900
2	Aghjabadi District	Aghjabadi	1,760	124,000	37	Qabala District	Qabala	1,550	95,600
3	Agdam District	Agdam	1,150	180,600	38	Qakh District	Qakh	1,490	53,900
4	Agdash District	Agdash	1,050	100,600	39	Qazakh District	Qazakh	700	90,800
5	Agstafa District	Agstafa	1,500	81,400	40	Gobustan District	Gobustan	1,370	41,100
6	Agsu District	Agsu	1,020	72,100	41	Quba District	Quba	2,580	155,600
7	Shirvan (city)		30	78,700	42	Qubadli District	Qubadli	800	36,700
8	Astara District	Astara	620	98,300	43	Qusar District	Qusar	1,540	89,300
9	Baku (city)		2,130	2,092,400	44	Saatly District	Saatly	1,180	95,100
10	Balakan District	Balakan	920	91,100	45	Sabirabad District	Sabirabad	1,470	155,400
11	Barda District	Barda	960	143,900	46	Shaki District	Shaki	2,430	173,500
12	Beylagan District	Beylagan	1,130	87,900	47	Shaki (city)			
13	Bilasuvar District	Bilasuvar	1,400	90,300	48	Salyan District	Salyan	1,790	124,900
14	Jabrayil District	Jabrayil	1,050	72,700	49	Shamakhi District	Shamakhi	1,610	93,700
15	Jalilabad District	Jalilabad	1,440	196,500	50	Shamkir District	Shamkir	1,660	196,100
16	Dashkasan District	Da□k□s□n	1,050	33,200	51	Samukh District	Nebiagali	1,450	54,600
17	Shabran District	Shabran	1,090	53,000	52	Siazan District	Siazan	700	38,400
18	Fizuli District	Fizuli	1,390	118,900	53	Sumqayit (city)		80	314,800
19	Gadabay District	Gadabay	1,290	95,000	54	Shusha District	Shusha	290	29,700
20	Ganja (city)		110	316,300	55	Shusha (city)			
21	Goranboy District	Goranboy	1,760	96,200	56	Tartar District	Tartar	960	98,400
22	Goychay District	Goychay	740	111,100	57	Tovuz District	Tovuz	1,900	160,700
23	Hajigabul District	Qazimemme	1,640	67,300	58	Ujar District	Ujar	850	79,800
24	Imishli District	Imishli	1,820	116,600	59	Khachmaz District	Khachmaz	1,050	162,100
25	Ismailli District	Ismailli	2,060	80,900	60	Khankendi (city)		8	55,200
26	Kalbajar District	Kalbajar	3,050	83,200	61	Goygol District	Goygol	1,030	58,300
27	Kurdamir District	Kurdamir	1,630	105,700	62	Khizi District	Khizi	1,850	14,700
28	Lachin District	Lachin	1,840	70,900	63	Khojali District	Khojali	940	26,500
29	Lankaran District	Lankaran	1,540	209,900	64	Khojavend District	Khojavend	1,460	42,100
30	Lankaran (city)		70		65	Yardymli District	Yardymli	670	59,600
31	Lerik District	Lerik	1,080	76,400	66	Yevlakh District	Yevlakh	1,540	119,600
32	Masally District	Masally	720	202,500	67	Yevlakh (city)			
33	Mingachevir (city)		130	97,800	68	Zangilan District	Zangilan	710	40,500
34	Naftalan (city)		30	9,100	69	Zaqatala District	Zaqatala	1,350	120,300
35	Neftchala District	Neftchala	1,450	81,300	70	Zardab District	Zardab	860	54,000

Figure 5: Index of administrative divisions within Azerbaijan

Satellite-enabled internet, especially given the low cost of high-power Ka-band solutions proposed for Azerspace-2, is expected to significantly facilitate last-mile connectivity throughout the country. These lower-cost terminals would be available not only to the government for national programs, but would also be available to the 40-plus state internet providers and telephone operators[25] who currently supply regions of the country with internet access.

Azerspace-2 for warning and relief operations during natural disaster & emergencies

Fixed satellite service (FSS) and mobile satellite service (MSS) terminals can be easily deployed to provide wide area coverage independent of local infrastructure, offering an immediate means of

25 Aztelekom and BTPA telephone operators actively install new equipment to provide the population with high-speed Internet opportunities.

telecommunications to help in relief operations during natural disaster or emergency situations. Azercosmos is currently planning to provide Ka-band services on the next Azerspace-2 satellite, making it an ideal potential platform to deliver these services.

If Azerspace-2 is needed for provision of prompt telecommunications assistance to mitigate the impact of a disaster, then regulatory barriers that impede the use of telecommunication resources for disasters are waived. This is defined in the Tampere Convention, which came into force on January 8, 2005 and has so far been ratified by 43 governments. Such barriers could include licensing restrictions for frequency allocations, equipment import restrictions, or limitations on the movement of humanitarian teams.

The ITU[26] currently endorses the use of GEO universal satellite systems with high-gain multiple spot beams for relief operations. If configured for this application, Azerspace would offer the capability of digital beam forming, allowing for re-configuration of the coverage and distribution of the Ka-band spectrum and power if and when needed to reach areas of conflict.

Infrastructure Security and Monitoring

The more flexible Azerspace-2 design should also provide wide-area coverage without the use of inter-satellite links or slow-performing and high-cost multiple gateways. This would allow the satellite to support real-time, high bandwidth configurations for real-time image transmission of static or moving pictures.

Regional Applications

Trans-border use of telecommunications equipment by humanitarian organizations is often impeded by regulatory barriers. This can make it extremely difficult to import and deploy telecommunications equipment for emergencies without the prior consent of the local authorities. This could be avoided through the use of Ka-band with high-gain multiple spot beams, and would additionally enable Azercosmos to provide regional customers with focused and dedicated links to address any security concerns.

National ICT Projects Supported by Azerspace

Contractor researched 52 of Azerbaijan's top ICT programs identified in the President's 2013 Action Plan to identify which could directly benefit from the additional capabilities provided by a GEO telecommunications satellite and specifically, Azerspace-2. Our findings (shown in the chart below) determined that 17, or 33%, of these national ICT projects are poised to directly benefit from the Azerspace-2 satellite.

Such synergies should encourage the Azerbaijan government's ongoing activities to attract both domestic funding and foreign investments to help boost the telecommunications and ICT sectors. [27] From our in-country interviews, it became apparent that investment in the ICT sector has been

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26 Source: ITU-R Report M.2149 http://www.itu.int/pub/R-REP-M.2149 `Use and examples of mobile-satellite service systems for relief operation in the event of natural disasters and similar emergencies.'

27 Azerbaijan has signed grant agreements with the UNDP (National Information Communication Technologies Strategy for 2003–2012), the World Bank (for expanding telecommunications in the rural areas of the Southern Caucasian countries), and other international organizations.

prioritized, with ICT seen as the "essential pillar" for diversifying the country's oil-dependent economy.

This is critical for the country, given that Azerbaijan's rich oil and gas reserves are expected to run out in the next 20 to 40 years.

Action Plan in connection with the Declaration of 2013 as the "Year of ICT" in the Republic of Azerbaijan, by the Order of the President of Azerbaijan on 3/28/13

Compatible Satellite Service			Azercosmos Satellite Program		Government Mandated ICT Activity	Matched Satellite Application	Stakeholders
C	Ku	Ka	AS-1	AS-2			
		Y		Y	Taking measures to bring prices for telecommunications services and the Internet in accordance with the cost of svc	Low cost, higher power Ka-band terminals for last-mile connectivity.	MCIT, Tariff (price) Council
Strengthening the capacity of ICT							
		Y		Y	Continuation of measures to create E- Government, expansion of activities to improve the mass use of e svcs	Ku-band last mile network connectivity, Low cost Ka=band kioks and transportable terminals for e-Gov apps; C-band backup	MCIT, State Agency for services to citizens and social innovation under the President of the Republic of Azerbaijan
Y	Y	Y	Y	Y	Expansion of the use of e-health, e- education, e-procurement, e-tourism, e- notary, e-culture, e-archive, e-court, e- commerce, e-payment		State Agency for services to citizens; Innovation under the President, Ministry of Health, Ministry of Education, Ministry of Culture and Tourism, Ministry of Justice, Ministry of Economic Development, National Archive Admin; State Procurement Agency, MCIT
Y	Y	Y	Y	Y	Taking measures for electronization of services provided in "ASAN Service" centers	Ku-band last mile network connectivity, Low cost Ka=band kioks and transportable SAT for ASAN apps; C-band backup	State Agency for services to citizens and social innovation under the President
Y	Y	Y	Y	Y	Expansion of the use of ICT in the electoral process	Low costt Ka terminals for last-mile transportable election monitoring; C-band for e-Platform/e-Gov backup	Central Election Commission, Special State Protection Service, MCIT
	Y	Y	Y	Y	Taking measures to increase the use of broadband internet services in regions, implementation of a pilot project	Lower cost Ka-band to support last-mile emerging market; Ku-band for savings	MCIT, local government authorities
	Y	Y	Y	Y	Measures to improve the quality of Internet, protection of user rights	High power Ka-band to improve QOS	MCIT, Ministry of Economic Development
Y	Y	Y	Y	Y	Providing the transition to digital broadcasting in the Republic of Azerbaijan	Ku/Ka-band for IP video; Ku/Ka for DTH; C-band for video /digital cont., cable head-ins	MCIT, National TV and Radio Council
Y	Y	Y	Y	Y	Taking measures to develop the content on Azerbaijan and data related to the Republic of Azerbaijan in global information resources	Last-mile Ku/Ka-band nets; C-band e-platform backup	Azerbaijan National Academy of Sciences, Ministry of Education, MCIT by involving NGOs
	Y	Y	Y	Y	Rendering support to the implementation of scientific research and development on ICT	Last-mile Ku/Ka-band networks; M2M satellite; C-band backup services	AZ National Academy of Sciences, MCIT,
Y	Y	Y			Development of the infrastructure of the computer network of AzScienceNet Elm in the country	C-band trunking & backup for infrastructure.	AZ National Academy of Sciences
	Y	Y	Y	Y	Taking measures to create opportunities for the access to scientific institutions and universities around the country to the international scientific databases (ACM, IEEE, etc.)	Ku/Ka-band networks; M2M; C-band backup	AZ National Academy of Sciences, Ministry of Education, MCIT,
Y	Y	Y	Y	Y	Development of information system on human resources of the Republic of Azerbaijan in the field of ICT	Ku/Ka-band linked nets and last-milee-Gov Kioks; C-band for e-Gov backup	AZ National Academy of Sciences, MCIT

Figure 6: Azerbaijan ICT Infrastructure and ICT Systems Compatible with Azerspace Services

Azerbaijan's government has successfully demonstrated its ability to attract backers of Azerspace-compatible infrastructure programs.[28]

Examples of active funded projects and investors include the **Azerbaijan State Oil Fund**, which

28 Source: Bloomberg, 'Azeri State Fund to Invest Up to $200 Million in Infrastructure,' Zulfugar Agayev, April 1, 2013: http://www.bloomberg.com/news/2013-04-01/azeri-state-fund-to-invest-up-to-200-million-in-infrastructure.html

plans to invest as much as $200 million USD in infrastructure projects in emerging markets as it diversifies reserves; the **International Finance Corporation (IFC)** with its $150 million **Global Infrastructure Fund (SOFAZ)**; [29] and the IFC Asset Management Company's managed infrastructure fund, which will enable capital to be channeled into industries including power, transportation, utilities, telecommunications, urban infrastructure, and infrastructure services.

Azerbaijan Content and HR Programs Enabled by Azerspace Services

Compatible Satellite Service			Azercosmos Satellite Program		Government Mandated ICT Activity	Matched Satellite Application	Stakeholders
C	Ku	Ka	AS-1	AS-2			
Development of information society and human resources							
	Y	Y	Y	Y	Implementation of the work to improve the capacity of the disabled and children under the age of 18 with disabilities to use ICT	Ku/Ka-band connectivity to last-mile learning centers for children with disabilities	MCIT, by involving Heydar Aliyev Foundation
	Y	Y	Y	Y	Expanding the network of public information kiosks to provide opportunities of E-Government in the regions	Ku/Ka-band connected networks and last-mile public Kioks for e-Gov platform; C-band for e-Gov backup services	MCIT, State Agency for services to citizens and social innovation under the President, local government
	Y	Y	Y	Y	Taking measures on the creation, promotion and dissemination of information resources reflecting the realities of Azerbaijan in the virtual space		MCIT, National Academy of Sciences of Azerbaijan by involving Heydar Aliyev Foundation and other NGOs
	Y	Y	Y	Y	Taking measures to develop distance education	Ku/Ka-band connected universities, schools and low cost knowledge kiosks	Ministry of Education, National Academy of Sciences of Azerbaijan
Y	Y	Y	Y	Y	Taking measures to create free WiFi zones in public places	C/Ku/Ka-band connected wifi gateways for last-mile licensed operators.	Ministry of Economic Development, Ministry of Culture and Tourism
	Y	Y	Y	Y	Taking measures for the dev of online media	Ku/Ka-band connected nodes for content-contribution and mgmt platform	MCIT, Ministry of Education, National Academy of Sciences of Azerbaijan by NGOs
	Y	Y	Y	Y	Improvement of ICT statistics in accordance with international practice	Ku/Ka-band connected Kioks for distributed last-mile data collection	State Statistical Committee, MCIT, by involving NGOs
	Y	Y	Y	Y	Conducting training courses, seminars for Ministry of Communications and various groups in regions in order to increase knowledge and skills in ICT	Ku/Ka-band connected Kioks for distributed interactive e-Learning	IT, Min. of Education, National Academy of Sciences of AZ by involving Heydar Aliyev Foundation other NGOs
	Y	Y	Y	Y	Holding of online activities on important topics	Ku/Ka-band connected Kioks for dist interactive knowledge contribution net	MCIT, Ministry of Education by involving Heydar Aliyev Foundation other NGOs
	Y	Y	Y	Y	Holding online photo contest "My Azerbaijan"	Ku/Ka-band connected Kioks for e-Gov platform;	MCIT, Ministry of Youth and Sports, Min. of Culture & Tourism (Heydar Aliyev Foundation other NGOs)
	Y	Y	Y	Y	Holding contests, quizzes and competitions on ICT, including online		MCIT, Ministry of Education, National Academy of Sciences of Azerbaijan
	Y	Y	Y	Y	Holding of international and republican conferences, forums, seminars, round tables, exhibitions on ICT		MCIT, Ministry of Education, National Academy of Sciences of AZ State Customs, Copyright Agency
Y	Y	Y	Y	Y	Creation of "Online thought bank"	Ku/Ka-band connected Kioks for dist interactive knowledge contribution net	MCIT, Ministry of Youth and Sports, National Academy of Sciences of AZ
Y	Y	Y	Y	Y	Preparation of articles, booklets and other printed matters on the development of the ICT sector	Ku/Ka-band connected Kioks for e-Library knowledge distribution; C-band for backup services	National Academy of SCI, of AZ, MCIT
Y	Y	Y	Y	Y	Expansion of the use of ICT in libraries		Ministry of Culture and Tourism
Y	Y	Y	Y	Y	Informing the diplomatic representations of foreign countries in the Republic of Azerbaijan on the development of ICT in the country	Secure C-band and Ka-band network for diplomatic networks, in and out of AZ	Ministry of Foreign Affairs, MCIT
Y	Y	Y	Y	Y	Taking measures on the application of the electronic queue and distribution of apartments	Ku/Ka-band connected Kioks for e-Gov platform; C-band for e-Gov backup services	State Agency for services to citizens and social innovation under the President, Min. of Labor and Social Protection, local Gov.

29 A third of the $500 million USD contributed by other sovereign wealth funds and pension managers.

Market Oriented Reform to Support Market Access

To address changes in Azerbaijan's telecommunications environment facilitated by the emergence of the country's satellite services industry and the new converged network services that result, Azercosmos together with MCIT will be required to establish and/or revise the laws and regulations governing these markets.

To guarantee an open satellite industry, one that supports both incumbents as well as new entrants, it is recommended that Azercosmos address these issues to foster the emergence of competition in what was previously a controlled or monopolistic market. Most countries with emerging satellite industries have understood that existing regulatory frameworks need not be imposed on new and/or converging technologies that are not easily classified under their existing framework. The planned Azercosmos deployment of lower-cost, higher-power Ka-band broadband satellite services into national, regional markets brings with it new regulatory challenges. Although these issues may surface mostly at the national level, they can have far reaching consequences.

Restrictive regulatory practices deny the benefits of technological advancements, and can manifest in the form of material losses and socio-economic gains denied. At the international level, governments and the satellite industry alike must strive towards adherence to international orbit-frequency coordination procedures and avoid potential monopolistic practices that are not conducive to the growth of satellite broadband delivery.

