

REQUEST FOR PROPOSALS

FEASIBILITY STUDY FOR THE

AZHK Smart Grid Project

Submission Deadline: 4:00 P.M.

LOCAL TIME

July 12, 2013

Submission Place: Mr. Dauren Baimagambetov
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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

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Section 1: INTRODUCTION

The U.S. Trade and Development Agency (USTDA) has provided a grant in the amount of US\$614,615 to JSC Alatau Zharyk Company (the "Grantee") in accordance with a grant agreement dated May 15, 2013 (the "Grant Agreement"). This Grant will fund a feasibility study ("Feasibility Study") on the proposed AZHK Smart Grid project ("Project") in Kazakhstan ("Host Country"). 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

AZHK provides electric power to a total population of 2.2 million in the city and region of Almaty through over 15,000 miles of transmission and distribution power lines and over 7,000 substations. Due to outdated equipment, AZHK experiences significant technical and commercial losses in excess of 19%. Electricity lost through poor billing and theft (commercial losses) and poor quality infrastructure (technical losses) represents costs for which there is no corresponding revenue. Furthermore, regulated transmission and distribution tariffs are calculated for line losses of 16.5%, so AZHK has considerable financial incentive to reduce line losses. In order to reduce these losses, AZHK plans to implement a modern supervisory control and data acquisition (SCADA) system, smart metering at large commercial customers, an outage management system (OMS), communications systems for distribution automation, and pilot smart metering for residential and small commercial customers. By increasing operational efficiency through better management, these changes would reduce technical losses. Commercial losses would be reduced through higher levels of required payment compliance and simplified grid connections.

1.2 OBJECTIVE

This Feasibility Study will help to assess the technical, economic, and financial feasibility for implementing distribution automation technologies in the Almaty region. Implementing this smart grid project would reduce line losses, improve power management and improve its service to its customers. 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\$614,615. **The USTDA grant of US\$614,615 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\$614,615.00 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 AZHK Smart Grid 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\$614,615.

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 AND QUESTIONS

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

Mr. Dauren Baimagambetov
Deputy Chairman of the Boards on Finance and Economics
JSC Alatau Zharyk Company
24 b, Manas str.
050008 Almaty
Kazakhstan
Phone: +7-727-376-18-06
Fax: +7-727-375-19-09
E-Mail: dbaimagambetov@azhk.kz

An Original and eight (8) copies of your proposal must be received at the above address no later than 4: P.M local time, on July 12, 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.

Any questions regarding this RFP must be submitted by June 14th. All questions should be submitted in writing (email or fax is acceptable) to JSC Alatau Zharyk Company at the above contact information and copied to Jennifer Vanrenterghem of USTDA at 1000 Wilson Boulevard, Suite 1600, Arlington, VA 22209-3901, Tel: (703) 875-4357, Fax: (703) 875-4009, email jvanrenterghem@ustda.gov.

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 NINETY (90) 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\$614,615, 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:

Proposed Work Plan (40%) – Each bidder shall demonstrate an understanding of all the project tasks. Proposal efforts should be responsive to the requirements outlined in the Terms of Reference. The proposed Work Plan should be detailed, realistic, and manageable. Clear objectives should be achieved at the end of each and all tasks.

Professional Experience (30%) – Each bidder shall propose a project team that will be fully qualified to execute the entire scope of work of the study. The proposed staff should have qualifications and experience in engineering, design, technical analysis, operations planning and modeling, environmental assessments, as well as in-depth technical knowledge of smart metering and transmission and distribution automation infrastructure, including software and hardware for integration into existing systems. Experience with electric utilities would be beneficial. Qualified bidders will be expected to provide evidence of satisfactorily executing at least three

(3) similar projects, with one project currently on-going or completed in the last 3 years. The reference projects (except for current or recently completed) should exhibit similar or larger size and complexity as the proposed one.

International Experience (30%) – Each bidder shall exhibit international experience and the capability to perform similar international feasibility studies. Qualified bidders will be expected to provide evidence of satisfactorily executing at least two (2) international projects in the last 5 years. Referenced international projects should exhibit similar or larger size and complexity as the proposed project.

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. DAUREN BAIMAGAMBETOV, DEPUTY CHAIRMAN OF THE BOARDS ON FINANCE AND ECONOMICS, JSC ALATAU ZHARYK COMPANY, 24 B, MANAS STR., 050008 ALMATY, KAZAKHSTAN, PHONE: +7-727-376-18-06, FAX: 7+727-375-19-09

KAZAKHSTAN: AZHK SMART GRID PROJECT FEASIBILITY STUDY

POC: Jennifer Vanrenterghem, USTDA, 1000 Wilson Boulevard, Suite 1600, Arlington, VA 22209-3901, Tel: (703) 875-4357, Fax: (703) 875-4009. AZHK Smart Grid 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 (Study) for smart grid upgrades to the electricity transmission network in Almaty, Kazakhstan.

AZHK provides electric power to a total population of 2.2 million in the city and region of Almaty through over 15,000 miles of transmission and distribution power lines and over 7,000 substations. Due to outdated equipment, AZHK experiences significant technical and commercial losses in excess of 19%. Electricity lost through poor billing and theft (commercial losses) and poor quality infrastructure (technical losses) represents costs for which there is no corresponding revenue. Furthermore, regulated transmission and distribution tariffs are calculated for line losses of 16.5%, so AZHK has considerable financial incentive to reduce line losses. In order to reduce these losses, AZHK plans to implement a modern supervisory control and data acquisition (SCADA) system, smart metering at large commercial customers, an outage management system (OMS), communications systems for distribution automation, and pilot smart metering for residential and small commercial customers. By increasing operational efficiency through better management, these changes would reduce technical losses. Commercial losses would be reduced through higher levels of required payment compliance and simplified grid connections.

This Feasibility Study will help to assess the technical, economic, and financial feasibility for implementing distribution automation technologies in the Almaty region. Implementing this smart grid project would reduce line losses, improve power management and improve its service to its customers.

The U.S. firm selected will be paid in U.S. dollars from a \$614,615 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 portions of a background definitional mission/desk study report 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 4:00 P.M. local time, July 12, 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 of Proposals.

ANNEX 2

2. Project 1 - AZHK Distribution Automation Project, Kazakhstan

2.1 EXECUTIVE SUMMARY

This proposed project was identified by the Alatau Zharik Kompanijasi (AZHK or Grantee), a fully owned subsidiary of state-owned diversified energy company Samruk Energo (a.k.a. Samruk Energy). AZHK has about 2 million customers.

The proposed project is designed to provide improvements to the transmission and distribution of electric networks by installing automation solutions. The proposed study shall evaluate the technical and economic benefits of installing:

- Modern SCADA system at 220 kV to 0.4 kV levels;
- Smart metering at large commercial customers;
- Outage Management System (OMS);
- Communications System for Distribution Automation; and
- Smart metering (on a pilot scale) for small commercial and residential customers.

The major tasks of the proposed study include:

- Review current distribution system management practices and IT applications;
- Review of current linkages to the national transmission system and their management;
- Collected data and database management/use evaluation;
- Gap analysis to identify possible areas for improved systems management and information management;
- Identification of the key high-level integration requirements and goals for AZHK;
- Recommendations of integration strategy;
- Project implementation planning; and
- Project technical and economic assessment.

The overall estimated project cost (without contingency) is in the \$43-81 million. The U.S. exports could reach the \$28-55 million (~68%) level on a probability weighted basis. The proposed study cost is estimated at \$614,615 and should be completed within eight months.

2.2 PROJECT BACKGROUND AND DESCRIPTION

2.2.1 Energy Sector Overview¹

In Kazakhstan, the electricity sector is divided into wholesale and retail markets. The wholesale electricity market of Kazakhstan is based on bilateral contracts conducted

¹ Adopted from AES 2011 Annual Report

through an over-the-counter market and KOREM's centralized trading system. In the retail market, the power distribution and supply functions are unbundled and retail customers with consumption of one MW or more have a right to buy the electricity directly from power plants or retail supply companies.

The government of Kazakhstan approves subordinate acts in the power sector (licensing requirement, technical regulations, market rules, tariff methodologies for natural monopolies, etc.) and determines the level of price caps for groups of power plants.

The Ministry of Industry and New Technologies (Ministry) is the central executive body responsible for developing state policy in the power sector and conducting technical regulation. As a part of price cap regulation, the Ministry is responsible for determining groups of power companies for each price cap, annual adjustments of price caps and signing agreements on investment obligations with power plants.

The Agency for Regulation of Natural Monopolies (Regulator) acts as a regulator of industries considered to be "natural monopolies" (transmission and distribution of oil, gas, electricity and heat, railroads, airports, etc.). In the power industry, the Regulator is responsible for the approval of tariffs for heat generation, distribution and supply, electricity transmission and distribution, as well as end-user tariffs for dominant companies in the retail power market. The Regulator grants different licenses in the power sector such as licenses for generation, distribution and retail activities.

The Agency for Protection of Competition (AZK) monitors power market participants to determine entities with a dominant position and detect violations of antimonopoly legislation.

The Ministry of Environmental Protection (Environmental Ministry) is responsible for environmental policy, grants emission permits and evaluates the environmental impact of new projects.

JSC KEGOC is a state-owned electricity transmission company, which also acts as the system operator with a central dispatch management function and as the operator of the balancing market.

The following major laws and regulations govern the electricity industry:

- Law "On the Power Industry" (the "Kazakhstan Electricity law");
- Law "On Natural Monopolies and Regulated Markets";
- Law "On Competition";
- Law "On Supporting the Use of Renewable Energy Sources";
- Environmental Code;
- Law "On Licensing";
- Resolution of the Government of the Republic of Kazakhstan "On Approval of the Price Caps"; and
- The state program of power industry development in 2010-2014.

Continuous changes in the law and regulations result in contradictions between different laws and regulations. This in turn results in an uncertain regulatory environment in the power sector.

The key elements of price cap regulation of power plants are as follows: (i) the Ministry has determined the power plant grouping based on the plant type, equipment, fuel and distance from coal mines (thirteen groups of power plants were defined); (ii) the Ministry has proposed to the government the price cap for each group based on actual prices in 2008 and the level of investment required, and the government has approved price caps for each group of power plants for the seven-year period from 2009-2015; (iii) the Ministry may propose to the government additional annual adjustments to price caps to reflect inflation and investment requirements within any group or a power plant may apply for an individual investment tariff to the Ministry and the Regulator; (iv) a power plant determines its investment obligations at its own discretion and signs an agreement with the Ministry on investment obligations; and (v) the price cap and individual investment tariff regime do not constitute a price guarantee and power plants should sell to consumers at the competitive market price but not higher than their group price cap or an individual investment tariff. Only exports of power and sale of ten percent of generation through a centralized trading system are exempt from this restriction. Power trading activities are restricted and power plants are allowed to conduct trading activities to provide electricity supply to their consumers during emergency shutdowns.

The Regulator approves and regulates all tariffs for heat generation, transmission and supply, as well as electricity transmission and distribution tariffs on a cost-based methodology. Power trading companies, which the AZK considers dominant entities, must notify the Regulator of any proposed increase in their tariffs and the Regulator has the right to veto such proposed tariff increases. Furthermore, the Regulator has the right to request a decrease in the applicable tariffs.