Licensing and Access Practices for Azerspace-2

During our recent interviews, Azercosmos communicated that it understands the need to support Azerbaijan's emerging space program through the modernization of its regulatory and policy frameworks on the path towards privatization. If the introduction of new Ka-band satellite-enabled solutions via Azerspace-2 is coupled with liberalization, competition, and harmonized licensing processes, it will promote increased access and facilitate innovation for the country.

As part of the proposed feasibility study, Contractor recommends that the specific objectives of licensing be investigated in the context of the second satellite. Areas to be examined during the feasibility study include the establishment of new policies, processes, and infrastructure to simplify access to satellite markets for new entrants, the definitions of conditions of operation, and rights and obligations of licensees in order to stimulate investment in the satellite market. Certainty is a key factor for ensuring the successful development of investment initiatives.

It is recommended that Azercosmos, together with MCIT, strive to build and maintain a level playing field and promote competition by creating mechanisms for managing the co-existence of Azerbaijan's future operators, both incumbents and new entrants, in complementary, supplementary, or competing segments. Since 2008, limited steps in this area have been taken. For example, before 2008, MCIT acted as both regulator and operator. In 2008, the MCIT moved to separate the two functions—although it has not yet completed this process. The MCIT has adopted a program for development of telecommunications, including the creation of new licensing policy aimed at modernizing the telecommunications infrastructure. For example, some telecommunications services, such as VoIP, must be licensed.

Regulation of the Internet

In response to foreign pressure, the Azerbaijan government has taken steps to liberalize the ISP market. Mandatory licensing for ISPs was eliminated in 2002, although the MCIT has ignored this

provision on isolated occasions. According to the ITU, the number of Azerbaijani internet users has reached 3.7 million users, or 44% of the population, as of June 2010.[30] This is only expected to increase as new broadband, wireless, and satellite-enabled services are deployed throughout Azerbaijan.

Contractor recommends that the FS examine MCIT and other government control in the ISP sector and suggest plans to help privatize the industry. Access to the Internet is currently controlled by a very few national top-level internet access providers and operators, which are also part government-owned. For example, privately-owned but government-controlled Delta Telecom (formerly Azersat) is the country's largest satellite and fiber-optic backbone provider, with approximately 40 ISPs operating in Azerbaijan on a retail basis. Delta is also the primary ISP in the country and licensed owner of the international gateway. This results in Delta Telecom supplying international internet access to 90 to 95% of all users in Azerbaijan, and selling international traffic to almost all ISPs.[31] Outside of Baku, the state-owned AzTelecom, which is partially owned by MCIT, is competing for Delta Telecom's business.[32] As the IT market is not yet fully liberalized, the commercial ISPs operate under economically inconvenient conditions set by the state monopolist, which stifle smaller competitors. Almost all of Azerbaijan's ISP's purchase bandwidth from these two operators. The government of Azerbaijan needs to assure that open market legal provisions and/or licensing requirements for ISPs are in place for new entrants into the market.

Contractor recommends that the feasibility study address plans by MCIT and Azercosmos to extend the supply chain in response to the new entrepreneurial opportunities created by the Azerspace planned use of Ka-band solutions, which can support low-cost, mass-market opportunities, and to determine whether Delta Telecom, the first company to implement WiMax throughout the country in 2010, will be the sole provider of licensed satellite services on Azerspace-1.

Internet Privacy

Since 2005, Azerbaijan has treated the internet as mass media and officially lists it as one of the telecommunications services regulated by the 2005 Law on Telecommunications. At present, Azerbaijani law does not mandate the filtering or monitoring of Internet content. Freedom of speech advocates have stated that Azerbaijan's Government has exerted a range of actions in order to exert pressure on content providers, ranging from the use of online application surveillance to the termination of commercial activities.[33]

Contractor recommends that the FS investigate this further, as there has been some public criticism of emerging government policies. For example, the study should determine whether the government plans to introduce any laws that will impose restrictions on websites with obscene or anti-national content. This concern has been raised by advocates' free speech.

Content filtering is practiced by AZNET, the education and research ISP, but is regulated by an accepted usage policy and is restricted to filtering out pornographic content.

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30 "Azerbaijan". Internet World Stats. Retrieved 3 October 2011. http://www.internetworldstats.com/asia/az.htm

31 "Azerbaijan country profile," Open Net Initiative, November 17, 2010, http://opennet.net/research/profiles/azerbaijan.

32 Y. Hajiyev, Azerbaijan, European Commission, accessed August 30, 2012, http://ec.europa.eu/information_society/activities/internationalrel/docs/pi_study_rus_ukr_arm_azerb_bel_geor_kaz_mold/5_azerbaijan.pdf.

33 "Azerbaijani Activists Under Pressure Ahead of Protest Day," Radio Free Europe/Radio Liberty, March 7, 2011, http://www.rferl.org/content/azerbaijan_activist_prison/2330387.html.

Azerspace-2 - Impact on Environment

As is the case with most gas-exploring countries, Azerbaijan faces the impact of environmental pollution. The pollution of coastal winds and shores with oil and gas byproducts, as well as in wide areas where pipelines are being laid, is a concern. Azercosmos has indicated that legal mechanisms are being drafted to cover the issues of liability for space activities, and that new space laws are expected to come into force in 2013. These new national regulations are meant to ensure that satellite operations will not harm the surrounding natural space and terrestrial environment. Azerspace satellites can be used to monitor pollution levels and activities with appropriate ancillary technologies.

Supportive Regulatory Environment for ICT Investment [34]

Recent ICT programs that demonstrate compatibility with both the Azerspace-1 and -2 satellite programs, and which are mandated by the President of the Republic of Azerbaijan, include the modernization of the telecommunications infrastructure; the increase of digital broadcast network; nationwide coverage with high-speed cable network; applications development of e-government infrastructure; and the formation of broadband network covering all residential areas in the country. Pursuant to the Azerbaijan's technology strategy and supporting policies, the trend towards privatization is continuing. As with other governments, shares in ICT companies established with the state's involvement were privatized, followed by liberalization steps, reduction of the tax burden, and facilitation of licensing procedures.

Note: Refer to Privatization Indicators in appendix

Investment in ICT and Infrastructure

Azerbaijan is building a foundation for both domestic and foreign investments together with a hospitable business climate for investors to be engaged in all spheres of economy. It remains to be seen how this is carried over to the emerging satellite services sector. Investments in ICT vary, comprising around 3 to 3.5% of the overall scope of investments made to the national economy. The country's growing economic capacities bring about further increase in financial support to ongoing projects in the ICT sector.

Private Investment

Investments to the "parent" ICT sector over the last five years equaled approximately $1.34 billion USD. During 2011, $525.5 million USD was invested in the Azerbaijan ICT sector, roughly double the previous year's indices. Mobile phone operators were responsible for the majority of these investments, 60%, or $313.3 million USD.

Government Funding

The major relevant technology areas funded by the Azerbaijan government include the space industry, application of nanotechnologies, and the building up of e-government infrastructure, e-services, etc. The share of the government sector in ICT investments increased from 23.5% to 35% within 5 recent years. According to the MCIT, SSC, $182.9 million USD was invested in the ICT

34 Source: 2011: Azerbaijan Annual Report

sector by the Azerbaijan government in 2011, with 22% directly from the state budget. [35]

Internet Background and Growth

- The Internet in Azerbaijan remains largely free from direct censorship by the government.
- Azerbaijan has a growing Internet population, supported by a national strategy to develop the country into an information and communication technology (ICT) hub for the Caucasus region.
- The Internet is also beginning to surface as an important forum for political communication, and there are some indications that restrictions on content may emerge in the future.
- The Internet in Azerbaijan remains for the most part ‘‘free and open’’ as a result of the government’s strong interest in converting the country into an ‘‘ICT hub’’ for the region.

New Satellite Capacity to allow Azeri operators to move off of foreign satellites

- Azercosmos currently plans to migrate strategic satellite customer’s traffic to Azerspace-1 and Azerspace-2 when contracts expire.
- Azeri communication companies currently lease the equivalent of two transponders.

35 Source; MCIT, SSC

3.11 IMPACT ON U.S. LABOR

The Contractor shall submit an assessment of the impact of the project(s) on U.S. labor, addressing the legislative prohibitions on the use of Foreign Assistance Funds described in Annex I.

Impact of Azerspace-2 on U.S. Job Creation

Azercosmos indicated in a 2011 press release that the Azerspace-1 project created approximately 1,500 U.S. jobs. Based on job numbers supplied by the satellite exporters and aggregated by the U.S. Ex-Im Bank[36], Contractor estimates that the financing of the Azerspace-2 project can be expected to generate between 1,200 and 1,800 jobs at the U.S. exporters' facilities and those of their suppliers. This estimate is based on three (3) Ex-Im approved satellite programs, which were closest in scope to the planned Azerspace-2 design. See highlighted rows in following table.

Table 1: US Export Jobs Created from US-Exim Approved Satellite Projects

US JOBS CREATED	US COMPANY	DATE	CUSTOMER	COUNTRY	MISSION	MISSION DESCRIPTION	Source:
1,500	Orbital Sciences	2012	Azercosmos	AZ	Azerspace-1	Orbital GEO STAR-2, 5 KW, 36 transponders	Azercosmos
80	Orbital Sciences	2012	Mexsat	Mexico	Mexsat3	Orbital GEO Star-2, 3.5 KW, 12 ext Ku-band,12 ext C-band transp.	EX-IM
600	Orbital Sciences	2013	Hispasat	Spain	Amazonas 4A	Orbital GEO Star-2, 24 Ku-band transponders	
425	Lockheed Martin	2013	Vinasat	Vietnam	VINASAT-2	GEO LM Lockheed Martin A2100A bus, 24 Ku-band transponders	
3,700	Loral, Aon	2013	ABS	Hong Kong	ABS-2	GEO FS1300, 87 active C-band, Ku-band and Ka-band transponders	
	Boeing, Aon, SpaceX		ABA		Project 2	(2) GEO 702SP C, Ku-band, launch on SpaceX on Falcon 9; Insurance	
480	Boeing	2012	Mexsat	Mexico	Mexsat1, Mexsat2	2 L-band MSS satellites	
900	Lockheed Martin	2012	Jabiru Sat.	Australia	Jabiru-1	8.1 GHz 50 Ka-band; Ku-band; Jobs: 250 aerospace, 650 suppliers across USA	

U.S. Legislative Restrictions

The primary U.S. legislative restriction for Azerbaijan is Section 907 of the United States Freedom Support Act, which bans any kind of direct United States aid to the Azerbaijani government only for military and specific energy projects. Section 907 is unique to Azerbaijan and makes it the only exception to the countries of the former Soviet Union in receiving direct financial aid from the United States.[37] The Act was originally passed in response to Azerbaijan's blockade of Armenia.

36 Source: US-EXIM 2011 annual report; www.exim.gov/about/library/reports/annualreports/2011

37 Under the Freedom Support Act to facilitate economic and political stability.

Since its creation, Congress eased many Section 907 restrictions on a year-by-year basis until the terrorist attacks on the United States in September 2001, after which it approved an annually renewable presidential waiver would provide the President with ability to waive the Section 907. The waivers continue to be conditional on Azerbaijan's cooperation with the United States in combating terrorism. Historically, Congress has called for equal funding each year for Foreign Military Financing and International Military Education and Training for Armenia and Azerbaijan.

Exclusion of Defense and Energy Department Funds

Historically, annual aid excludes Defense and Energy Department funding. However, ongoing rumors continue to circulate regarding the lessening of these restrictions. Contractor has not been able to substantiate these rumors.

Other Congressional Initiatives

Other congressional initiatives have included the creation of a South Caucasus funding category in FY1998 to encourage a Nagorno-Karabakh (NK) peace settlement, provide for reconstruction, and facilitate regional economic integration. Congress also has called for humanitarian aid to NK, which has amounted to $30.8 million expended from FY1998 through FY2008.

The Obama Administration aims to develop democratic institutions and civil society, support the growth of the non-oil sectors of the economy, strengthen the interoperability of the armed forces with NATO, increase maritime border security, and bolster the country's ability to combat terrorism, corruption, narcotics trafficking, and other transnational crime.

Cumulative U.S. assistance budgeted for Azerbaijan from FY1992 through FY2010 was $976 million (all agencies and programs). Almost one-half of the aid was humanitarian, and another fifth supported democratic reforms. Budgeted aid to Azerbaijan was $26.4 million in FY2011 and an estimated $20.9 million in FY2012 (including "Function 150" foreign aid excluding Defense and Energy Department funds). Under the Continuing Appropriations Resolution for FY2013, signed into law on September 28, 2012 (P.L. 112-175), regular foreign aid accounts are funded until late March 2013 at the same level as in FY2012, plus an additional 0.612%, and most country allocations may be adjusted at agency discretion.

3.12 QUALIFICATIONS

The Contractor shall submit the activity team qualifications required to conduct the activity(ies) and the evaluation criteria to be used by the Project Sponsor in cases of competed activity(ies).

Qualifications Required by the Feasibility Study Contractor

A Contractor executing the Feasibility Study needs to have personnel with extensive satellite, market research, regulatory, and technical experience required for this type of project. The Contractor should also provide financial, contractual, and risk management expertise.

The Contractor carrying out this Feasibility Study shall demonstrate:

a) Detailed experience with the regulatory process, specifically regarding C-, Ku-, and Ka-band satellites, the ability to assess the status of its frequency coordination with neighboring satellite operators and terrestrial users of the same frequencies, and the ability to provide a timeline of the process;

b) The contractor shall demonstrate knowledge of global trends in satellite telecommunications and how these global trends might impact the derived economic value of the Azeri satellite; demonstrate a strong market research capacity and ability to assess the value of the satellite services the Azeris can derive from using the slot (Azercosmos is obtaining and correlating the slot selection to the design of the satellite, geographic coverage, market potential for each of a series of satellite services by demand growth in those regions, and expected market penetration); as well as provide a competitive market analysis of other satellite operators in the region offering similar services;

c) The contractor shall demonstrate firm knowledge of the U.S. companies that might be capable of supplying the satellite and associated launch and ground segment. The contractor shall also demonstrate knowledge of the competitive advantages and disadvantages of U.S. industry relative to the Azeri requirements.

d) Strong technical capability in being able to validate the capabilities of the satellite, the types and quality of the services it can provide; familiarity with high throughput and Ka-band spot beam technology, including issues and challenges in the target markets; as well as identify the technical risks associated with the implementation of the system from the point of view of launch vehicle and satellite manufacturer's selection;

e) Experience in providing detailed analyses of the economic, legal, and business factors associated with generation of satellite services to the wholesale market in the region, and a particular demonstrated understanding of the special political nuances within the region that might affect the Azercosmos business objectives; this should include a risk assessment and mitigation program;

f) Internal ability to model Supply and Demand in FSS customized by countries and regions by frequency bands and by services;

g) Knowledge of end-user market customer, channel distribution, and political and economic conditions for satellite communications in the target markets (e.g. oil and gas, DTH, etc.)

h) Strong financial capabilities to develop the most appropriate financial models for a Ka-band satellite system through the full life cycle of the program;

i) Proficiency in satellite project financing and knowledge of U.S. Export Credit agency activity in the satellite sector;

j) The ability to determine and develop appropriate training programs to be offered to Azercosmos.

3.13 JUSTIFICATION AND RECOMMENDATION

The Contractor shall provide an explanation of why USTDA's grant funding is needed, including a description of how the activity would support U.S. Government priorities and promote U.S. commercial goals, how USTDA's participation would add value to the project's development, and how the success of each project would be measured in terms of U.S. trade promotion and development impact.
Detailed recommendations as to:

- *Whether or not the project meets USTDA's basic funding criteria;*
- *The appropriate TOR for the proposed activity; and*
- *The appropriate budget for the TOR recommended for the proposed activity.*

If the recommendation is that USTDA should fund the activity, but in a phased approach or only if certain outstanding issues are resolved or conditions met, those phases, issues or conditions should be clearly delineated in the recommendation.

Justification of Project

Our analysis of the current status urgently suggests the need for development of a comprehensive business plan. The current demand for satellite services is growing within the country and on a regional basis. The existing satellite is not expected to meet the need or demand for satellite services within and outside of Azerbaijan. The justification for USTDA's continued involvement with a feasibility study could be summarized as follows:

a) U.S. manufacturing firms we interviewed expressed strong interest in supplying goods and/or services for the project.
b) Azercosmos is well-placed to capture the existing demand and fill the current Azerspace-1 with a potential backlog;
c) The President's "Azerbaijan 2020 – Future Outlook" directive places telecommunications and this satellite program as a national imperative;
d) A substantial investment has already been made in the satellite program with the launch of Azerspace-1 and a very sophisticated ground station;
e) The Azerbaijan government is prepared to provide a sovereign guaranty behind ECA loans;
f) Azercosmos management is young, ambitious, well-trained, and thoughtfully incorporated to include key management positions;
g) The feasibility study will be used as a key document to developing a formal and comprehensive business plan;
h) U.S. Export potential is estimated at approximately $300 million USD, if not more, depending on the complexity of the satellite technology for acquisition of the satellite, launch services, insurance, ground equipment and advisory services.