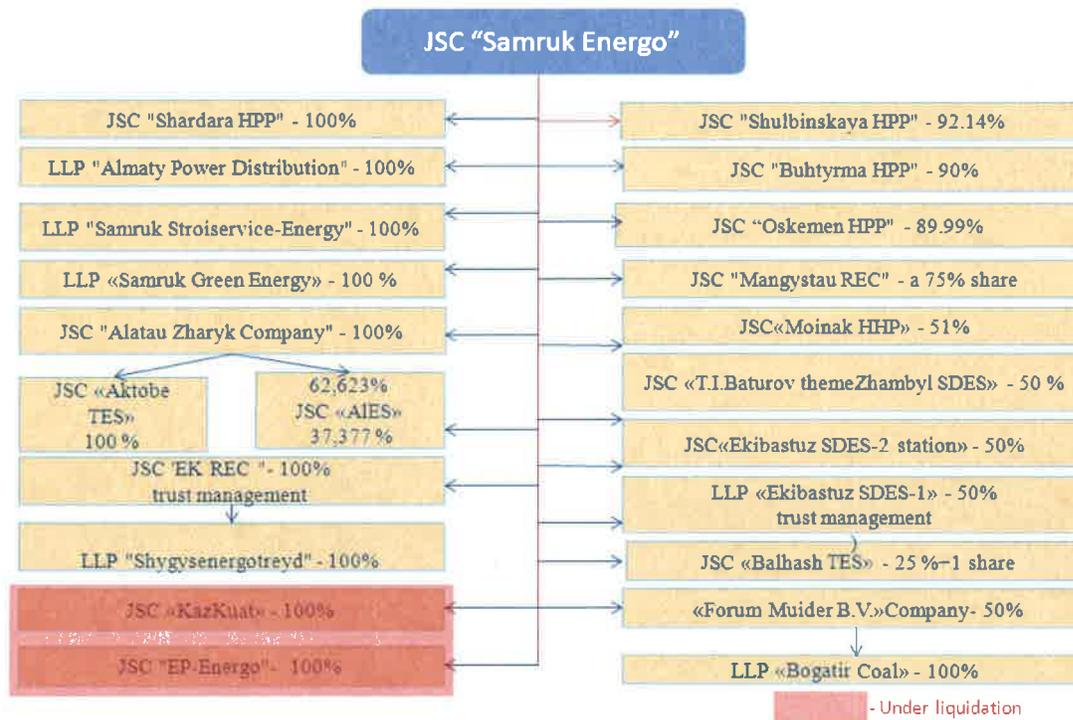
The AZK determines the borders of electricity markets at its own discretion, which does not correspond with the provisions of the Kazakhstan Electricity Law, and designates entities with dominant market power. The AZK may consider the tariff of a power plant which is in compliance with price cap regulation to be an excessive monopolistic price of a dominant entity and impose sanctions.

2.2.2 Project

Samruk Energo was registered on May, 10th, 2007 for the purpose of development and realization of the long-term state policy on modernization of existing and input

of new generating capacities¹. At present the group includes 19 companies. Exhibit below provides the structure of the company.

Structure of Assets "Samruk Energo" as of the 2nd quarter of this year



The company employs 13,747 people, of whom 79 are in the central management office, 1,291 are classified as administrative and managerial, and 12,456 are technical and support.

The main company activities include:

- Generation of electric and thermal energy;
- Transmission and distribution of electric energy;
- Extraction of power coal; and
- Reconstruction, expansion and building of power-related infrastructure.

Alatay Zharik Kompanijasi (AZHK) is a wholly-owned independent subsidiary of Samruk Energo that owns transmission and distribution infrastructure supplying electricity to over 2.2 million customers as well as generating capacity in Almaty area and Aktobe. Almaty Power Distribution, should not be mistaken with AZHK, is a marketing arm selling power to customers of Samruk Energo.

¹ Information from <http://www.samruk-energy.kz> and <http://www.azhk.kz>

The company owns the following overhead power lines:

- 220 kV overhead lines - 971 km (606 miles)
- 110 kV overhead line - 5,016 miles (3,135 miles)
- 35 kV overhead lines - 3,573 miles (2,233 miles)
- 6-10kV overhead lines - 11,412 km (7,132 miles)
- 0.4 kV overhead lines - 9,479 miles (1,395 miles)

Cable transmission lines:

- 110 kV - 68.7 miles
- 35 kV - 49.2 miles
- 10 kV - 1160.2 miles
- 6 kV - 1376.7 miles
- 0.4 kV - 1379.1 miles

The company owns 310 electric transmission substations rated at 35 kV and above (463 transformers with installed capacity of 7,951 MVA) and 7,299 distribution substations 6-10/0.4 kV (8,589 transformers with an installed capacity of 2,270 MVA).

At present in Kazakhstan, the following major problems exist in electricity transmission and distribution:

- Technical losses due to design inefficiencies (length, equipment size and age) and complexity of operations (complex geography, non-homogeneous layout planning, and limited metering); and
- Commercial losses due to the economic situation, poor enforcement, and the complexity of the grid;
- Inadequate reactive power compensation that leads to voltage fluctuation between generators and customers; and
- Lack of energy efficiency improvements, including quality monitoring, automation, and smart metering and management.

AZHK is making efforts to improve its operational efficiencies by implementing new technologies, tools and equipment. The Company has requested USDA's technical assistance for conducting feasibility studies for the implementation of grid automation technologies.

The proposed study shall evaluate the technical and economic benefits of installing:

- Modern SCADA system at 220 kV to 0.4 kV levels (current SCADA is not modern and covers only higher voltage levels);
- Smart metering at large commercial customers;

- Outage Management System (OMS);
- Communications System for Distribution Automation; and
- Potential smart metering (on pilot scale) for small commercial and residential customers.

Major tasks of the proposed project include:

- Review current distribution system management practices and IT applications;
- Review of current linkages to the national transmission system and their management;
- Collected data and database management/use evaluation;
- Gap analysis to identify possible areas for improved systems management and information management;
- Identification of the key high-level integration requirements and goals for AZHK;
- Recommendations of integration strategy;
- Project implementation planning; and
- Project technical and economic assessment.

The exhibit below provides the details of the electricity delivery mechanism in Kazakhstan. The generation is provided from state and privately owned in-country generation facilities as well as from the Central Asian interconnections. Almaty area customers receive their electricity from AmatyEnergoSbyt via transmission and distribution lines owned by AZHK and KEGOC. AZHK owns transmission lines for the Almaty area and Mojnak HPP generation.

Details of Electricity Delivery to Customers



The components of retail tariff are identified in the table on the top-right. The wholesale electricity component is estimated at about 61% of the retail tariff. Transmission and Distribution charges are estimated at about 33% of the retail tariff. The AZHK transmission and distribution tariff is about 3.41 tenge/kWh (~\$0.03/kWh) or about 26% of the retail tariff, which is slightly lower than the typical T&D contribution to the retail tariff.

It should be noted that the T&D tariffs are based on 16.5% level of losses. Any exceedance of this level directly hurts the profitability of AZHK. Opposite is true as well. Current total losses at AZHK are estimated at about 19%. The proposed project is aimed directly at system optimization and modernization leading to losses reduction and increased profitability of AZHK. 2% reduction of losses at current tariffs results in over \$5 million savings to AZHK bottom line.

2.3 PROJECT SPONSOR'S CAPABILITIES AND COMMITMENT

2.3.1 Samruk Energo¹

¹ Based on 2011 Annual Report

Samruk Energo is a diversified company supporting several sectors of the Kazakhstan's economy and integrated in the CIS power pool system. The key focus areas of the Company, which incorporates 19 companies, include the production / generation of electric and thermal power, transmission and distribution of electric power, power-generating coal mining, as well as reconstruction, expansion and construction of power generating facilities and units.

In 2010 the electric power output of Samruk Energo reached 12,686 million kWh and 7,469 thousand Gcal. In total at the end of 2010 the income of the Group of Companies amounted to KZT81.3 billion (~\$543 million), including KZT76.9 billion (~\$513 million) from operating activities. The net profit amounted to KZT10.9 billion (~\$7 million). At the end of 2010, the Company's assets amounted to KZT244 billion (~\$1.63 billion).

The Company's core medium-term objectives are as follows:

- Reconstruction and modernization of the electric power transmission and distribution facilities in Almaty and the Almaty Oblast.
- Increasing the power capacity of the Ekibastuz GRES-2 through construction of new electric power units, and introduction of the technological process automation systems at the electric power units № 1-2 at Ekibastuz.
- Construction of the Kerbulak HPP, which will become a counter-regulatory station of the Kapchagai HPP and will allow it to increase the peak power output by 112 MW.
- Samruk-Energo JSC intends to implement the projects for construction of wind-power stations.

Samruk-Energo JSC was officially registered on 10 May 2007 with the purpose of development and implementation of a long-term state policy of modernization of existing and commissioning of new generating facilities / plants.

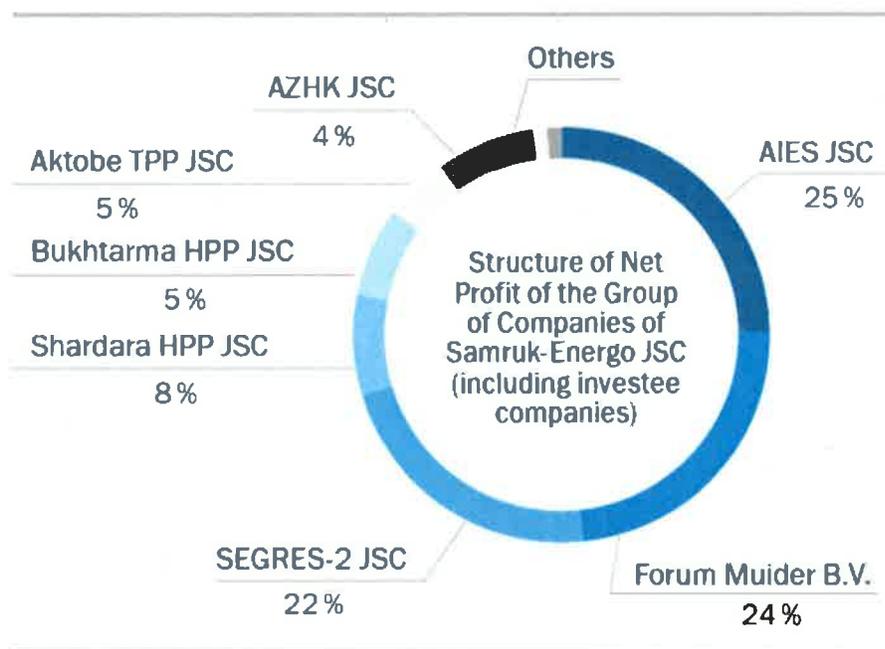
On 3rd November, 2008 as a result of reorganization made by means of merging of Kazakhstan State Assets Management Holding Samruk JSC and Kazyna Sustainable Development Fund JSC, it was Samruk-Kazyna National Welfare Fund JSC which became a shareholder of Samruk-Energo JSC as a legal successor of Kazakhstan State Assets Management Holding Samruk JSC.

As at 31 December 2010, the shares of Samruk-Energo JSC were distributed among its shareholders as follows:

- Samruk-Kazyna National Welfare Fund JSC - 92.6112 %
- KazTransGas JSC - 7.3888 %.

Exhibit below provides the profit distribution off the company by subsidiary. The major share in the profit of Samruk-Energo JSC is made by its subsidiary companies such as:

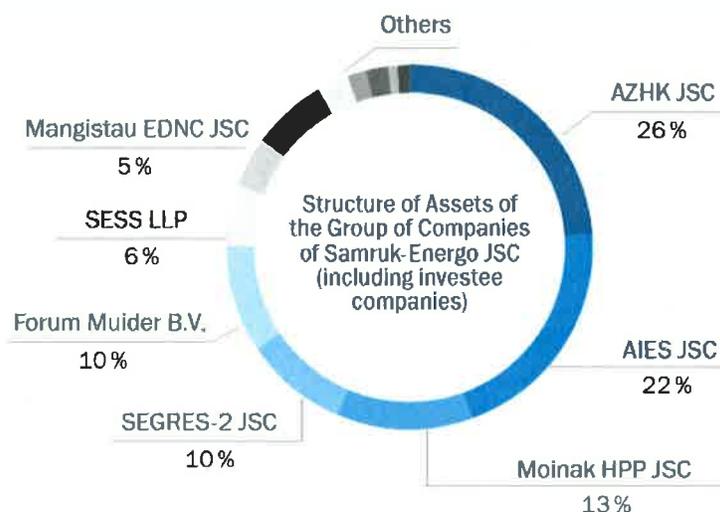
- AIES JSC - 25 %,
- Forum Muider B.V. - 24 %,
- Ekibastuz GRES-2 JSC - 22 %.