Implementation of the project is consistent with USTDA's mission to not only expand US exports, but to contribute to the improvement and security of the physical, financial, and social infrastructure of the targeted developing countries. The planned implementation will also introduce modern satellite technologies, as well as satellite services that improve management information systems and process technologies to create greater economic productivity and more efficient use of resources.

Contractor believes that the Feasibility Study is further justified because:

- The technology risk involved is low, since the satellite will be built on the basis of a well-known and proven technology;
- The Grantee is seeking the most economically and technically appropriate technology;
- The project encourages wider market penetration beyond Azerbaijan

3.14 TERMS OF REFERENCE

The DM Contractor shall provide Terms of Reference (TOR) for the activity(ies). The TOR, which must be endorsed by the Project Sponsor, shall include, at a minimum, the following: Terms of Reference
This should explain how the activity relates to the proposed project.

Aim of the Terms of reference

Azercosmos is planning to launch a second geosynchronous satellite in order to provide additional communication, broadcasting, and high-speed internet services to Azerbaijan and other countries in a combination of C, Ku and Ka frequency bands. In order to obtain the necessary government approvals and financial support, Azercosmos must prepare and present a comprehensive feasibility study that justifies the procurement and launch of Azerspace-2. The objective of the study is to work with Azercosmos management:

- To develop a clear vision for the business and the business model, clarity regarding investor, management, and related stakeholder views, and expectations about how this business should develop over time;
- To create a clear, defensible picture of what the market potential is for the Azerspace-2 satellite system, the sources of value in defining the services to be provided, the nature of buyer segments, the nature of direct and indirect competition, and options for service positioning and partnerships;
- To produce a comprehensive plan for achieving the stated Azercosmos business and financial objectives, while defining the risks and alternatives and the relative strengths and weaknesses of these alternatives in terms of business performance.

This effort should be broken down into the following general sections to include:

- Review of Azercosmos baseline objectives
- Feasibility study and comprehensive business plan
- Detailed market and competitive assessment, including market access strategies
- Orbital slot evaluation, frequency, and regulatory analysis
- Review of financing options
- Evaluation of U.S. export opportunities
- Benefit derived from the satellite program to Azerbaijan

Objective: The Study will determine the technical, economic, and financial feasibility of the procurement, financing, launch and operation of the Azerspace-2 communications satellite that would cover Azerbaijan, its surrounding region and Africa (however the exact coverage of the Azerspace-2 satellite may be modified or narrowed for the purpose of this Study depending on the likely orbital slot to be used). The Study will confirm and characterize market demand, assess options and availability of orbital slots, provide a conceptual design and technical configuration of the satellite, estimate the capital and operating costs, perform a risk assessment, and develop a financial model with a profitability analysis.

Contractor shall include the following tasks designed to address the issues identified for each of the categories listed above:

Task 1 – Review of baseline objectives

The Contractor shall familiarize itself with Azercosmos and its stakeholders, including the Ministry of Communications and Information Technology (MCIT), as well as their objectives for the Project. This shall include a review of the proposed technical design of the satellite, its capabilities, coverage areas, and service offerings being contemplated. The Contractor shall also review any previous market, financial, or technical governmental reports covering the Azerspace-1 and Azerspace-2 programs.

Task 1 Deliverable:

The Contractor shall conduct a lessons learned review of Azerspace-1 to identify technical, market, and business shortcomings and best practices that can be addressed or applied, respectively, to the Azerspace-2 program. The Contractor shall produce a report providing the findings from Task 1.

Task 2 - Market Demand Study, Competitive Assessment and Analysis

The Contractor shall assess the market for transponders within geographic areas that could be served by the Azerspace-2 satellite. This analysis shall include the following:

- Define services that are optimally provided by communication satellites, including Broadcast Satellite Services and Fixed Satellite Services in the C, Ku and Ka frequency bands;
- Identify current and anticipated supply of transponders in each service for the specified geographical region;
- Identify current and future demand for satellite services in the specified geographical region;
- Determine likely end users and provide qualitative description of their service requirements;
- Undertake a competitive analysis utilizing supply and demand analysis as well as pricing information;
- Using a scenario-based approach to assess the impact of technical and market trends in global satellite telecommunications on the expected demand for Azerspace-2 derived services;
- Develop a preliminary market plan for the wholesale sales of Azerspace-2 transponder capacity. This shall include market targets and estimated pricing for the transponders, satellite fill rate, and identifying distribution channels/partner candidates.

Task 2 Deliverable:

The Contractor shall provide a preliminary assessment of the market conditions and develop a marketing plan.

Task 3 – Orbital Slot Evaluation and Spectrum Assessment

The Contractor shall perform a detailed due diligence to determine the current frequency-coordination situation for Azerspace-2 for all frequency bands of interest to Azercosmos. Specifically, it is necessary to establish the availability of orbital positions for Azerspace-2 and to determine availability of an orbital position directly through International Telecommunications Union (ITU) process.

In the case of a third-party slot arrangement, the Contractor shall analyze the technical characteristics and filing priorities of orbit positions through the processes of the ITU.

The Contractor shall assess and provide evaluation criteria of slot offerings to Azercosmos from third parties. This would include assessing the value of the satellite services the Grantee can derive from using any given slot being contemplated.

Task 3 Deliverable:

A report analyzing the options and costs for obtaining access to orbit positions for the Azerspace-2 satellite.

Task 4 - Conceptual Design and Technical Configuration of Azerspace-2

The Contractor shall investigate and evaluate financial, market, economic and regulatory conclusions to determine optimal satellite network design. The Contractor shall meet with the Grantee on a regular basis to establish preliminary satellite system configurations and geographic coverage to be studied further. Based on the findings in the market study in Task 2 regarding the most viable market segments for the proposed satellite, the Contractor shall develop a design and technical configuration that will allow the Grantee as operator to most effectively serve the most promising market segments. In particular, the Contractor shall specify a geographic service area, identify frequency bands that can effectively serve the market segments, establish the number of transponders that will be needed to meet existing and future growth in the markets, determine the downlink and uplink power needed considering the size of the antenna on the satellite and the specifications for the earth stations, determine the VSAT platform as required, and determine any other ground-based electronics needed to support managed applications for government, commercial, and/or consumer markets.

Task 4 Deliverable:

The Contractor shall provide the definitional requirements for:

- Space segment concept/description;
- Ground systems requirements; and
- A general concept of operations guidelines or requirements.

Task 5 – Preliminary Cost Estimates

Taking into consideration the selected design and technical configuration of Azerspace-2 in Task 4 above, the Contractor shall develop preliminary cost estimates (maximum +/- 10%) in U.S. dollars:

The capital cost estimates shall include, but not be limited to the following:

- Satellite and network design;
- Construction of the satellite and external technical monitoring over the project implementation;
- Launch services;
- Tracking, telemetry and control ground facilities;
- Ground communications equipment;
- Regulatory and licensing fees;
- Financing costs, including but not limited to interest during construction, bank and other creditors' fees and commissions, and currency conversion costs;
- Legal fees;

- Applicable value added tax (VAT), excise tax, customs duties and other obligatory payments;
- Inspections;
- Consultants;
- Insurance, including launch and early in-orbit property insurance and liability insurance;
- Personnel training;
- Contingency reserve and other costs, which may be identified by the Feasibility Study Contractor (e.g. International Traffic in Arms Regulations "ITAR" related).
- The operating cost estimates shall include, but not be limited to the following:
    - Operations and maintenance of the satellite over its lifetime;
    - Operations and maintenance of the communications network;
    - In-orbit insurance;
    - Administrative and management fees;
    - Concession, rent and lease payments (e.g. orbital slot fees, if any);
    - Depreciation and amortization;
    - Interest; and
    - Taxes, fees and obligatory payments.

Task 5: Deliverable:

The Contractor shall provide capital cost estimates and operating cost estimates based on the selected design and network configuration.

Task 6 – Preliminary Environmental Assessment

The Contractor shall complete a preliminary environmental impact assessment (space environment and traditional environment). The preliminary environmental assessment shall be consistent with the requirements of the appropriate government entity with jurisdiction over the satellite project.

This review shall identify potential negative impacts (e.g. zoning affecting dish size, and quantity per dwelling, potential debris caused by the launch vehicle or satellite during the launch phase through in orbit operations), discuss the extent to which they can be mitigated, and develop plans for a full environmental impact assessment if and when the Project moves forward to implementation stage.

Task 6 Deliverable:

The Contractor shall provide the preliminary environmental impact assessment based on the satellite design and technical configuration.

Task 7 – U.S. Sources of Supply

The Contractor shall identify potential sources of satellite, ground equipment, launch services and related services (insurance, consulting, legal, etc.) that can be procured competitively from U.S. vendors for construction of the Azerspace-2 and provide the list of such vendors with identification of corresponding estimated values for their respective products and services. The Contractor shall determine existing relationships between U.S. sources of supply and U.S. sources of finance that might impact the financing model for the Project.

Task 7 Deliverable:

Based on the selected technical design of the satellite from Task 4, the Contractor shall obtain preliminary cost estimates from the identified U.S. vendors.

Task 8 - Financial Evaluation

The Contractor shall develop a detailed financial model that shall include a Life Cycle Cost Analysis (LCCA) as part of the overall project cost estimate. The LCCA shall examine the following categories:

Capital Costs

The Contractor shall make a detailed budget estimate (within maximum +/-10% accuracy) of the project investment costs for Azerspace-2. The preliminary investment costs composition is stipulated in Task 5 above. The Contractor shall verify and amend this list if required.

The Contractor shall include an estimated cost for future technical assistance and customer support as part of the investment costs for all stages of the Project.

Operating Costs

- The Contractor shall prepare an estimation (within maximum +/-10% accuracy) of the projected Operating Costs.
- The Contractor shall consider that like investment costs, operation and maintenance ("O&M") costs are system-specific and depend to a certain extent on decisions taken at the design and construction of Azerspace-2.
- The Contractor shall consider all operational costs, including administrative and management fees, taxes, and interest. The Contractor shall also consider personnel costs.
- The Contractor's cost analysis shall also include equipment and building lease, orbital slot fees, concessions and rent payments (if any).
- The Contractor shall evaluate additional costs that may be incurred under different financing arrangements from export credit agencies or other sources to take into account the cost of capital, for example, interest payments, transaction fees associated with debt, loan commitment fees, exposure fees, and similar costs.

The Contractor shall evaluate additional costs that may be incurred under different financing arrangements from export credit agencies or other sources to take into account the cost of capital, for example, interest payments, transaction fees associated with debt, loan commitment fees, exposure fees, and similar costs.

Revenues

The Contractor shall develop various revenue models for wholesale services in each of the frequency bands being contemplated. If wholesale transponder sales are not expected to be the primary source of revenues, the Contractor shall develop a revenue model that incorporates those changes. The Contractor shall assess the financial impacts (cost vs. revenue potential) of hosted payloads on the utilization of Azerspace-2.

Cash Flows

The Contractor shall conduct cash flow analyses to determine the best combination of transponder lease and sales and evaluate amounts of loans or government support required to reach cash flow positive.

Profitability Analysis

The Contractor shall generate and evaluate specific indices of economic performance such as profitability, return on investment, internal rate of return, debt service coverage ratio, and net present value. The Contractor shall design the financial analysis to evaluate available financing scenarios, analyze each scenario's cost effectiveness, and compare each scenario's improvement in relation to the situation at the time of the Feasibility Study preparation. In addition to conservative assessments of operating and investment costs, the profitability and financial analysis shall compare costs of financing, for example, interest on bank credits, and other banking charges.

- The Contractor shall assess the potential profitability of the Azerspace-2 satellite.
- The Contractor shall develop a viable Financing Plan for the project. In developing a Financing Plan for the project, the Contractor shall consider and evaluate sources of funds to cover the capital expenditures, and how the free cash flows shall be used to cover the projected debt service. In order to evaluate the potential sources of financing, the Contractor shall contact local and international long-term debt financing sources to discuss their requirements for, and interest in, the project. Sources to contact include, but are not limited to, the U.S. Export- Import Bank and the Asian Development Bank.

The Contractor shall review indicative financing term sheets from potential lenders, if available, and include them in the final Feasibility Study report.

The Contractor shall develop a financing plan taking into account the comments and requirements of the aforementioned institutions. The financing plan shall include indicative capital structure, covenants, and terms and conditions for borrowings. It shall address interest rate and currency hedging, duties and taxes, and foreign exchange availability.

In addition to the projected economic analysis, the available sources of financing and proposed Financing Plan shall be used to assess the projected financial viability of the project.

The Contractor shall also prepare pro forma or projected income statements and balance sheets, and shall conduct and report on a sensitivity analysis to demonstrate the range of conditions under which the project will be profitable, and the extent to which the projections are dependent on uncontrollable conditions or factors. The pro forma financial statements will consist of the Income Statement (Profit and Loss Account), the Balance Sheet, Statement of Cash Flows, and Financial Ratios that include profitability calculations and cash flow projections. The Contractor shall provide advice on how to make the project most bankable, including providing risk minimization strategies to the extent that they are within control of the Azercosmos, and shall anticipate and address risk and return criteria of the most likely sources of bank loan financing.

Task 8 Deliverable:

The Contractor shall develop financial projections sufficient to include in an investment memorandum that will provide potential financiers with the information needed regarding the economic and financial merits of the project for their decision to invest.

Task 9 – Project Risk

The Contractor shall perform a risk assessment to identify risks, minimize the identified risks where possible through insurance or other means, and recommend a reasonable allocation of remaining risks. The primary risk categories to be considered by the Contractor shall include, but not be limited to the following: (i) project implementation risks, i.e., the risks of obtaining consents, permits, licenses, concession rights and other agreements and covenants necessary for financial closure, (ii) technical risks, i.e., construction delays, cost overruns, launch, operations,

and (iii) project regulatory risks, i.e., risks that arise from the regulatory or legal factors governing access to the orbital spectrum and rights to offer services in countries within the satellites' designated footprints.

Task 9 Deliverable:

The Contractor shall prepare a risk assessment and risk mitigation report based on the selected design, technical configuration and mission of Azerspace-2.

Task 10 – Developmental Impact

The Contractor shall report on the potential development impact of the project in Azerbaijan as well as other countries to be served by the satellite. The Contractor shall focus on what the economic development outcomes will be if the project is implemented according to the Study recommendations. While specific focus should be paid to the immediate impact of the project, the Contractor shall include, where appropriate, any additional developmental benefits to the project, including spin-off and demonstration effects. The Contractor's analysis of potential benefits shall be as concrete and detailed as possible. The development impact factors are intended to provide the project's decision-makers and interested parties with a broader view of the project's potential effects of the Azerspace-2 satellite.

The Contractor shall provide estimates of the project's potential benefits in the following areas:

A. **Infrastructure**. The Contractor shall provide a statement on the infrastructure impact giving a brief synopsis.

B. **Human Capacity Building**. The Contractor shall assess the capacity of the Azercosmos organization to implement and market the satellite program; address the number and type of positions that would be needed to implement the Project; and, identify opportunities for training that will augment existing Azercosmos capacity.

C. **Technology Transfer and Productivity Enhancement**. The Contractor shall provide a description of any advanced technologies that will be implemented as a result of the project and a quantitative description of any efficiency that will be gained.

D. **Social Benefits**. The Contractor shall identify social benefits of the project that arise from the Project.

E. **Other**. The Contractor shall identify any other developmental benefits of the Project.

Task 11 – Implementation Plan

The Contractor shall prepare a detailed Implementation Plan designed to provide for procurement, financing, construction, launch and operation of the Azerspace-2 satellite in a timely and in a cost-effective manner. The Implementation Plan shall establish sequence of tasks, assign responsibility for each task, and determine corresponding time limits for their completion. The Implementation Plan shall target a launch date of not later than the end of calendar year 2016.

Task 11 Deliverable:

The Contractor shall provide a copy of the Implementation Plan to the Grantee and incorporate any feedback from the Grantee into the Plan, incorporating a final draft into the Final Report.

Task 12 – Final Report

The Contractor shall prepare and deliver to the Grantee and USTDA a substantive and comprehensive final report of all work performed under these Terms of Reference ("Final Report") in accordance with Clause J of Annex II. The Contractor shall ensure that the front cover of every

Final Report contains the name and logo of the Grantee.