At the end of 2010 the Company's assets amounted to KZT244 billion, having increased by KZT60.7 billion (\$405 million) or 25 % as against 2009. Such an increase in the Company's assets resulted from implementation of large investment projects and programs financed at the expense of the own and borrowed funds.

Exhibit below provides the details of company assets by major subsidiary. The major share in the structure of the assets belonging to the Group of Companies of Samruk-Energo JSC is made by the following companies:

- Alatau Zharyk Kompaniyasy JSC - 26 %,
- AIES JSC - 22 %,
- Moinak HPP JSC - 13 %,
- Ekibastuz GRES-2 JSC - 10 %,
- Forum Muider B.V. - 10 %.



It should be noted the Alatau Zharyk Kompaniyasy assets constitute 26% of the company total adding only 4% to group profits. This is primarily due to the regulated nature of the business.

2.3.2 Alatau Zharyk Kompaniyasy – Wholly-Owned Subsidiary of Samruk Energo¹

The core activities of Alatau Zharyk Kompaniyasy JSC include the services of transmission and distribution of electric power to consumers of Almaty and a part of the Almaty Region (Oblast) under electric power supply agreements.

Current breakdown of customers includes:

The number of household, industrial, institutional and commercial consumers			
	2010	2009	Measurement unit
Domestic consumers	16 813	16 620	consumers
Industrial consumers	440	438	consumers
Institutional consumers	233	232	consumers
Commercial consumers	937	940	consumers

Source: SE Report on Sustainable Development, 2010

In 2010 the total volume of services rendered for transmission and distribution of electric power through networks of Alatau Zharyk Kompaniyasy JSC reached 5,261.853 mln kWh.

¹ Based on 2011 Annual Report

The T&D power lines breakdown is provided in the table below.

Length of power transmission lines and distribution lines					
Type of lines	Length of lines over 66 kV		Length of lines less than 66 kV		Unit of measure
	2010	2009	2010	2009	
Overground	5 962	5 970	24 392	25 725	km
Underground	58	0	3 852	3 847	km
The cumulative length of lines	6 020	5 970	28 244	29 572	km

Source: SE Report on Sustainable Development, 2010

In 2010 five new substations with cable lines of 110 kV (49.6 km) were put into commission:

- “Yermensai” – the transformer power of 2x250 MVA;
- “KazGU” – the transformer power of 2x63 MVA;
- “Medeu” – the transformer power of 2x63 MVA;
- “Shymbulak” – the transformer power of 2x40 MVA – for electric power supply to facilities of the Aziada 2011.
- “Novaya” № 16 – the transformer power of 2x16 MVA for electric power supply to the Free Economic Zone “Alatau Information Technologies Park” in Almaty.

The transformer power of the new facilities put into commission is 864 MVA . The capital investments amounted to KZT22.4 billion (~\$150 million). Project for reconstruction of Substation № 137A, “Central” (Stage 2), and Substation № 55A, “Sairan” were completed in 2010.

Examples above show the ability of the company to carry out complex infrastructure projects.

2.4 IMPLEMENTATION FINANCING

AZHK and Samruk Energo can fund projects by either utilizing its own operating budget or by borrowing money. Small amount of capital improvements (historically about 10-15%) can depend on additional State funding. Company has a track record of utilizing both major funding mechanisms. Smaller projects, which can be considered operational improvements (e.g., replacement of equipment or minor system modifications) are generally funded internally.

Larger capital projects are funded via international and domestic funding agencies. Past financing activities of Samruk Energo include:

- Under the Project on Expansion and Reconstruction of the Ekibastuz GRES-2 with Installation of Power Generating Unit № 3, the Loan Agreement was signed between Station Ekibastuz GRES-2 JSC, Vnesheconombank (Foreign Trade Bank) and the Eurasian Development Bank in 2010 for extension of a loan facility in the amount of up to \$770 million for the purpose of the Ekibastuz Project implementation.
- On 16 March 2010 AZHK subsidiary Aktobe TPP JSC signed a Loan Agreement with the European Bank for Reconstruction and Development in the amount of EUR40 million for implementation of an investment program, involving supply of a gas turbine plant of 50 MW capacity, and the energy efficiency measures.
- As of April 2012, the EBRD is considering financing the Shardara HPP rehabilitation project to replace old equipment and improve efficiency of this hydropower plant. JSC "Shardarinskaya GES" was incorporated in 1998 as an owner and manager of the 100MW Shardara hydropower plant. The Company is 100% owned by Samruk Energo, a power sector subsidiary of the National Welfare Fund Samruk Kazyna. The EBRD is considering making a senior 10 year amortising loan in the amount of up to €50 million to JSC "Shardarinskaya GES".
- As of August 2012, the EBRD is considering providing a loan to co-finance KTZ¹'s energy efficiency program, which is expected to include a number of components (upgrade of lighting system and electric infrastructure, heat pumps, solar water heaters, space heating and energy efficiency in buildings). KTZ (100 per cent owned by Samruk-Kazyna) is a vertically integrated company that manages railway infrastructure and operates freight and passenger train services. Senior loan of up to Tenge 29 billion (€140 million equivalent) is considered.

AZHK stand-alone financial statements are not available. The consolidated Samruk Energo financial statements (including AZHK) show a fairly strong balance sheet (shown in Exhibit below). The balance sheet shows about Tenge 233 billion (~ \$1.6 billion) of assets, including Tenge 154 billion of basic fixed assets and Tenge 56 billion of investments, and over Tenge 50 billion in receivables and cash. On the liabilities side, the company has over Tenge 99 billion of loans and over Tenge 27 billion of accounts payables. Overall, the company is financially healthy with a Current Ratio² of over 1.7 and Quick Ratio³ of over 1.5.

¹ KTZ (100 per cent owned by Samruk-Kazyna) is a vertically integrated company that manages railway infrastructure and operates freight and passenger train services.

² The current ratio is a financial ratio that measures whether or not a firm has enough resources to pay its debts over the next 12 months. It compares a firm's current assets to its current liabilities.

³ Quick ratio or liquid ratio measures the ability of a company to use its near cash or quick assets to extinguish or retire its current liabilities immediately. Quick assets include those current assets that presumably can be quickly converted to cash at close to their book values.

Exhibit – Company Balance Sheet

тыс. тенге	Примечание	2011 г.	2010 г.
АКТИВЫ			
Долгосрочные активы			
Основные средства	14	164,025,064	116,876,601
Нематериальные активы		711,149	331,676
Инвестиционная недвижимость	15	1,031,179	1,134,297
Инвестиции в совместные предприятия и ассоциированные компании	16	55,703,630	53,736,079
Прочие долгосрочные активы	17	11,901,377	27,196,622
Итого долгосрочных активов		233,372,339	199,269,275
Краткосрочные активы			
Земли	18	10,604,059	7,922,951
Торговая и прочая кредиторская задолженность	19	8,726,712	11,393,253
Прочие краткосрочные активы	20	9,272,243	6,206,597
Пролонгаты по подоходному налогу		382,415	362,156
Денежные средства и эквиваленты денежных средств	21	49,844,147	14,988,160
Активы, классифицированные как удерживаемые для продажи и активы группы выбытия	6	10,126,416	3,906,929
Итого краткосрочных активов		88,956,992	44,786,046
Всего активов		322,329,331	244,049,321
КАПИТАЛ И ОБЯЗАТЕЛЬСТВА			
Капитал			
Акционерный капитал	22	120,294,884	76,715,078
Прочий резервный капитал		29,473,162	26,833,774
Нераспределенная прибыль		19,917,339	6,771,848
Итого капитала, принадлежащего собственникам Компании		169,685,385	110,320,700
Часть, принадлежащая держателям неконтролирующих долей участия		2,142,287	1,981,484
Итого капитал		171,827,672	112,302,184
Обязательства			
Долгосрочные обязательства			
Кредиты и займы	23	83,506,212	77,411,510
Обязательства по вознаграждениям работникам	24	889,962	240,558
Резерв на восстановление золотоплавильнообтокателей	25	352,350	362,234
Отложенные налоговые обязательства	26	5,154,614	5,035,181
Прочие долгосрочные обязательства	27	7,550,074	8,106,869
Итого долгосрочных обязательств		97,453,212	91,156,352
Краткосрочные обязательства			
Кредиты и займы	23	16,060,628	9,079,618
Обязательства по вознаграждениям работникам	24	59,025	42,577
Торговая и прочая кредиторская задолженность	28	27,361,186	22,428,521
Пролонгаты по судебным разбирательствам	29	8,312,179	8,244,672
Прочие налоги к уплате		678,769	692,621
Подоходный налог к уплате		448,150	55,263
Обязательства (в составе выбывающей группы), классифицированные как удерживаемые для продажи	6	129,510	47,513
Итого краткосрочных обязательств		53,049,447	40,590,785
Итого обязательства		150,502,659	131,747,137
Всего капитал и обязательства		322,329,331	244,049,321

Source: SE Audited Financial Statements 2011

Exhibit below provides the details of the income statement. The company had over Tenge 17 billion (~ \$113 million) of EBITDA in 2011, up from Tenge 12 billion in 2010. Most of the cash came from operations.

Exhibit – Company Income Statement

тыс. тенге	Примечание	2011 г.	2010 г.
Доход	7	85,549,944	76,939,830
Себестоимость реализованной	8	(68,823,661)	(60,932,911)
Валовая прибыль		16,726,283	16,006,919
Прочие доходы, нетто	9	1,444,122	745,124
Расходы по реализации	10	(112,733)	(124,375)
Общие и административные расходы	11	(6,405,338)	(4,881,940)
Результаты операционной деятельности		11,652,334	11,745,778
Финансовые доходы	12	834,330	2,654,737
Финансовые расходы	12	(5,365,512)	(5,353,261)
Чистые финансовые расходы		(4,531,182)	(2,698,524)
Доля в прибыли объектов инвестиций, учитываемых методом долевого участия	16	10,024,877	3,449,013
Прибыль до налогообложения		17,146,029	12,296,277
Расход по подоходному налогу*	13	(2,219,436)	(1,214,618)
Прибыль за год		14,926,593	11,081,589
Прочий совокупный доход		-	-
Прибыль и общий совокупный доход за год		14,926,593	11,081,589
Прибыль и общий совокупный доход, приватизирующийся:			
Собственникам Компании		14,794,171	10,862,569
Держателям неконтролирующих долей участия		132,422	218,990
Прибыль и общий совокупный доход за год		14,926,593	11,081,589
Прибыль на акцию			
Базовая и разведенная прибыль на акцию	22(а)	3.34	3.19

Source: SE Audited Financial Statements 2011

CG is of the opinion that Samruk Energo will be able to fund the proposed T&D automation project using a combination of its operational budget and required borrowings.

2.5 EXPORT POTENTIAL

The United States has recently had a modest amount of power-related exports into Kazakhstan. Exhibit below provides the details of U.S. exports to Kazakhstan by category. In the last few years, the volume was stable at about \$220 million per year. Electrical equipment amounted to slightly over \$50 million.