The Final Report shall be organized according to the above tasks, and shall include all deliverables and documents that have been provided to the Grantee. The Final Report shall include an executive summary discussing the project, the key findings of the Study, and the recommendations for further development of project, to be included in the Final Report. In addition to the copies of the Report that shall be provided to USTDA, the Contractor shall provide six (6) copies of the public version of the Final Report and six (6) copies of the Confidential Version to the Grantee.

The Contractor shall ensure that the label affixed to the front of the CD-ROM also contains the name and logo of the Grantee.

3.15 BUDGET

The DM Contractor shall provide a detailed budget for each recommended USTDA activity that is divided into three parts: a line item budget and task breakdown (Annex III), a Task Completion Schedule (Annex W), and a budget narrative (Annex V). All costs in each budget should be reasonable and allocable to the work being performed, and should support the activity TOR. The budget should be supported with sufficient detail to enable USTDA staff or others reviewing the material to understand completely, not only the budgeted amounts, but also the methodology that justifies the budget amounts. The budget should be provided in accordance with the format in Annex III and should include:

1. *Labor, budgeted by position title and task for each of the positions on the activity team. Positions should be identifiable, with descriptions of the positions and proposed team members included in the proposal. Person-Days should reflect the proposed number of days of work effort proposed for each position for each task. The labor cost shall be derived as set forth in Annex III. The proposed budget may not include fee or profit.*
2. *Itemization for per diem, transportation, communications, purchased services/contracts, translation of Final Report, and other direct costs. Per diem must be based on U.S. Government rates, which are available on the State Department web site (http://aoprals.state.gov/web920/per_diem.asp)*
3. *The Task Completion Schedule should list each major task to be performed in support of the TOR. The duration of each task is to be graphically presented in a bar chart as illustrated in Annex W.*
4. *The budget narrative should provide a detailed budget explanation and justification presenting how all costs have been derived in accordance with the sample provided in Annex V. The narrative must include an explanation for every line item. In general, each narrative statement should describe, in as much detail as possible:*
5. *What the specific item is*
6. *How the specific item relates to the project*
7. *How the amount shown in the budget was arithmetically determined*

Total Estimated Labor Costs and Expenses

The total cost for conducting the proposed Feasibility Study, in accordance with the Terms of Reference presented herein is estimated to be $603,560, the breakdown of which includes Direct Labor Costs of $541,800 and Expenses of $61,760. The proposed budget reflects the costs associated with meeting an expedited schedule by working on multiple tasks in parallel to achieve completion in three (3) months from coming into force of a contract between the Feasibility Study Contractor and the Grantee.

Estimated Direct Labor

Tasks	Work Package	Payment Amount (loaded daily rate) est.	Program Manager	Regulatory Specialist	Financial Specialist	Business Analyst	Market Specialist	Admin	Technical Specialist	Risk Management pecialist	TOTAL DAYS / TASK	TOTAL WORK WEEKS
			DAYS									
1	Review of baseline assumptions and program		10	3	1	2	2		10	1	29	5.8
2	Market Analysis		10	5	5	16	21		4		61	12.2
3	Slot evaluation		5	14		5	2		3		29	5.8
4	Technical review		10				3		20	2	35	7
5	Financial analysis		12		20	10	5		1	1	49	9.8
6	Environmental assessment		5			1			2	1	9	1.8
7	US source of supply		5				7		1		13	2.6
8	Risk Management		5		2	2			2	5	16	3.2
9	Developmental impact		5						0		5	1
10	implementation plan		5			3	3		1	1	13	2.6
11	Feasibility Study report		10	3	3	3	3	2	3	3	30	6
12	Final report		5	1	1	1	1	1	1	1	12	2.4
TOTAL LABOR EFFORT		$ 1,800	87	26	32	43	47	3	48	15		

Total Estimated Days 301

Total Direct Labor $541,800

Estimated Travel Expenses

Tasks	Work Package	Travel						
		number of trips	no. peops	airfare	day/trip	per diem	other	total
1	Review of baseline assumptions and program	1	2	$ 5,000	5	$ 3,600	$ 800	$ 9,400
2	Market Analysis	3	2	$ 15,000	12	$ 25,920	$ 2,400	$ 43,320
3	Slot evaluation			$ -	7	$ -	$ -	$ -
4	Technical review	1	1	$ 2,500	4	$ 1,440	$ 400	$ 4,340
5	Financial analysis							
6	Environmental assessment							
7	US source of supply							
8	Risk Management							
9	Developmental impact							
10	implementation plan							
11	Feasibility Study report							
12	Final report	1	1	$ 2,500	5	$ 1,800	$ 400	$ 4,700
	TOTAL TRAVEL							$ 61,760

Timeline of Proposed Work Package Activities

Tasks	Work Package	1 Week	2 Week	3 Week	4 Week	5 Week	6 Week	7 Week	8 Week	9 Week	10 Week	11 Week	12 Week
1	Review of baseline assumptions & program												
2	Market Analysis												
3	Slot evaluation												
4	Technical review												
5	Financial analysis												
6	Environmental assessment												
7	US source of supply												
8	Risk Management												
9	Developmental impact												
10	implementation plan												
11	Feasibility Study report												
12	Final report												

APPENDIX

Appendix 2: Azerbaijan Key Indicators [38]

Key indicators

Population (millions), 2009	9.0
GDP (PPP) per capita (PPP $), 2009	9,540
GDP (US$ billions), 2009	43.1
Global Competitiveness Index 2010–2011 rank (out of 139)	57

Networked Readiness Index

Edition (No. of economies)	Score	Rank
2010–2011 (138)	**3.8**	**70**
2009–2010 (133)	3.7	64
2008–2009 (134)	3.9	60
2007–2008 (127)	3.7	67
2006–2007 (122)	3.5	71

38 The Global Information Technology Report 2010–2011 © 2011 World Economic Forum

Environment component		3.7	77
Market environment		**4.0**	**78**
1.01	Venture capital availability*	2.9	48
1.02	Financial market sophistication*	4.0	80
1.03	Availability of latest technologies*	4.8	80
1.04	State of cluster development*	3.2	87
1.05	Burden of government regulation*	3.7	31
1.06	Extent & effect of taxation*	3.5	75
1.07	Total tax rate, % profits	40.9	72
1.08	No. days to start a business	8	27
1.09	No. procedures to start a business	6	33
1.10	Freedom of the press*	3.6	125
Political and regulatory environment		**3.8**	**79**
2.01	Effectiveness of law-making bodies*	3.8	51
2.02	Laws relating to ICT*	4.1	55
2.03	Judicial independence*	3.3	86
2.04	Efficiency of legal system in settling disputes*	3.3	93
2.05	Efficiency of legal system in challenging regs*	3.7	61
2.06	Property rights*	3.9	89
2.07	Intellectual property protection*	3.6	62
2.08	Software piracy rate, % software installed	88	100
2.09	No. procedures to enforce a contract	39	83
2.10	No. days to enforce a contract	237	4
2.11	Internet & telephony competition, 0–6 (best)	4	85
Infrastructure environment		**3.2**	**79**
3.01	Phone lines/100 pop.	15.9	80
3.02	Mobile network coverage, % pop. covered	99.6	40
3.03	Secure Internet servers/million pop.	1.9	102
3.04	Int'l Internet bandwidth, Mb/s per 10,000 pop	14.0	67
3.05	Electricity production, kWh/capita	2,821.4	68
3.06	Tertiary education enrollment rate, %	15.8	98
3.07	Quality scientific research institutions*	3.4	77
3.08	Availability of scientists & engineers*	4.0	78
3.09	Availability research & training services*	4.1	66
3.10	Accessibility of digital content*	4.8	70

Readiness component		4.4	49
Individual readiness		**4.9**	**67**
4.01	Quality of math & science education*	3.3	100
4.02	Quality of educational system*	3.1	103
4.03	Adult literacy rate, %	99.5	9
4.04	Residential phone installation (PPP $)	196.0	125
4.05	Residential monthly phone subscription (PPP $)	4.9	27
4.06	Fixed phone tariffs (PPP $)	0.00	1
4.07	Mobile cellular tariffs (PPP $)	0.23	36
4.08	Fixed broadband Internet tariffs (PPP $)	95.6	112
4.09	Buyer sophistication*	3.8	41
Business readiness		**3.8**	**83**
5.01	Extent of staff training*	4.0	67
5.02	Quality of management schools*	3.2	123
5.03	Company spending on R&D*	2.8	87
5.04	University-industry collaboration in R&D*	3.2	91
5.05	Business phone installation (PPP $)	294.0	126
5.06	Business monthly phone subscription (PPP $)	17.2	72
5.07	Local supplier quality*	4.0	102
5.08	Computer, communications, & other services imports, % services imports	61.7	5
Government readiness		**4.6**	**33**
6.01	Gov't prioritization of ICT*	5.3	36
6.02	Gov't procurement of advanced tech.*	4.1	35
6.03	Importance of ICT to gov't vision*	4.4	42

Usage component	3.3	7
Individual usage	**3.4**	
7.01 Mobile phone subscriptions/100 pop.	87.8	
7.02 Cellular subscriptions w/data, % total	28.5	
7.03 Households w/ personal computer, %	18.2	
7.04 Broadband Internet subscribers/100 pop.	1.1	
7.05 Internet users/100 pop.	27.4	
7.06 Internet access in schools*	3.7	
7.07 Use of virtual social networks*	5.5	
7.08 Impact of ICT on access to basic services*	4.5	
Business usage	**2.9**	
8.01 Firm-level technology absorption*	4.9	
8.02 Capacity for innovation*	3.5	
8.03 Extent of business Internet use*	4.2	1
8.04 National office patent applications/million pop	25.3	
8.05 Patent Cooperation Treaty apps/million pop	0.1	
8.06 High-tech exports, % goods exports	0.0	1
8.07 Impact of ICT on new services and products*	4.4	
8.08 Impact of ICT on new organizational models*	4.0	
Government usage	**3.5**	
9.01 Gov't success in ICT promotion	5.0	
9.02 ICT use & gov't efficiency*	4.1	
9.03 Government Online Service Index, 0–1 (best)	0.32	
9.04 E-Participation Index, 0–1 (best)	0.17	

* Out of a 1–7 (best) scale.

This indicator is derived from the World Economic Forum's Executive Opinion Survey. For further details and explanation, please refer to the section "How to Read the Country/Economy Profiles" on page 159.

Appendix 3: MCIT Organizational Structure

MCIT STRUCTURE		
MINISTER	Governance	Deputy Minister Deputy Minister Head of the Office Assistant to Minister Advisor, Press Secretary Deputy Head of the Office
	MCIT Departments	Department of Finance, Accounting and Economic Analysis Strategic Planning, Investment and Scientific Potential Department Department for Reception of Citizens and Work with Appeals Department for Coordination of Public Institutions Activities Information Society Development Department Department for International Relations and Work with Non-Governmental Bodies General Department Regulating Department Law and Personnel Department Secret Department
	MCIT Units	Aztelekom BTCPA Azerpocht SARF Teleradio IRAC DPC Azercosmos Azermarka MSD

Appendix 4: SPI Analysis:

Ku/C/Ka Band Satellite Applications Matched to MCIT Action Plan[39]

Compatible			Azercosmos					
C	Ku	Ka	AS-1	AS-2	№	Government Mandated ICT Activity	Matched Satellite Application	Stakeholders
Improvement of legal framework and management								
		Y		Y	9.	Taking measures to bring prices for telecommunications services and the Internet in accordance with the cost of these services	Low cost, higher power Ka-band terminals for last-mile connectivity.	MCIT, Tariff (price) Council
Strengthening the capacity of ICT								
		Y		Y	14.	Continuation of measures to create E-Government, expansion of activities to improve the mass use of electronic services	Ku-band last mile network connectivity, Low cost Ka=band kioks and transportable terminals for e-Gov apps; C-band backup	MCIT, State Agency for services to citizens and social innovation under the President of the Republic of Azerbaijan
Y	Y	Y	Y	Y	15.	Expansion of the use of e-health, e- education, e-procurement, e-tourism, e- notary, e-culture, e-archive, e-court, e- commerce, e-payment		State Agency for services to citizens; Innovation under the President, Ministry of Health, Ministry of Education, Ministry of Culture and Tourism, Ministry of Justice, Ministry of Economic Development, National Archive Admin; State Procurement Agency, MCIT
Y	Y	Y	Y	Y	16.	Taking measures for electronization of services provided in "ASAN Service" centers	Ku-band last mile network connectivity, Low cost Ka=band kioks and transportable SAT for ASAN apps; C-band backup	State Agency for services to citizens and social innovation under the President
Y	Y	Y	Y	Y	17.	Expansion of the use of ICT in the electoral process	Low costt Ka terminals for last-mile and transportable election monitoring monitoring; C-band for e-Platform/e-Gov backup	Central Election Commission, Special State Protection Service, MCIT
	Y	Y	Y	Y	18.	Taking measures to increase the use of broadband internet services in regions, implementation of a pilot project	Lower cost Ka-band to support last-mile emerging market; Ku-band for savings	MCIT, local government authorities
	Y	Y	Y	Y	19.	Measures to improve the quality of Internet, protection of user rights	Higher power Ka-band to improve QOS	MCIT, Ministry of Economic Development
Y	Y	Y	Y	Y	20.	Providing the transition to digital broadcasting in the Republic of Azerbaijan	Ku/Ka-band for IP video; Ku/Ka for DTH; C-band for video /digital cont., cable head-ins	MCIT, National TV and Radio Council
Y	Y	Y	Y	Y	22.	Taking measures to develop the content on Azerbaijan and data related to the Republic of Azerbaijan in global information resources like Wikipedia	Last-mile Ku/Ka-band networks; C-band e-platform backup	Azerbaijan National Academy of Sciences, Ministry of Education, MCIT by involving NGOs
	Y	Y	Y	Y	23.	Rendering support to the implementation of scientific research and development on ICT	Last-mile Ku/Ka-band networks; M2M satellite; C-band backup services	Azerbaijan National Academy of Sciences, MCIT,
Y	Y	Y			24.	Development of the infrastructure of the computer network of AzScienceNet Elm in the country	C-band trunking anb backup for infrastructure.	Azerbaijan National Academy of Sciences
	Y	Y	Y	Y	25.	Taking measures to create opportunities for the access to scientific institutions and universities around the country to the international scientific databases (ACM, IEEE, Springer, Elsevier, etc.)	Ku/Ka-band networks; M2M satellite; C-band backup services	Azerbaijan National Academy of Sciences, Ministry of Education, MCIT,
Y	Y	Y	Y	Y	26.	Development of information system on human resources of the Republic of Azerbaijan in the field of ICT	Ku/Ka-band connected networks and last-mile Kioks for e-Gov platform; C-band for e-Gov backup	Azerbaijan National Academy of Sciences, MCIT

39 Done in connection with the declaration 2013 "Year of ICT" in the Republic of Azerbaijan; Approved by the Order of the President of the Republic of Azerbaijan dated March 28, 2013.

Appendix 5: U.S. Interview Contact List:

Organization	First Name	Last Name	Title	Address1	Address 2	City	Zip	Country	Phone	Fax	Email	Dates of Contact	Comments / Quotes
NON-TECHNICAL													
US Embassy	George (Brandon)	Sherwood	Economic Counselor	83 Azadlig Prospekt		Baku	1007	AZ	(994 12) 498 0335/6/7		sherwoodgb@state.gov	4/1/13, 4/10/13, 4/11/13,4/16/13, 4/29/13	Interview scheduled for 4/29/13 and 5/3/13.
Export-Import Bank of the US	Sam	Carnegie	Engineer / PM	811 Vermont Ave NW	#911	Washington, DC	20571	USA	(202) 565-3946		samuel.carnegie@exim.gov	4/11/13	Referred to Jeffery Abrahamson 202-565-3412
SATELLITE MANUFACTURERS													
Orbital Sciences	Amer	Khouri	VP, Marketing & Business Dev	45101 Warp Drive		Dulles, VA	20166	USA	703-948-8600		geomarketing@orbital.com	4/4/13	Not respond
Lockheed Martin Communications Space Systems	Chris	Baran	VP Commercial Business Dev,	100 Campus Drive		Newtown, PA	18940	USA			chris.g.baran@lmco.com	4/4/13	Completed Interview
Boeing Satellite Systems Intl.	Kevin	Reyes	Dir., Business Development	2260 E. Imperial Hwy.		El Segundo, CA	90245	USA	Ph.: (310) 364-5108		kevin.reyes@boeing.com	4/4/13, 4/8/13, 4/18/13	Referred to Alan Hafeza; Completed interview.
Loral	Robert (Bob)	Prevaux	Regional Head	3825 Fabian Way		Palo Alto, CA	94303	USA	(650) 852-4000		Prevaux.robert@ssd.loral.com	4/4/13, 4/18/13, 4/18/13	Completed Interview
Ball	Brad	Wolk	VP	1600 Commerce Street		Boulder, CO	80301	USA	303-939-6100		bfwolk@ball.com	4/16/13	Imaging Satellite; Referred to and contacted Liam Weston;
Thales Alenia Space North America	Eddie	Kato	CEO	1101 17th St. NW,	Suite 410	Washington DC	20036	USA	202-463-4514		eddie.kato@us.thalesaleniaspace.com	4/10/12	Completed interview
EADS for Surrey, USA	Owen	Bowles	Regional Sales Director Comm Sat Sys	2550 Wasser Terrace		Herndon VA	20171	USA	703 466 5671		owen.bowles@eads-na.com	4/18/13	Contacted EADS, owns Surrey; Completed interview
SES GOV SVCS	William	Simonsen	VP	2010 Corporate Ridge,	Suite 550	McLean, VA	22102	USA	703-610-1000		William.simonsen@ses-gs.com	4/8/13, 4/9/13, 4/15/13, 4/24/13	Completed interview
ITT Exilis	Kyle	Schmackpfer	VP	1650 Tysons Blvd.	1700	McLean, VA	22102	USA	703 790 6300		Kyle.Schmackpfer@exilisinc.com	4/16/13, 4/17/13	Completed interview.
LAUNCH SERVICE PROVIDERS													
SpaceX	Christophe	Bauer	VP, Com. Sales	030 15th St NW	# 400E	Washington, DC	20005	USA	310.435.0042		christophe.bauer@spacex.com	4/4/13,	Completed interview
GROUND STATION ELECTRONICS													
Hughes Network Svc	David	Dave Rehbehn	Senior Dir.	11717 Exploration Lane		Germantown, MD	20876	USA	(240) 888-8041		Dave.Rehbehn@hughes.com	4/17/13, 4/18/13	Completed interview on 4/18/13
Globecomm	Paul	Johnson	EVP, International	45 Oser Avenue		Hauppauge, NY	11788-3816	USA	631 231-9800,1101		daveh@globecommsystems.com	4/9/18	Completed Interview

Appendix 5: U.S. Interview Contact List:

Organization	First Name	Last Name	Title	Address1	Address	City	Zip	Country	Phone	Fax	Email	Dates of Contact	Comments Quotes
EMBASSY OF THE USA													
State Dept.	George	Sherwood	Economic Officer	83 Azadlig Prospect		Baku	AZ1007	AZ	+99412 498 0335	+99412 465 66 71		4/29/13, 5/2/13	Completed Interview
State Dept.	Roger	Rigaud	First Secretary/Consul	83 Azadlig Prospect		Baku	AZ1007	AZ	+99412 498 0335	+99412 465 66 71		4/29/13, 5/2/13	Completed Interview
State Dept.	Erin	McConaha	Chief of the Economic and Commercial Division	83 Azadlig Prospect		Baku	AZ1007	AZ	+99412 498 0335	+99412 465 66 71		4/29/13, 5/2/13	Completed Interview
AZERCOSMOS													
AzerCosmos	Rashad	Nabiyev	Chairman/CEO	36 Uzeyir Hajibayov Street		Baku	AZ1000	AZ	+99412 493 24 58	+99412 493 2671		4/29/13	Completed Interview
AzerCosmos	Rugiyya	Hajiyeva	Logistics	36 Uzeyir Hajibayov Street		Baku	AZ1000	AZ	+99412 493 24 58	+99412 493 2671		4/29/13	Completed Interview
AzerCosmos	Wesley	Wong	CTO	36 Uzeyir Hajibayov Street		Baku	AZ1000	AZ	+99412 493 24 58	+99412 493 2671		4/29/13	Completed Interview
AzerCosmos	Ilgar	Abdullayev	Head of Legal Dept.	37 Uzeyir Hajibayov Street		Baku	AZ1001	AZ	+99412 493 24 58	+99412 493 2671		4/29/13	Completed Interview
AzerCosmos	Samaddin	Asadov	Head of Corporate Finance	37 Uzeyir Hajibayov Street		Baku	AZ1001	AZ	+99412 493 24 58	+99412 493 2671		4/29/13	Completed Interview
AzerCosmos	Elshan	Abdullayev	Head of Risk Management	37 Uzeyir Hajibayov Street		Baku	AZ1001	AZ	+99412 493 24 58	+99412 493 2671		4/29/13	Completed Interview
AzerCosmos	Firuz	Suleymanov	Head of Sales & Marketing	37 Uzeyir Hajibayov Street		Baku	AZ1001	AZ	+99412 493 24 58	+99412 493 2671		4/30/13	Completed Interview
AzerCosmos	Rovshan	Rustamov	Corporate Governance Mgr	37 Uzeyir Hajibayov Street		Baku	AZ1001	AZ	+99412 493 24 58	+99412 493 2671		4/30/13	Completed Interview
AzerCosmos	Inara	Ibrahimkhalilova	HR Mgr.	36 Uzeyir Hajibayov Street		Baku	AZ1000	AZ	+99412 493 24 58	+99412 493 2671		5/1/13	Completed Interview
GROUND STATION													
AzerCosmos	Dunay	Badirkhanov	Satellite Operations Mgr.	36 Uzeyir Hajibayov Street		Baku	AZ1000	AZ	+99412 493 24 58	+99412 493 2671		5/1/13	Completed Interview
AzerCosmos	Joshgun	Garayev	Satellite Engineering Unit Ground Engineer	36 Uzeyir Hajibayov Street		Baku	AZ1000	AZ	+99412 493 24 58	+99412 493 2671		5/1/13	Completed Interview
Ministry of Com and IT (MICT)													
Ministry of Com and IT (MICT)	Iltimas	Mammadov	Dpty Minister	Str. 33 Zarifa Aliyeva		Baku	AZ1001	AZ	(+99412) 493 3984	(+99412) 498 79 12	international@mincom.gov.az	5/2/13	Completed Interview

A N N E X 3

U.S. TRADE AND DEVELOPMENT AGENCY
Arlington, VA 22209-2131

NATIONALITY, SOURCE, AND ORIGIN REQUIREMENTS

The purpose of USTDA's nationality, source, and origin requirements is to assure the maximum practicable participation of American contractors, technology, equipment and materials in the prefeasibility, feasibility, and implementation stages of a project.

USTDA STANDARD RULE (GRANT AGREEMENT STANDARD LANGUAGE):

Except as USTDA may otherwise agree, each of the following provisions shall apply to the delivery of goods and services funded by USTDA under this Grant Agreement: (a) for professional services, the Contractor must be either a U.S. firm or U.S. individual; (b) the Contractor may use U.S. subcontractors without limitation, but the use of subcontractors from host country may not exceed twenty percent (20%) of the USTDA Grant amount and may only be used for specific services from the Terms of Reference identified in the subcontract; (c) employees of U.S. Contractor or U.S. subcontractor firms responsible for professional services shall be U.S. citizens or non-U.S. citizens lawfully admitted for permanent residence in the U.S.; (d) goods purchased for implementation of the Study and associated delivery services (e.g., international transportation and insurance) must have their nationality, source and origin in the United States; and (e) goods and services incidental to Study support (e.g., local lodging, food, and transportation) in host country are not subject to the above restrictions. USTDA will make available further details concerning these standards of eligibility upon request.

NATIONALITY:

1) Rule

Except as USTDA may otherwise agree, the Contractor for USTDA funded activities must be either a U.S. firm or a U.S. individual. Prime contractors may utilize U.S.

subcontractors without limitation, but the use of host country subcontractors is limited to 20% of the USTDA grant amount.

2) Application

Accordingly, only a U.S. firm or U.S. individual may submit proposals on USTDA funded activities. Although those proposals may include subcontracting arrangements with host country firms or individuals for up to 20% of the USTDA grant amount, they may not include subcontracts with third country entities. U.S. firms submitting proposals must ensure that the professional services funded by the USTDA grant, to the extent not subcontracted to host country entities, are supplied by employees of the firm or employees of U.S. subcontractor firms who are U.S. individuals.

Interested U.S. firms and consultants who submit proposals must meet USTDA nationality requirements as of the due date for the submission of proposals and, if selected, must continue to meet such requirements throughout the duration of the USTDA-financed activity. These nationality provisions apply to whatever portion of the Terms of Reference is funded with the USTDA grant.

3) Definitions

A "U.S. individual" is (a) a U.S. citizen, or (b) a non-U.S. citizen lawfully admitted for permanent residence in the U.S. (a green card holder).

A "U.S. firm" is a privately owned firm which is incorporated in the U.S., with its principal place of business in the U.S., and which is either (a) more than 50% owned by U.S. individuals, or (b) has been incorporated in the U.S. for more than three (3) years prior to the issuance date of the request for proposals; has performed similar services in the U.S. for that three (3) year period; employs U.S. citizens in more than half of its permanent full-time positions in the U.S.; and has the existing capability in the U.S. to perform the work in question.

A partnership, organized in the U.S. with its principal place of business in the U.S., may also qualify as a “U.S. firm” as would a joint venture organized or incorporated in the United States consisting entirely of U.S. firms and/or U.S. individuals.

A nonprofit organization, such as an educational institution, foundation, or association may also qualify as a “U.S. firm” if it is incorporated in the United States and managed by a governing body, a majority of whose members are U.S. individuals.

SOURCE AND ORIGIN:

1) Rule

In addition to the nationality requirement stated above, any goods (e.g., equipment and materials) and services related to their shipment (e.g., international transportation and insurance) funded under the USTDA Grant Agreement must have their source and origin in the United States, unless USTDA otherwise agrees. However, necessary purchases of goods and project support services which are unavailable from a U.S. source (e.g., local food, housing and transportation) are eligible without specific USTDA approval.

2) Application

Accordingly, the prime contractor must be able to demonstrate that all goods and services purchased in the host country to carry out the Terms of Reference for a USTDA Grant Agreement that were not of U.S. source and origin were unavailable in the United States.

3) Definitions

“Source” means the country from which shipment is made.

"Origin” means the place of production, through manufacturing, assembly or otherwise.

Questions regarding these nationality, source and origin requirements may be addressed to the USTDA Office of General Counsel.

ANNEX 4

GRANT AGREEMENT

This Grant Agreement for a feasibility study on the proposed Azerspace-2 Communications Satellite project is entered into between the Government of the United States of America, acting through the U.S. Trade and Development Agency ("USTDA") and Azercosmos Open Joint Stock Company ("Grantee"). USTDA agrees to provide the Grantee under the terms of this Grant Agreement US$604,000 ("USTDA Grant") to fund the cost of goods and services required for a feasibility study ("Study") on the proposed Azerspace-2 Communications Satellite project ("Project") in Azerbaijan ("Host Country").

1. USTDA Funding

The funding to be provided under this Grant Agreement shall be used to fund the costs of a contract between the Grantee and the U.S. firm selected by the Grantee ("Contractor") under which the Contractor will perform the Study ("Contract"). Payment to the Contractor will be made directly by USTDA on behalf of the Grantee with the USTDA Grant funds provided under this Grant Agreement.

2. Terms of Reference

The Terms of Reference for the Study ("Terms of Reference") are attached as Annex I and are hereby made a part of this Grant Agreement. The Study will examine the technical, financial, environmental, and other critical aspects of the proposed Project. The Terms of Reference for the Study shall also be included in the Contract.

3. Standards of Conduct

USTDA and the Grantee recognize the existence of standards of conduct for public officials and commercial entities in their respective countries. Therefore, USTDA, the Grantee, and the Contractor shall not directly or indirectly provide, offer or promise to provide money or anything of value to any public official in violation of any United States or Host Country laws relating to corruption or bribery.

4. Grantee Responsibilities

The Grantee shall undertake its best efforts to provide reasonable support for the Contractor, such as local transportation, office space, and secretarial support.

5. Contract Matters and USTDA's Rights as Financier

(A) Grantee Competitive Selection Procedures

Selection of the U.S. Contractor shall be carried out by the Grantee according to its established procedures for the competitive selection of contractors with advance notice of the procurement published online through *Federal Business Opportunities (www.fedbizopps.gov)*. Upon request, the Grantee will submit these contracting procedures and related documents to USTDA for information and/or approval.

(B) USTDA's Right to Approve Contractor Selection

The Grantee shall notify USTDA at the address of record set forth in Article 16 below upon selection of the Contractor to perform the Study. USTDA then shall notify the Grantee whether or not USTDA approves the Grantee's Contractor selection. Upon USTDA approval of the Grantee's Contractor selection, the Grantee shall notify in writing the U.S. firms that submitted unsuccessful proposals to perform the Study that they were not selected. The Grantee and the Contractor then shall enter into a contract for performance of the Study.

(C) USTDA's Right to Approve Contract Between Grantee and Contractor

(1) Contract

The Grantee and the Contractor shall enter into a contract for performance of the Study. The Grantee (or the Contractor on the Grantee's behalf) shall transmit to USTDA, at the address set forth in Article 16 below, a photocopy of an English language version of the signed contract or a final negotiated draft version of the contract. USTDA then shall notify the Grantee and the Contractor whether or not USTDA approves the contract.

(2) Amendments and Assignments

The Grantee or the Contractor may submit any proposed amendment to the contract, including any proposed amendment to any annex thereto, or any proposed assignment of the contract, to USTDA at the address set forth in Article 16 below. USTDA then shall notify the Grantee and the Contractor whether or not USTDA approves the proposed amendment or assignment.

(D) USTDA Not a Party to the Contract

It is understood by the parties that USTDA has reserved certain rights such as, but not limited to, the right to approve the terms of the contract and any amendments thereto, including assignments, the selection of all contractors, the Terms of Reference, the Final Report, and any and all documents related to any contract funded under the Grant Agreement. The parties hereto further understand and agree that USTDA, in reserving any or all of the

foregoing approval rights, has acted solely as a financing entity to assure the proper use of United States Government funds, and that any decision by USTDA to exercise or refrain from exercising these approval rights shall be made as a financier in the course of funding the Study and shall not be construed as making USTDA a party to the contract. The parties hereto understand and agree that USTDA may, from time to time, exercise the foregoing approval rights, or discuss matters related to these rights and the Project with the parties to the contract or any subcontract, jointly or separately, without thereby incurring any responsibility or liability to such parties. Any approval or failure to approve by USTDA shall not bar the Grantee or USTDA from asserting any right they might have against the Contractor, or relieve the Contractor of any liability which the Contractor might otherwise have to the Grantee or USTDA.

(E) Grant Agreement Controlling

Regardless of USTDA approval, the rights and obligations of any party to the contract or any subcontract thereunder must be consistent with this Grant Agreement. In the event of any inconsistency between the Grant Agreement and the contract or any subcontract funded by the Grant Agreement, the Grant Agreement shall control.

6. Disbursement Procedures

(A) USTDA Approval of Contract Required

USTDA will make disbursements of Grant funds directly to the Contractor only after USTDA approves the Grantee's contract with the Contractor.

(B) Contractor Invoice Requirements

The Grantee should request disbursement of funds by USTDA to the Contractor for performance of the Study by submitting invoices in accordance with the procedures set forth in the USTDA Mandatory Clauses in Annex II.

7. Effective Date

The effective date of this Grant Agreement ("Effective Date") shall be the date of signature by both parties or, if the parties sign on different dates, the date of the last signature. In the event that only one signature is dated, such date shall constitute the Effective Date.

8. Study Schedule

(A) Study Completion Date

The completion date for the Study, which is June 30, 2014, is the date by which the parties estimate that the Study will have been completed.

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(B) Time Limitation on Disbursement of USTDA Grant Funds

Except as USTDA may otherwise agree, (i) no USTDA funds may be disbursed under this Grant Agreement for goods and services which are provided prior to the Effective Date of the Grant Agreement; and (ii) no USTDA funds may be disbursed more than four (4) years after the Effective Date of the Grant Agreement.

9. USTDA Mandatory Contract Clauses

All contracts funded under this Grant Agreement shall include the USTDA Mandatory Contract Clauses set forth in Annex II to this Grant Agreement. All subcontracts funded or partially funded with USTDA Grant funds shall include the USTDA Mandatory Contract Clauses, except for clauses B(1), G, H, I, and J.

10. Use of U.S. Carriers

(A) Air

Transportation by air of persons or property funded under this Grant Agreement shall be on U.S. flag carriers in accordance with the Fly America Act, 49 U.S.C. 40118, to the extent service by such carriers is available, as provided under applicable U.S. Government regulations.

(B) Marine

Transportation by sea of property funded under this Grant Agreement shall be on U.S. carriers in accordance with U.S. cargo preference law.