Exhibit 2-11 - U.S. Exports to Kazakhstan (\$M)

Item	2005	2006	2007	2008	2009	2010	2011
Compressors	3	6	10	39	20	96	77
Internal Combustion Engines	0	0	0	2	10	41	53
Valves	15	7	14	18	19	13	17
Pumps	3	7	13	9	7	14	13
Filters, Centrifuges	5	2	3	12	5	6	5
Gas Turbines	0	2	2	2	6	42	4
Bearings and Gears	0	0	1	2	2	2	3
Boilers	1	-	3	0	0	0	1
Gensets	0	0	0	2	2	4	13
Generators	0	0	0	0	1	4	8
Generators other	0	0	0	3	3	3	7
Automation	1	1	1	4	2	5	7
Wires	0	2	3	4	4	4	7
Transmission	0	2	1	2	2	1	2
Switches <1kV	1	0	0	1	2	1	2
Switches >1kV	0	0	0	1	1	1	1
TOTAL	31	30	52	99	84	237	223

It should be noted that the AZHK T&D system is large and complex. Based on the discussions, AZHK would be interested in evaluating optimal automation level during the feasibility study finding the balance between practical approach and technical capabilities.

AZHK is considering the following systems and tools which would also need to be integrated into its operations, which Contractor shall also review:

- Modern SCADA system at 220 kV to 0.4 kV levels;
- Smart metering at large commercial customers;
- Outage Management System (OMS);
- Communications System for Distribution Automation; and
- Potential smart metering (on pilot scale) for small commercial and residential customers.

The following estimate provides wide ranges of automation levels with lowest cost option including installation of above listed systems at higher voltage levels and higher cost option including installation of above listed systems at lower voltage levels.

The overall estimated project cost (without contingency) is in the \$43-81 million. This estimate is based on the design details above. U.S. exports could reach the \$28-55 million (~68%) level on a probability weighted basis. Exhibit below shows the approximate breakdown of major equipment costs and the potential share of U.S. exports.

Exhibit - Sample Project Budget Estimate and Share of U.S. Exports

Major Equipment/Services	Approximate Total Cost	U.S. Exports (U.S. Competitiveness)
Major Equipment	\$40-78 million	\$24.5-52 million
- SCADA System	\$10-30 million ¹	\$10-30 million (excellent)
- Larger Commercial and Residential Smart Meters Pilot (100,000 customers)	\$24 million	\$12 million (good)
- Outage Management System (OMS)	\$2-8 million	\$0.5-2 million (fair)
- Distribution Management System (DMS)	\$4-16 million	\$2-8 million (good)
Engineering and Design	\$3 million	\$3 million (Excellent)
Total Value (w/o Contingency)	\$43-81 million	\$27.5-55 million

Source: CG Estimate

Exhibit below lists a number of U.S. firms that have suitable credentials for the proposed project follow-up procurement.

Exhibit - U.S. Equipment and Services Suppliers

<u>SCADA:</u>	<u>Smart Meters and Software:</u>	<u>OMS:</u>	<u>DMS:</u>
<ul style="list-style-type: none"> ▪ Emerson ▪ Honeywell ▪ GE ▪ Siemens ▪ Areva ▪ Open Systems 	<ul style="list-style-type: none"> ▪ Itron ▪ GE ▪ Echelon ▪ IBM ▪ Silver Spring Networks ▪ Sensus Metering Systems ▪ eMeter ▪ GridPoint ▪ Comverge ▪ EnerNOC 	<ul style="list-style-type: none"> ▪ ABB Network ▪ Oracle NMS ▪ GE ▪ IBM ▪ Miner ▪ Intergraph 	<ul style="list-style-type: none"> ▪ Emerson ▪ Honeywell ▪ GE ▪ Siemens USA ▪ Areva T&D USA ▪ Current ▪ ACS

Source: CG

The Consultant discussed T&D automation U.S. content with Emerson, Honeywell, Echelon, GE, and Itron. Results of these discussions are confidential.

2.6 FOREIGN COMPETITION AND MARKET ENTRY ISSUES

¹ Depends on complexity, subject to feasibility study findings. Lower end of the range represents basic configuration and high end of the range represents detailed layout configuration estimate. Similar is applicable for DMS and OMS.

Foreign companies have been very active in Kazakhstan. CG is aware of past country-wide purchases of electric power equipment from LG (Korea), ABB (Switzerland), Siemens (Germany), and Multiple Vendors from China, Russia, Ukraine, and Belarus.

The strongest foreign competition is likely to come from European firms, in particular from France, Germany, and Switzerland. Following are the major international providers of smart meters and smart meter support systems:

- ABB, Germany ;
- Siemens, Germany ;
- Landis+Gyr, Switzerland (now part of Itron Group);
- Sagem, France; and
- Elster Group, Germany.

These companies have an extensive track record of supplying transmission automation solutions to EU member countries and customers worldwide.

2.7 DEVELOPMENTAL IMPACT

This project is supportive of national government objectives to improve grid stability and reliability and minimize electricity costs. According to USTDA criteria, the project's potential development impacts include the following:

Infrastructure -- The Project will develop a plan for the implementation of an advanced T&D automation system in Kazakhstan. Among potential infrastructure improvements are meter replacements, reinforcement of the existing communication infrastructure, construction of new data terminals for storage and processing of load data, and implementation of advanced software systems. The pilot project can include as many as 100,000 meters.

Human Capacity Building -- The proposed automation improvements will create new jobs in installation, maintenance, data collection and integration, analysis, billing, and other areas. Employment opportunities will be available for technical, analytical, construction, and administrative people during the installation and commercial operation phases of the project. While specific number of jobs depend on the final system layout, the SCADA, OMS, and DMS systems may require over 15 full-time specialists. Their installation as well as the installation of 100,000 meters may require over 150 part-time jobs.

Technology Transfer and Productivity - By implementing this project, the Sponsor shall receive access to modern transmission and distribution technology which can be replicated in other electricity networks in Kazakhstan. The productivity

improvements shall also be significant and include efficiency improvements in data collection and analysis as well as in the losses reduction and operations optimization.

Other - The automation infrastructure should have some positive environmental benefits including recycling of older equipment and reduction of emissions from maintenance operations and data collection.

2.8 ENVIRONMENTAL IMPACT

The project is expected to have a positive effect on the environment.