11. Nationality, Source and Origin

Except as USTDA may otherwise agree, the following provisions shall govern the delivery of goods and professional services funded by USTDA under this Grant Agreement:

(a) the Contractor must be a U.S. firm;

(b) the Contractor may use U.S. subcontractors without limitation;

(c) employees of U.S. Contractor or U.S. subcontractor firms shall be U.S. citizens or non-U.S. citizens lawfully admitted for permanent residence in the United States, except as provided pursuant to subpart (d) below;

(d) up to twenty percent (20%) of the USTDA Grant amount may be used to pay for services performed by (i) Host Country subcontractors, and/or (ii) Host Country nationals who are employees of the Contractor;

(e) a Host Country subcontractor may only be used for specific services from the Terms of Reference identified in the subcontract;

(f) subcontractors from countries other than the United States or Host Country may not be used;

(g) goods purchased for performance of the Study and associated delivery services (e.g., international transportation and insurance) must have their nationality, source and origin in the United States; and

(h) goods and services incidental to Study support (e.g., local lodging, food, and transportation) in Host Country are not subject to the above restrictions.

USTDA will make available further details concerning these provisions upon request.

12. Taxes

USTDA funds provided under this Grant Agreement shall not be used to pay any taxes, tariffs, duties, fees or other levies imposed under laws in effect in Host Country, except for taxes of a de minimis nature imposed on local lodging, food, transportation, or airport arrivals or departures. Neither the Grantee nor the Contractor will seek reimbursement from USTDA for taxes, tariffs, duties, fees or other levies, except for taxes of a de minimis nature referenced above.

13. USTDA Project Evaluation

The parties will cooperate to assure that the purposes of the Grant Agreement are accomplished. For five (5) years following receipt by USTDA of the Final Report, the Grantee agrees to respond to any reasonable inquiries from USTDA about the status of the Project. Inquiries will include, but not be limited to, whether the Final Report recommendations have been or will be used to implement the Project, anticipated Project implementation timeline, and likely source of financing. In addition, the Grantee agrees to notify USTDA any time the Grantee selects a new primary contact person for this Project during the five-year period referenced above.

14. Recordkeeping and Audit

The Grantee agrees to maintain books, records, and other documents relating to the Study and this Grant Agreement adequate to demonstrate implementation of its responsibilities under this Grant Agreement, including the selection of contractors, receipt and approval of contract deliverables, and approval or disapproval of contractor invoices for payment by USTDA. Such books, records, and other documents shall be separately maintained for three (3) years after the date of the final disbursement by USTDA. The Grantee shall afford USTDA or its authorized representatives the opportunity at reasonable times to review books, records, and other documents relating to the Study and the Grant Agreement.

15. Representation of Parties

For all purposes relevant to this Grant Agreement, the Government of the United States of America will be represented by the U. S. Ambassador to Host Country or USTDA and Grantee will be represented by its Chief Executive Officer (CEO)/Chairman of the Board. The parties hereto may, by written notice, designate additional representatives for all purposes under this Grant Agreement.

16. Addresses of Record for Parties

Any notice, request, document, or other communication submitted by either party to the other under the Grant Agreement shall be in writing or through an electronic medium that produces a tangible record of the transmission, such as a facsimile or e-mail message, and will be deemed duly given or sent when delivered to such party at the following:

To: Mr. Rashad Nabiyev
CEO/Chairman of the Board
Azercosmos OJSCo.
72 Uzeyir Hajibeyli Street
AZ1000, Baku, Azerbaijan

Phone: +99412-565-0055
Fax: +99412-565-0066
E-Mail: rashad.nabiyev@azercosmos.az

To: U.S. Trade and Development Agency
1000 Wilson Boulevard, Suite 1600
Arlington, Virginia 22209-3901
USA

Phone: (703) 875-4357
Fax: (703) 875-4009
E-Mail: grantnotices@ustda.gov and
sgreenip@ustda.gov

All such communications shall be in English, unless the parties otherwise agree in writing. In addition, the Grantee shall provide the Commercial or Economic Section of the U.S. Embassy in Host Country with a copy of each communication sent to USTDA.

Any communication relating to this Grant Agreement shall include the following fiscal data:

Appropriation No.:	1113/141001
Activity No.:	2013-21017A
Reservation No.:	2013203
Grant No.:	GH201321203

17. Implementation Letters

To assist the Grantee in the implementation of the Study, USTDA may, from time to time, issue implementation letters that will provide additional information about matters covered by this Grant Agreement. USTDA may also issue implementation letters to (i) extend the estimated completion date set forth in Article 8(A) above, or (ii) change the fiscal data set forth in Article 16 above. The parties may also use jointly agreed upon implementation letters to confirm and record their mutual understanding of matters covered by this Grant Agreement.

18. Grant Agreement Amendments

Either party may submit to the other party at any time a proposed amendment to the Grant Agreement. A Grant Agreement amendment shall be effective only if it has been signed by both parties.

19. Termination Clause

Either party may terminate this Grant Agreement by giving the other party written notice thereof. The termination of the Grant Agreement will end any obligations of the parties to provide financial or other resources for the Study, except for payments that may be made pursuant to Clause I of the USTDA Mandatory Contract Clauses set forth in Annex II to this Grant Agreement. This article and Articles 5, 12, 13, 14, and 21 of the Grant Agreement shall survive termination of the Grant Agreement.

20. Non-waiver of Rights and Remedies

No delay in exercising any right or remedy accruing to either party in connection with the Grant Agreement shall be construed as a waiver of such right or remedy.

21. U.S. Technology and Equipment

By funding this Study, USTDA seeks to promote the project objectives of the Host Country through the use of U.S. technology, goods, and services. In recognition of this purpose, the Grantee agrees that it will allow U.S. suppliers to compete in the procurement of technology, goods and services needed for Project implementation.

22. Governing Law

This Grant Agreement shall be governed by, and construed in accordance with, the applicable laws of the United States of America. In the absence of federal law, the laws of the State of New York shall apply.

23. Counterparts

This Grant Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same agreement. Counterparts may be delivered via electronic mail or other transmission method and any counterpart so delivered shall be deemed to be valid and effective for all purposes.

IN WITNESS WHEREOF, the Government of the United States of America and Azercosmos Open Joint Stock Company, each acting through its duly authorized representative, have caused this Grant Agreement to be signed in the English and Azerbaijani languages in their names and delivered as of the day and year written below. In the event of disagreement in interpretation of this Grant Agreement, the English language version shall govern.

For the Government of the United States of America

By: _____

Date: August 21, 2013

Witnessed:

By: _____

For Azercosmos Open Joint Stock Company

By: _____

Date: 15 August 2013

Witnessed:

By: _____

15 August 2013

Annex I -- Terms of Reference

Annex II -- USTDA Mandatory Clauses

Annex II

USTDA Mandatory Contract Clauses

A. USTDA Mandatory Clauses Controlling

The parties to this Contract acknowledge that this Contract is funded in whole or in part by the U.S. Trade and Development Agency ("USTDA") under the Grant Agreement between the Government of the United States of America acting through USTDA and Azercosmos Open Joint Stock Company ("Client"), dated _____ ("Grant Agreement"). The Client has selected _____ ("Contractor") to perform the feasibility study ("Study") for the Azerspace-2 Communications Satellite project ("Project") in Azerbaijan ("Host Country"). The Client and the Contractor are the parties to this Contract, and they hereinafter are referred to collectively as the "Contract Parties." Notwithstanding any other provisions of this Contract, the following USTDA Mandatory Contract Clauses shall govern. All subcontracts entered into by Contractor funded or partially funded with USTDA Grant funds shall include these USTDA Mandatory Contract Clauses, except for clauses B(1), G, H, I, and J. In addition, in the event of any inconsistency between the Grant Agreement and the Contract or any subcontract thereunder, the Grant Agreement shall be controlling.

B. USTDA as Financier

(1) USTDA Approval of Contract

This Contract, and any amendment thereto, including any amendment to any annex thereto, and any proposed assignment of this Contract, must be approved by USTDA in writing in order to be effective with respect to the expenditure of USTDA Grant funds. USTDA will not authorize the disbursement of USTDA Grant funds until the Contract conforms to modifications required by USTDA during the Contract review process and the Contract has been formally approved by USTDA. To make this review in a timely fashion, USTDA must receive from either the Client or the Contractor an English language version of a final negotiated draft Contract or a signed Contract to the attention of the General Counsel's office at USTDA's address listed in Clause N below.

(2) USTDA Not a Party to the Contract

It is understood by the Contract Parties that USTDA has reserved certain rights such as, but not limited to, the right to approve the terms of this Contract and amendments thereto, including assignments, the selection of all contractors, the Terms of Reference, the Final Report, and any and all documents related to any contract funded under the Grant Agreement. The Contract Parties hereto further understand and agree that USTDA, in reserving any or all of the foregoing approval rights, has acted solely as a financing entity to assure the proper use of United States Government funds, and that any decision by USTDA to exercise or refrain from exercising these approval

rights shall be made as a financier in the course of financing the Study and shall not be construed as making USTDA a party to the Contract. The Contract Parties hereto understand and agree that USTDA may, from time to time, exercise the foregoing approval rights, or discuss matters related to these rights and the Project with the Contract Parties or the parties to any subcontract, jointly or separately; and in consideration of USTDA's role as financier, the Contract Parties further agree that USTDA's rights may be exercised without thereby incurring any responsibility or liability, in contract, tort, or otherwise, to the Contract Parties or the parties to any subcontract. Any approval or failure to approve by USTDA shall not bar the Client or USTDA from asserting any right they might have against the Contractor, or relieve the Contractor of any liability which the Contractor might otherwise have to the Client or USTDA.

C. Nationality, Source and Origin

Except as USTDA may otherwise agree, the following provisions shall govern the delivery of goods and professional services funded by USTDA under the Grant Agreement:

(a) the Contractor must be a U.S. firm;

(b) the Contractor may use U.S. subcontractors without limitation;

(c) employees of U.S. Contractor or U.S. subcontractor firms shall be U.S. citizens or non-U.S. citizens lawfully admitted for permanent residence in the United States, except as provided pursuant to subpart (d) below;

(d) up to twenty percent (20%) of the USTDA Grant amount may be used to pay for services performed by (i) Host Country subcontractors, and/or (ii) Host Country nationals who are employees of the Contractor;

(e) a Host Country subcontractor may only be used for specific services from the Terms of Reference identified in the subcontract;

(f) subcontractors from countries other than the United States or Host Country may not be used;

(g) goods purchased for performance of the Study and associated delivery services (e.g., international transportation and insurance) must have their nationality, source and origin in the United States; and

(h) goods and services incidental to Study support (e.g., local lodging, food, and transportation) in Host Country are not subject to the above restrictions.

USTDA will make available further details concerning these provisions upon request.

D. Recordkeeping and Audit

The Contractor and subcontractors funded under the Grant Agreement shall maintain, in accordance with generally accepted accounting procedures, books, records, and other documents, sufficient to reflect properly all transactions under or in connection with the Contract. These books, records, and other documents shall clearly identify and track the use and expenditure of USTDA funds, separately from other funding sources. Such books, records, and documents shall be maintained during the period of performance of work provided for by this Contract, and for a period of three (3) years after final disbursement by USTDA. The Contractor and subcontractors shall afford USTDA, or its authorized representatives, the opportunity at reasonable times for inspection and audit of such books, records, and other documentation.

E. U.S. Carriers

(1) Air

Transportation by air of persons or property funded under the Grant Agreement shall be on U.S. flag carriers in accordance with the Fly America Act, 49 U.S.C. 40118, to the extent service by such carriers is available, as provided under applicable U.S. Government regulations.

(2) Marine

Transportation by sea of property funded under the Grant Agreement shall be on U.S. carriers in accordance with U.S. cargo preference law.

F. Workman's Compensation Insurance

The Contractor shall provide adequate Workman's Compensation Insurance coverage for work performed under this Contract.

G. Reporting Requirements

The Contractor shall advise USTDA by letter as to the status of the Project on March 1st annually for a period of two (2) years after completion of the Study. In addition, if at any time the Contractor receives follow-on work from the Client, the Contractor shall so notify USTDA and designate the Contractor's contact point including name, telephone, fax number, and e-mail address. Since this information may be made publicly available by USTDA, any information which is confidential shall be designated as such by the Contractor and provided separately to USTDA. USTDA will maintain the confidentiality of such information in accordance with applicable law.

H. Disbursement Procedures

(1) USTDA Approval of Contract

Disbursement of Grant funds will be made only after USTDA approval of this Contract.

(2) Payment Schedule Requirements

A payment schedule for disbursement of Grant funds to the Contractor shall be included in this Contract. Such payment schedule must conform to the following USTDA requirements: (1) up to twenty percent (20%) of the total USTDA Grant amount may be used as a mobilization payment; (2) all other payments, with the exception of the final payment, shall be based upon Contract performance milestones; and (3) the final payment may be no less than fifteen percent (15%) of the total USTDA Grant amount, payable upon approval by USTDA of a Final Report that has been (i) prepared and submitted in accordance with the requirements set forth in Clause I below, and (ii) approved in writing by the Client in the manner provided for by Clause H(3)(b)(iii) below. Invoicing procedures for all payments are described below.

(3) Contractor Invoice Requirements

USTDA will make all disbursements of USTDA Grant funds directly to the Contractor. The Contractor must provide USTDA with an ACH Vendor Enrollment Form (available from USTDA) with the first invoice. The Client shall request disbursement of funds by USTDA to the Contractor for performance of the Contract by submitting the following to USTDA:

(a) Contractor's Invoice

The Contractor's invoice shall include reference to an item listed in the Contract payment schedule, the requested payment amount, and an appropriate certification by the Contractor, as follows:

(i) For a mobilization payment (if any):

"As a condition for this mobilization payment, the Contractor certifies that it will perform all work in accordance with the terms of its Contract with the Client. To the extent that the Contractor does not comply with the terms and conditions of the Contract, including the USTDA Mandatory Contract Clauses contained therein, it will, upon USTDA's request, make an appropriate refund to USTDA. "

(ii) For Contract performance milestone payments:

"The Contractor has performed the work described in this invoice in accordance with the terms of its Contract with the Client and is entitled to payment thereunder. To the extent the Contractor has not complied with the terms and conditions of the Contract, including the USTDA Mandatory Contract Clauses contained therein, it will, upon USTDA's request, make an appropriate refund to USTDA."

(iii) For final payment:

"The Contractor has performed the work described in this invoice in accordance with the terms of its Contract with the Client and is entitled to payment thereunder. Specifically, the Contractor has submitted the Final Report to the Client, as required by the Contract, and received the Client's approval of the Final Report. To the extent the Contractor has not complied with the terms and conditions of the Contract, including the USTDA Mandatory Contract Clauses contained therein, it will, upon USTDA's request, make an appropriate refund to USTDA."

(b) Client's Approval of the Contractor's Invoice

(i) The invoice for a mobilization payment must be approved in writing by the Client.

(ii) For Contract performance milestone payments, the following certification by the Client must be provided on the invoice or separately:

"The services for which disbursement is requested by the Contractor have been performed satisfactorily, in accordance with applicable Contract provisions and the terms and conditions of the USTDA Grant Agreement."

(iii) For final payment, the following certification by the Client must be provided on the invoice or separately:

"The services for which disbursement is requested by the Contractor have been performed satisfactorily, in accordance with applicable Contract provisions and the terms and conditions of the USTDA Grant Agreement. The Final Report submitted by the Contractor has been reviewed and approved by the Client. "

(c) USTDA Address for Disbursement Requests

Requests for disbursement shall be submitted to the attention of the Finance Department at USTDA's address listed in Clause N below, or by e-mail to invoices@ustda.gov.

I. Termination

(1) Method of Termination

Either Contract Party may terminate this Contract upon giving written notice to the other party and USTDA. This notice shall be effective after either 30 days, or any other period set forth elsewhere in this Contract. Furthermore, this Contract shall terminate immediately upon notification of USTDA's termination of the Grant Agreement or the term of availability of any funds thereunder.

(2) Ramifications of Termination

In the event that this Contract is terminated prior to completion, the Contractor will be eligible, subject to USTDA approval, for payment for the value of the work performed pursuant to the terms of this Contract. Likewise, in the event of such termination, USTDA is entitled to receive from the Contractor all USTDA Grant funds previously disbursed to the Contractor (including but not limited to mobilization payments) which exceed the value of the work performed pursuant to the terms of this Contract.

(3) Survivability

Clauses B, D, G, H, I, and O of the USTDA Mandatory Contract Clauses shall survive the termination of this Contract.

J. USTDA Final Report

(1) Definition

"Final Report" shall mean the Final Report described in the attached Annex I Terms of Reference or, if no such "Final Report" is described therein, "Final Report" shall mean a substantive and comprehensive report of work performed in accordance with the attached Annex I Terms of Reference, including any documents delivered to the Client.

(2) Final Report Submission Requirements

The Contractor shall provide the following to USTDA:

(a) One (1) complete hard copy of the Final Report for USTDA's records. This version shall have been approved by the Client in writing and must be in the English language. It is the responsibility of the Contractor to ensure that confidential information, if any, contained in this version be clearly marked. USTDA will maintain the confidentiality of such information in accordance with applicable law.

and

(b) One (1) hard copy of the Final Report suitable for public distribution ("Public Version"). The Public Version shall have been approved by the Client in writing and must be in the English language. As this version will be available for public distribution, it must not contain any confidential information. If the report in (a) above contains no confidential information, it may be used as the Public Version. In any event, the Public Version must be informative and contain sufficient Project detail to be useful to prospective equipment and service providers.

and

(c) Two (2) CD-ROMs, each containing a complete copy of the Public Version of the Final Report. The electronic files on the CD-ROMs shall be submitted in a commonly accessible read-only format. As these CD-ROMs will be available for public distribution, they must not contain any confidential information. It is the responsibility of the Contractor to ensure that no confidential information is contained on the CD-ROMs.

The Contractor shall also provide one (1) hard copy of the Public Version of the Final Report to the Commercial or Economic Section of the U.S. Embassy in Host Country for informational purposes.

(3) Final Report Presentation

All Final Reports submitted to USTDA must be paginated and include the following:

(a) The front cover of every Final Report shall contain the name of the Client, the name of the Contractor who prepared the report, a report title, USTDA's logo, and USTDA's address. If the complete version of the Final Report contains confidential information, the Contractor shall be responsible for labeling the front cover of that version of the Final Report with the term "Confidential Version." The Contractor shall be responsible for labeling the front cover of the Public Version of the Final Report with the term "Public Version." The front cover of every Final Report shall also contain the following disclaimer:

> "This report was funded by the U.S. Trade and Development Agency (USTDA), an agency of the U.S. Government. The opinions, findings, conclusions or recommendations expressed in this document are those of the author(s) and do not necessarily represent the official position or policies of USTDA. USTDA makes no representation about, nor does it accept responsibility for, the accuracy or completeness of the information contained in this report."

(b) The inside front cover of every Final Report shall contain USTDA's logo, USTDA's address, and USTDA's mission statement. Camera-ready copy of USTDA Final Report specifications will be available from USTDA upon request.

(c) The Contractor shall affix to the front of the CD-ROM a label identifying the Host Country, USTDA Activity Number, the name of the Client, the name of the Contractor who prepared the report, a report title, and the following language:

> "The Contractor certifies that this CD-ROM contains the Public Version of the Final Report and that all contents are suitable for public distribution."

(d) The Contractor and any subcontractors that perform work pursuant to the Grant Agreement must be clearly identified in the Final Report. Business name, point of contact, address, telephone and fax numbers, and e-mail address shall be included for Contractor and each subcontractor.

(e) The Final Report, while aiming at optimum specifications and characteristics for the Project, shall identify the availability of prospective U.S. sources of supply. Business name, point of contact, address, telephone and fax numbers, and e-mail address shall be included for each commercial source.

(f) The Final Report shall be accompanied by a letter or other notation by the Client which states that the Client approves the Final Report. A certification by the Client to this effect provided on or with the invoice for final payment will meet this requirement.

(g) The Client, USTDA, and the Commercial and/or Economic Section(s) of the U.S. Embassy in Host Country shall have irrevocable, worldwide, royalty-free, non-exclusive rights to use and distribute the Final Report.

K. Modifications

All changes, modifications, assignments or amendments to this Contract, including the appendices, shall be made only by written agreement by the Contract Parties hereto, subject to written USTDA approval.

L. Study Schedule

(1) Study Completion Date

The completion date for the Study, which is June 30, 2014, is the date by which the Contract Parties estimate that the Study will have been completed.

(2) Time Limitation on Disbursement of USTDA Grant Funds

Except as USTDA may otherwise agree, (a) no USTDA funds may be disbursed under this Contract for goods and services which are provided prior to the Effective Date of the Grant Agreement; and (b) no USTDA funds may be disbursed more than four (4) years after the Effective Date of the Grant Agreement.

M. Business Practices

The Contract Parties recognize the existence of standards of conduct for public officials and commercial entities in their respective countries. Therefore, the Contract Parties shall fully comply with all United States and Host Country laws relating to corruption or bribery. For example, the Contractor and its subcontractors shall fully comply with the requirements of the Foreign Corrupt Practices Act, as amended (15 U.S.C. §§ 78dd-1 et seq.). Each Contract Party agrees that it shall require that any agent or representative hired to represent it in connection with the Study will comply with this paragraph and all laws which apply to activities and obligations of that Contract Party, including, but not limited to, those laws and obligations referenced above.

N. USTDA Address and Fiscal Data

Any communication with USTDA regarding this Contract shall be sent to the following address and include the fiscal data listed below:

U.S. Trade and Development Agency
1000 Wilson Boulevard, Suite 1600
Arlington, Virginia 22209-3901
USA

Phone: (703) 875-4357
Fax: (703) 875-4009

Fiscal Data:

Appropriation No.:	1113/141001
Activity No.:	2013-21017A
Reservation No.:	2013203
Grant No.:	GH201321203

O. Taxes

USTDA funds provided under the Grant Agreement shall not be used to pay any taxes, tariffs, duties, fees or other levies imposed under laws in effect in Host Country, except for taxes of a de minimis nature imposed on local lodging, food, transportation, or airport arrivals or departures. Neither the Client nor the Contractor will seek reimbursement from USTDA for taxes, tariffs, duties, fees or other levies, except for taxes of a de minimis nature referenced above.

P. Export Licensing

The Contractor and all subcontractors are responsible for compliance with U.S. export licensing requirements, if applicable, in the performance of the Terms of Reference.

Q. Contact Persons

The Client designates the following person as the contact person for matters concerning this Contract:

Name: Mr. Rashad Nabiyev
Title: CEO/Chairman of the Board
Phone: +99412-565-0055
Fax: +99412-565-0066
E-Mail: rashad.nabiyev@azercosmos.az

The Contractor designates the following person as the contact person for matters concerning this Contract:

Name:
Title:
Phone:
Fax:
E-Mail:

If anyone designated by a Contract Party as a contact person ceases service as a contact person at any point during the ten-year period following the date of signing of this Contract, the Contract Party that had designated that contact person shall provide USTDA and the other Contract Party with the name and contact information of a replacement contact person.

R. Liability

This Contract may include a clause that limits the liability of the Contract Parties, provided that such a clause does not (i) disclaim liability for special, incidental, general, or punitive damages, or (ii) limit the total amount of damages recoverable to an amount less than the total amount disbursed to the Contractor pursuant to this Contract.

S. Arbitration

If the Contract Parties submit any dispute arising under this Contract for arbitration, the scope of any such arbitration shall be limited to the Contract Parties' rights and/or obligations under this Contract and may not extend to any right or obligation of USTDA. The arbitrator(s) shall not arbitrate issues directly affecting the rights or obligations of USTDA.

ANNEX 5

Annex I

Terms of Reference

Objective: The Study will determine the technical, economic and financial feasibility of the procurement, financing, launch and operation of the Azerspace-2 communications satellite that would cover Azerbaijan, its surrounding region and Africa (however the exact coverage of the Azerspace-2 satellite will be determined by the Grantee on the basis of the Task 3 Orbital Slot Evaluation and Spectrum and the likely orbital slot to be used). The Study will confirm and characterize market demand, assess options and availability of orbital slots, provide a conceptual design and technical configuration of the satellite, estimate the capital and operating costs, perform a risk assessment and develop a financial model with a profitability analysis.

Task 1 – Review of Baseline Objectives and Lessons Learned

The Contractor shall familiarize itself with Azercosmos' and their stakeholders', including the Ministry of Communications and Information Technology (MCIT), objectives for the Project. Specifically, the Contractor shall review the satellite's proposed technical design, capabilities, coverage areas and the service offerings being contemplated. The Contractor shall also review any previous market, financial, and/or technical governmental reports covering the Azerspace-1 and Azerspace-2 programs. The Contractor shall conduct a lessons learned review of Azerspace-1 to identify technical, market and business shortcomings and best practices that can be addressed or applied, respectively to the Azerspace-2 program.

Task 1 Deliverable

The Contractor shall produce a report providing the findings from Task 1.

Task 2 - Market Demand Study, Competitive Assessment and Analysis

The Contractor shall assess the market for transponders within geographic areas that could be served by the Azerspace-2 satellite. This analysis shall include the following:

- Define services that are optimally provided by communication satellites including Broadcast Satellite Services and Fixed Satellite Services in the C, Ku and Ka-band frequency Bands;
- Identify current and anticipated supply of transponders in each service for the specified geographical region;
- Identify current and future demand for satellite services in the specified geographical region;
- Determine likely end users and provide qualitative description of their service requirements;

- Undertake a competitive analysis utilizing supply and demand analysis as well as pricing information;
- Using a scenario-based approach to assess the impact of technical and market trends in global satellite telecommunications on the expected demand for Azerspace-2 derived services;
- Develop a preliminary market plan for the wholesale sales of Azerspace-2 transponder capacity. This shall include market targets and estimated pricing for the transponders, satellite fill rate, and identifying distribution channels/partner candidates.

Task 2 Deliverable:

The Contractor shall prepare a report containing the preliminary assessment of the market conditions and preliminary marketing plan.

Task 3 – Orbital Slot Evaluation and Spectrum Assessment

The Contractor shall perform a detailed due diligence to determine the current frequency-coordination situation for Azerspace-2 for all frequency bands of interest to Azercosmos. Specifically, it is necessary to establish the availability of orbital positions for Azerspace-2 and to determine availability of an orbit position directly through International Telecommunications Union (ITU) process.

In the case of a third party slot arrangement, the Contractor shall analyze the technical characteristics and filing priorities of orbit positions through the processes of the ITU.

The Contractor shall assess and provide evaluation criteria of slot offerings to Azercosmos from third parties. Specifically, the Contractor shall assess the value of the satellite services the Grantee can derive from using any given slot being contemplated.

Task 3 Deliverable:

The Contractor shall prepare a report analyzing the options and costs for obtaining access to orbit positions for the Azerspace-2 satellite.

Task 4 - Conceptual Design and Technical Configuration of Azerspace-2

The Contractor shall investigate and evaluate financial, market, economic and regulatory conclusions to determine optimal satellite network design. The Contractor shall meet with the Grantee on a regular basis to establish preliminary satellite system configurations and geographic coverage to be studied further. Based on the Task 2 preliminary market study findings regarding the most viable market segments for the proposed satellite, the Contractor shall develop a design and technical configuration that will allow the Grantee as operator to most effectively serve the most promising market segments. In particular, the Contractor shall specify a geographic service area, identify

frequency bands that can effectively serve the market segments, establish the number of transponders that will be needed to meet existing and future growth in the markets, determine the down link and uplink power needed considering the size of the antenna on the satellite and the specifications for the earth stations, determine the VSAT platform as required, and determine any other ground based electronics needed to support managed applications for government, commercial, and/or consumer markets.

Task 4 Deliverable:

The Contractor shall prepare a report containing the definitional requirements for:

1. space segment concept/description;
2. ground systems requirements; and,
3. a general concept of operations guidelines or requirements.

Task 5 – Preliminary Cost Estimates

Taking into consideration the selected design and technical configuration of Azerspace-2 in Task 4 above, the Contractor shall develop preliminary cost estimates (maximum +/- 10%) in U.S. dollars:

The capital cost estimates shall include, at a minimum, the following:

- Satellite and network design;
- Construction of the satellite and external technical monitoring over the project implementation;
- Launch services;
- Tracking, telemetry and control ground facilities;
- Ground communications equipment;
- Regulatory and licensing fees;
- Financing costs including, at a minimum, interest during construction, bank and other creditors' fees and commissions, currency conversion costs;
- Legal fees;
- Applicable value added tax (VAT), excise tax, customs duties and other obligatory payments;
- Inspections;
- Consultants;
- Insurance, including launch and early in-orbit property insurance and liability insurance;
- Personnel training, and
- Contingency reserve and other costs, which may be identified by the Contractor (e.g. International Traffic in Arms Regulations "ITAR" related).

The operating cost estimates shall include, at a minimum, the following:

- Operations and maintenance of the satellite over its lifetime;
- Operations and maintenance of the communications network;
- In-orbit insurance;
- Administrative and management fees;
- Concession, rent and lease payments (e.g. orbital slot fees, if any);
- Depreciation and amortization;
- Interest; and
- Taxes, fees and obligatory payments.

Task 5: Deliverable:

The Contractor shall provide capital cost estimates and operating cost estimates based on the selected design and network configuration.

Task 6 – Preliminary Environmental Assessment

The Contractor shall complete a preliminary environmental assessment (space environment and traditional environment). The preliminary environmental assessment shall be consistent with the requirements of the appropriate government entity with jurisdiction over the satellite project.

This review shall identify potential negative impacts (e.g. zoning affecting dish size, and quantity per dwelling, potential debris caused by the launch vehicle or satellite during the launch phase through in orbit operations), discuss the extent to which they can be mitigated, and develop plans for a full environmental impact assessment at the Project implementation stage.

Task 6 Deliverable:

The Contractor shall prepare a report containing the preliminary environmental impact assessment.

Task 7 – U.S. Sources of Supply and Cost Estimates

The Contractor shall identify potential sources of satellite, ground equipment, launch services and related services (insurance, consulting, legal, etc.) that can be procured competitively from U.S. vendors for construction of the Azerspace-2 and provide the list of such vendors with identification of corresponding preliminary estimated costs for their respective products and services (based on the selected technical design of the satellite from Task 4). The Contractor shall determine existing relationships between U.S. sources of supply and U.S. sources of finance that might impact the financing model for the Project.

Task 7 Deliverable:

The Contractor shall produce a report with the U.S. sources of supply and the cost estimates from the identified U.S. vendors.

Task 8 - Financial Evaluation

The Contractor shall develop a detailed financial model that shall include a Life Cycle Cost Analysis (LCCA) as part of the overall project cost estimate. The LCCA shall examine the following categories:

Capital Costs

The Contractor shall make a detailed budget estimate (within maximum +/-15% accuracy) of the project investment costs for Azerspace-2. The preliminary investment costs composition is stipulated in Task 5 above. The Contractor shall verify and amend this list if required.

The Contractor shall include an estimated cost for future technical assistance and customer support as part of the investment costs for all stages of the Project.

Operating Costs

The Contractor shall prepare an estimation (within maximum +/-10% accuracy) of the projected Operating Costs.

- The Contractor shall consider that, similar to investment costs, operation and maintenance ("O&M") costs are system-specific and depend to a certain extent on decisions taken with regard to the design and construction of Azerspace-2.
- The Contractor shall consider all operational costs, including administrative and management fees, personnel costs, taxes, and interest.
- The Contractor's cost analysis shall also include equipment and building lease, orbital slot fees, concessions and rent payments (if any).
- The Contractor shall evaluate additional costs that may be incurred under different financing arrangements from export credit agenies or other sources to take into account the cost of capital, for example, interest payments, transaction fees associated with debt, loan commitment fees, exposure fees, and similar costs.

Revenues

The Contractor shall develop various revenue models for wholesale services in each of the frequency bands being contemplated. If wholesale transponder sales are not expected to be the primary source of revenues, the Contractor shall develop a revenue model that incorporates those changes. The Contractor shall assess the financial impacts (cost vs. revenue potential) of hosted payloads on the utilization of Azerspace-2.

Cash Flows

The Contractor shall conduct cash flow analyses to determine the best combination of transponder lease and sales and evaluate amounts of loans or government support required to reach cash flow positive.

Profitability Analysis

The Contractor shall generate and evaluate specific indices of economic performance such as profitability, return on investment, internal rate of return, debt service coverage ratio and net present value. The Contractor shall design the financial analysis to evaluate available financing scenarios, analyze each scenario's cost effectiveness, and compare each scenario's improvement in relation to the situation at the time of the Feasibility Study preparation. In addition to conservative assessments of operating and investment costs, the profitability and financial analysis shall compare costs of financing, for example, interest on bank credits, and other banking charges.

I. The Contractor shall assess the potential profitability of the Azerspace-2 satellite.
II. The Contractor shall develop a viable Financing Plan for the project. In developing a Financing Plan for the project, the Contractor shall consider and evaluate sources of funds to cover the capital expenditures, and how the free cash flows shall be used to cover the projected debt service. In order to evaluate the potential sources of financing, the Contractor shall contact local and international long-term debt financing sources to discuss their requirements for, and interest in, the project. Sources to contact include, at a minimum, the U.S. Export- Import Bank, and the Asian Development Bank.

The Contractor shall review indicative financing term sheets from potential lenders, if available, and include them in the final Feasibility Study report.

The Contractor shall develop a financing plan taking into account the comments and requirements of the aforementioned institutions. The financing plan shall include indicative capital structure, covenants, terms and conditions for borrowings. It shall address interest rate and currency hedging, duties and taxes, and foreign exchange availability.

In addition to the projected economic analysis, the available sources of financing and proposed Financing Plan shall be used to assess the projected financial viability of the project.

The Contractor shall also prepare pro forma or projected income statements and balance sheets, and shall conduct and report on a sensitivity analysis to demonstrate the range of conditions under which the project will be profitable and the extent, to which the projections are dependent on uncontrollable conditions or factors. The pro forma financial statements will consist of the Income Statement (Profit and Loss Account), the Balance Sheet, Statement of Cash Flows and Financial Ratios that include profitability calculations and cash flow projections. The Contractor shall provide advice on how to make the project most bankable, including providing risk

minimization strategies to the extent that they are within control of the Azercosmos and shall anticipate and address risk and return criteria of the most likely sources of bank loan financing.

Task 8 Deliverable:

The Contractor shall prepare a report containing a financial model and Financing Plan that provides enough detail for potential financiers. The Contractor shall keep in mind that this report shall be in a format and at a level of quality sufficient to be included in an investment memorandum.

Task 9 – Project Risk

The Contractor shall perform a risk assessment to identify risks, minimize the identified risks where possible through insurance or other means, and recommend a reasonable allocation of remaining risks. The primary risk categories to be considered by the Contractor shall include the following: (i) project implementation risks, i.e., the risks of obtaining consents, permits, licenses, concession rights and other agreements and covenants necessary for financial closure, (ii) technical risks, i.e., construction delays, cost overruns, launch, operations, and (iii) project regulatory risks, i.e., risks that arise from the regulatory or legal factors governing access to the orbital spectrum and rights to offer services in countries within the satellites designated footprints.

Task 9 Deliverable:

The Contractor shall prepare a risk assessment and risk mitigation report based on the selected design, technical configuration and mission of Azerspace-2.

Task 10 – Developmental Impact

The Contractor shall report on the potential development impact of the project in Azerbaijan as well as other countries to be served by the satellite. The Contractor shall focus on what the economic development outcomes will be if the project is implemented according to the Study recommendations. While specific focus should be paid to the immediate impact of the project, the Contractor shall include, where appropriate, any additional developmental benefits to the project, including spin-off and demonstration effects. The Contractor's analysis of potential benefits shall be as concrete and detailed as possible. The development impact factors are intended to provide the project's decision-makers and interested parties with a broader view of the project's potential effects of the Azerspace-2 satellite.

The Contractor shall provide estimates of the project's potential benefits in the following areas:

A. Infrastructure. The Contractor shall provide a statement on the infrastructure impact giving a brief synopsis.

B. Human Capacity Building. The Contractor shall assess the capacity of the Azercosmos organization to implement and market the satellite program; address the number and type of positions that would be needed to implement the Project; and, identify opportunities for training that will augment existing Azercosmos capacity.

C. Technology Transfer and Productivity Enhancement. The Contractor shall provide a description of any advanced technologies that will be implemented as a result of the project and a quantitative description of any efficiency that will be gained.

D. Social Benefits. The Contractor shall identify social benefits of the project that arise from the Project.

E. Other. The Contractor shall identify any other developmental benefits of the Project.

Task 10 Deliverable:

The Contractor shall produce a report on the potential development impact of the Project.

Task 11 – Implementation Plan

The Contractor shall prepare a detailed Implementation Plan designed to provide for procurement, financing, construction, launch and operation of the Azerspace-2 satellite in a timely and in a cost-effective manner. The Implementation Plan shall establish sequence of tasks, assign responsibility for each task and determine corresponding time limits for their completion. The Implementation Plan shall target a launch date of not later than the end of calendar year 2016. The Contractor shall provide a draft copy of the Implementation Plan to the Grantee and incorporate any feedback from the Grantee into the final draft of the Implementation Plan.

Task 11 Deliverable:

The Contractor shall provide a report with the final draft of the Implementation Plan.

Task 12 – Final Report

The Contractor shall prepare and deliver to the Grantee and USTDA a substantive and comprehensive final report of all work performed under these Terms of Reference ("Final Report") in accordance with Clause J of Annex II. The Contractor shall ensure that the front cover of every Final Report contains the name and logo of the Grantee. The Final Report shall be organized according to the above tasks, and shall include all deliverables and documents that have been provided to the Grantee. The Final Report shall include an executive summary discussing the project, the key findings of the Study, and the recommendations for further development of project, to be included in the Final Report. In addition to the copies of the Report that shall be provided to USTDA, the Contractor shall provide six (6) copies of the public version of the Final Report and six (6) copies of the Confidential Version to the Grantee. The Contractor shall ensure that the label affixed to the front of the CD-ROM also contains the name and logo of the Grantee.

A N N E X 6

USTDA-Funded Feasibility Study, Technical Assistance, or Training Grant

U.S. Firm Information Form

This form is designed to enable the U.S. Trade and Development Agency ("USTDA") to obtain information about entities and individuals proposed for participation in USTDA-funded activities. Information in this form is used to conduct screening of entities and individuals to ensure compliance with legislative and executive branch prohibitions on providing support or resources to, or engaging in transactions with, certain individuals or entities with which USTDA must comply.

USTDA Activity Number [*To be completed by USTDA*]	2013-21017A					
Activity Type [*To be completed by USTDA*]	✔	Feasibility Study		Technical Assistance		Other (specify)
Activity Title [*To be completed by USTDA*]	AZERSPACE-2 COMMUNICATIONS SATELLITE PROJECT					
Full Legal Name of U.S. Firm						
Business Address (street address only)						
Telephone		Fax		Website		
Year Established (include any predecessor company(s) and year(s) established, if appropriate). Please attach additional pages as necessary.						
Type of Ownership		Publicly Traded Company				
		Private Company				
		Other (please specify)				
Please provide a list of directors and principal officers as detailed in Attachment A. Attached? (Not Applicable for U.S. Publicly Traded Company)		Yes				
If Private Company or Other (if applicable), provide a list of shareholders and the percentage of their ownership. In addition, for each shareholder that owns 15% or more shares in U.S. Firm, please complete Attachment B.						
Is the U.S. Firm a wholly-owned or partially owned subsidiary?		Yes				
		No				
If so, please provide the name of the U.S. Firm's parent company(ies). In addition, for any parent identified, please complete Attachment B.						
Is the U.S. Firm proposing to subcontract some of the proposed work to another firm?		Yes				
		No				
If yes, U.S. Firm shall complete Attachment C for each subcontractor. Attached?		Yes				
		Not applicable				
Project Manager						
Name		Surname				
		Given Name				
Address						
Telephone						
Fax						
Email						
Negotiation Prerequisites						
Discuss any current or anticipated commitments which may impact the ability of the U.S. Firm or its subcontractors to complete the Activity as proposed and reflect such impact within the project schedule.						
Identify any specific information which is needed from the Grantee before commencing negotiations.						

U.S. Firm may attach additional sheets, as necessary.

U.S. Firm's Representations

U.S. Firm shall certify to the following (or provide an explanation as to why any representation cannot be made):

1. U.S. Firm is a *[check one]* ☐ Corporation ☐ LLC ☐ Partnership ☐ Sole Proprietor ☐ Other:

duly organized, validly existing and in good standing under the laws of the State of: *[insert state]* .

The U.S. Firm has all the requisite corporate power and authority to conduct its business as presently conducted, to submit this proposal, and if selected, to execute and deliver a contract to the Grantee for the performance of the USTDA Activity. The U.S. Firm is not debarred, suspended, or to the best of its knowledge or belief, proposed for debarment or ineligible for the award of contracts by any federal or state governmental agency or authority.

2. The U.S. Firm has included herewith, a copy of its Articles of Incorporation (or equivalent charter or document issued by a designated authority in accordance with applicable laws that provides information and authentication regarding the legal status of an entity) and a Certificate of Good Standing (or equivalent document) issued within 1 month of the date of signature below by the State of: *[insert state]* .

The U.S. Firm commits to notify USTDA and the Grantee if it becomes aware of any change in its status in the state in which it is incorporated. USTDA retains the right to request an updated certificate of good standing. **(U.S. publicly traded companies need not include Articles of Incorporation or Good Standing Certificate)**

3. Neither the U.S. Firm nor any of its principal officers have, within the ten-year period preceding the submission of this proposal, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a federal, state or local government contract or subcontract; violation of federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, violating federal or state criminal tax laws, or receiving stolen property.

4. Neither the U.S. Firm, nor any of its principal officers, is presently indicted for, or otherwise criminally or civilly charged with, commission of any of the offenses enumerated in paragraph 3 above.

5. There are no federal or state tax liens pending against the assets, property or business of the U.S. Firm. The U.S. Firm, has not, within the three-year period preceding the submission of this proposal, been notified of any delinquent federal or state taxes in an amount that exceeds US$3,000 for which the liability remains unsatisfied. Taxes are considered delinquent if (a) the tax liability has been fully determined, with no pending administrative or judicial appeals; and (b) a taxpayer has failed to pay the tax liability when full payment is due and required.

6. The U.S. Firm has not commenced a voluntary case or other proceeding seeking liquidation, reorganization or other relief with respect to itself of its debts under any bankruptcy, insolvency or other similar law. The U.S. Firm has not had filed against it an involuntary petition under any bankruptcy, insolvency or similar law.

7. The U.S. Firm certifies that it complies with USTDA Nationality, Source, and Origin Requirements and shall continue to comply with such requirements throughout the duration of the USTDA-funded activity. The U.S. Firm commits to notify USTDA and the Grantee if it becomes aware of any change which might affect U.S. Firm's ability to meet the USTDA Nationality, Source, and Origin Requirements.

The U.S. Firm shall notify USTDA if any of the representations are no longer true and correct.

U.S. Firm certifies that the information provided in this form is true and correct. U.S. Firm understands and agrees that the U.S. Government may rely on the accuracy of this information in processing a request to participate in a USTDA-funded activity. If at any time USTDA has reason to believe that any person or entity has willfully and knowingly provided incorrect information or made false statements, USTDA may take action under applicable law. The undersigned represents and warrants that he/she has the requisite power and authority to sign on behalf of the U.S. Firm.

Name		Signature	
Title			
Organization		Date	

ATTACHMENT A

USTDA-Funded Feasibility Study, Technical Assistance, or Training Grant

U.S. Firm Information Form – Directors and Principal Officers

(Not Applicable for U.S. Publicly Traded Company)

Provide a list of all directors and principal officers (e.g., President, Chief Executive Officer, Vice-President(s), Secretary and Treasurer). Please provide full names including surname and given name.

USTDA Activity Number [*To be completed by USTDA*]	2013-21017A
Activity Title [*To be completed by USTDA*]	AZERSPACE-2 COMMUNICATIONS SATELLITE PROJECT
Full Legal Name of Entity	

Title	**Name**		
(e.g., Director, President, Chief Executive Officer, Vice-President(s), Secretary, Treasurer) ***** *Please place an asterisk (*) next to the names of those principal officers who will be involved in the USTDA-funded activity*	**Surname**	**Given Name**	**Middle Name**

ATTACHMENT B

USTDA-Funded Feasibility Study, Technical Assistance, or Training Grant

U.S. Firm Information Form – Shareholder(s) and Parent Company(ies)

If applicable, U.S. Firm provided a list of shareholders and the percentage of their ownership. This form shall be completed for each shareholder that owns 15% or more shares in U.S. Firm, as well as any parent corporation of the U.S. Firm ("Shareholder"). In addition, this form shall be completed for each shareholder identified in Attachment B that owns 15% or more shares in any Shareholder, as well as any parent identified in Attachment B.

USTDA Activity Number [*To be completed by USTDA*]	2013-21017A
Activity Title [*To be completed by USTDA*]	AZERSPACE-2 COMMUNICATIONS SATELLITE PROJECT
Full Legal Name of U.S. Firm	
Full Legal Name of Shareholder	
Business Address of Shareholder (street address only)	
Telephone number	Fax Number
Year Established (include any predecessor company(s) and year(s) established, if appropriate). Please attach additional pages as necessary.	
Country of Shareholder's Principal Place of Business	
Please provide a list of directors and principal officers as detailed in Attachment A. Attached?	☐ Yes
Type of Ownership	☐ Publicly Traded Company ☐ Private Company ☐ Other
If applicable, provide a list of shareholders and the percentage of their ownership. In addition, for each shareholder that owns 15% or more shares in Shareholder, please complete Attachment B.	
Is the Shareholder a wholly-owned or partially owned subsidiary?	☐ Yes ☐ No
If so, please provide the name of the Shareholder's parent(s). In addition, for any parent identified, please complete Attachment B.	

Shareholder may attach additional sheets, as necessary.

ATTACHMENT C

USTDA-Funded Feasibility Study, Technical Assistance, or Training Grant

Subcontractor Information Form

This form is designed to enable the U.S. Trade and Development Agency ("USTDA") to obtain information about entities and individuals proposed for participation in USTDA-funded activities. Information in this form is used to conduct screening of entities and individuals to ensure compliance with legislative and executive branch prohibitions on providing support or resources to, or engaging in transactions with, certain individuals or entities with which USTDA must comply.

USTDA Activity Number [*To be completed by USTDA*]	2013-21017A
Activity Title [*To be completed by USTDA*]	AZERSPACE-2 COMMUNICATIONS SATELLITE PROJECT
Full Legal Name of Prime Contractor U.S. Firm ("U.S. Firm")	
Full Legal Name of Subcontractor	
Business Address of Subcontractor (street address only)	
Telephone Number	
Fax Number	
Year Established (include any predecessor company(s) and year(s) established, if appropriate). Please attach additional pages as necessary.	

Subcontractor Point of Contact

Name	Surname	
	Given Name	
Address		
Telephone		
Fax		
Email		

Subcontractor's Representations									
Subcontractor shall provide the following (or any explanation as to why any representation cannot be made), made as of the date of the proposal:									
1. Subcontractor is a *[check one]*	☐	Corporation	☐	LLC	☐	Partnership	☐	Sole Proprietor	☐	Other	
duly organized, validly existing and in good standing under the laws of:	*[insert state (if U.S.) or country]*	.									
The subcontractor has all the requisite corporate power and authority to conduct its business as presently conducted, to participate in this proposal, and if the U.S. Firm is selected, to execute and deliver a subcontract to the U.S. Firm for the performance of the USTDA Activity and to perform the USTDA Activity. The subcontractor is not debarred, suspended, or to the best of its knowledge or belief, proposed for debarment or ineligible for the award of contracts by any federal or state governmental agency or authority.									
2. Neither the subcontractor nor any of its principal officers have, within the ten-year period preceding the submission of the Offeror's proposal, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a federal, state or local government contract or subcontract; violation of federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, violating federal or state criminal tax laws, or receiving stolen property.									
3. Neither the subcontractor, nor any of its principal officers, is presently indicted for, or otherwise criminally or civilly charged with, commission of any of the offenses enumerated in paragraph 2 above.									
4. There are no federal or state tax liens pending against the assets, property or business of the subcontractor. The subcontractor, has not, within the three-year period preceding this RFP, been notified of any delinquent federal or state taxes in an amount that exceeds $3,000 for which the liability remains unsatisfied. Taxes are considered delinquent if (a) the tax liability has been fully determined, with no pending administrative or judicial appeals; and (b) a taxpayer has failed to pay the tax liability when full payment is due and required.									
5. The subcontractor has not commenced a voluntary case or other proceeding seeking liquidation, reorganization or other relief with respect to itself or its debts under any bankruptcy, insolvency or other similar law. The subcontractor has not had filed against it an involuntary petition under any bankruptcy, insolvency or similar law.									
6. The Subcontractor certifies that it complies with the USTDA Nationality, Source, and Origin Requirements and shall continue to comply with such requirements throughout the duration of the USTDA-funded activity. The Subcontractor commits to notify USTDA, the Contractor, and the Grantee if it becomes aware of any change which might affect U.S. Firm's ability to meet the USTDA Nationality, Source, and Origin Requirements.									
The selected Subcontractor shall notify the U.S. Firm, Grantee and USTDA if any of the representations included in its proposal are no longer true and correct.									
Subcontractor certifies that the information provided in this form is true and correct. Subcontractor understands and agrees that the U.S. Government may rely on the accuracy of this information in processing a request to participate in a USTDA-funded activity. If at any time USTDA has reason to believe that any person or entity has willfully and knowingly provided incorrect information or made false statements, USTDA may take action under applicable law. The undersigned represents and warrants that he/she has the requisite power and authority to sign on behalf of the Subcontractor.									

Name		Signature	
Title			
Organization		Date	