Among the anticipated positive environmental impacts are the following:

- Air emission reductions due to less meter reading and outages;
- Ability to optimize power purchases leading to more efficient power generation;
- Training on environmental issues will be provided to locals;
- Life quality improvement for local communities due to new income;
- Social commitment regarding education, health and production of goods; and
- Line loss reduction leading to reduction in power generation.

Potential negative environmental impacts include the following:

- Potential environmental issues with old equipment removal;
- Old equipment disposal;
- Sound pollution during installations; and
- Equipment transit during construction.

2.9 IMPACT ON U.S. LABOR

CG anticipates no negative impacts on U.S. employment due to this project. The project would provide planning guidance for the T&D system and not products that could be imported into the U.S. On the other hand, positive impacts will result in the event U.S. exporters succeed in obtaining contracts to provide equipment and services when the project goes forward, and this could conceivably serve as a catalyst for further projects in the region.

No adverse impact is expected from the execution of the proposed project. Its significant export potential would assure the bulk of the production of major goods in the U.S. and their export to the host country. No significant permanent new job creation impacting U.S. jobs is expected outside the U.S.

2.10 QUALIFICATIONS

In the event that USTDA provides grant funds for this project, the selection of a contractor to perform the Feasibility Study should be based on competitive bidding. The proposed selection criteria to be used in ranking the bids received from qualified bidders are as follows.

Professional Experience (30%) - Each bidder shall propose a project team that will be fully qualified to execute the entire scope of work of the study. The proposed staff should have qualifications and experience in engineering, design, technical analysis, operations planning and modeling, environmental assessments, as well as in-depth technical knowledge of smart metering and T&D automation infrastructure, including software and hardware for integration into existing systems. Experience with electric utilities would be beneficial. Qualified bidders will be expected to provide evidence of satisfactorily executing at least three (3) similar projects, with one project currently on-going or completed in the last 3 years. The reference projects (except for current or recently completed) should exhibit similar or larger size and complexity as the proposed one.

International Experience (30%) - Each bidder shall exhibit international experience and the capability to perform similar international feasibility studies. Qualified bidders will be expected to provide evidence of satisfactorily executing at least two (2) international projects in the last 5 years. Reference international projects should exhibit similar or larger size and complexity as the proposed project.

Proposed Work Plan (40%) - Each bidder shall demonstrate an understanding of all the project tasks. Proposal efforts should be responsive to the requirements outlined in the Terms of Reference. The proposed Work Plan should be detailed, realistic, and manageable. Clear objectives should be achieved at the end of each and all tasks.

2.11 JUSTIFICATION

The proposed T&D automation project will have the following major benefits:

- Reduce technical losses due to operation inefficiencies reduction (better complex geography management, homogeneous layout planning, and increased data collection and metering);
- Decrease of commercial losses due to higher enforcement and ability to simplify grid;
- Better management of reactive power compensation; and
- Implementation of scalable advanced metering pilot system;

- Reduction of non-payments while maintaining a basic level of social assistance; and
- Assistance in electricity generation optimization.

The proposed project clearly satisfies USTDA funding criteria:

- The Project Sponsor is willing to provide “equal access” to U.S. firms in procurement resulting from this project;
- The amount of post-project procurement should be significantly higher than study funding. The estimate for U.S. exports is in \$28-55 million range. The U.S. companies have expressed interest in the project.;
- The project is clearly a priority for the country and will be viewed favorably by the U.S. Embassy; and
- The proposed project shall assist U.S. companies facing significant competition from EU and other regional competitors.

2.12 TERMS OF REFERENCE

The vision of Almaty Zharik Kompanijasi (AZHK or Grantee), an Almaty area electricity distribution company, is to provide world-class service by employing an integrated distribution system. The integrated system would allow AZHK to tie customer data with supply information in real time, resulting in more cost-effective service, lower losses, and quicker responses to network and system problems. As part of the integration implementation process, certain evaluation studies need to be carried out prior to selection of equipment, software, and service providers. These Terms of Reference will provide the necessary analysis, evaluation, and planning for this system.

The aim of this Feasibility Study (FS) is to develop the planning and technical design aspects of a high-level distribution systems integration strategy. The Contractor will provide:

- A strategic evaluation and assessment of the suitability of the current technology, software, and distribution management systems;
- A high level integration plan/strategy to help inter-link the numerous databases and information systems; and
- A detailed implementation plan and supporting requests for proposals, Terms of Reference, and budget estimates for all the major elements of the strategy.

Task 1 - Review of Current Business Processes, Asset Management Practices and Systems, and Tools

The Contractor shall travel to Kazakhstan to meet with the AZHK staff to review AZHK's current system for managing company resources and delivery of power to customers. Specifically, the Contractor shall:

1.1. *Review current distribution system management practices and IT applications.* In this process, the Contractor shall examine the following systems and tools in place at AZHK:

- 220/110/35 kV interfaces;
- 35/6-10/0.4 kV interfaces;
- Geographic Information Systems (GIS) Planning and Design;
- Enterprise Resource Program (ERP);
- Customer Information System (CIS);
- Customer Relations Management (CRM) and Customer Database; and
- Communications Inter-link.

AZHK is presently considering the following systems and tools which would also need to be integrated into its operations, which Contractor shall also review:

- Modern SCADA system at 220 kV to 0.4 kV levels;
- Smart metering at large commercial customers;
- Outage Management System (OMS);
- Communications System for Distribution Automation; and
- Potential smart metering (on pilot scale) for small commercial and residential customers.

1.2. *Assess current linkages to the national transmission system.* The Contractor shall meet with AZHK's transmission staff to better understand how AZHK interacts with KEGOC at the transmission level. AZHK currently purchases approximately 5,200 GWh of power annually from KEGOC. The Contractor shall also assess the future needs and integration requirements that will allow for better management of AZHK's distribution system and link to the national transmission system.

1.3. *Data and database evaluation.* The Contractor shall review currently available data and assess future needs under an integrated system. AZHK currently operates several separate databases that are currently not linked. In many cases data capture processes are redundant and inefficient. The Contractor shall review these databases and data collection systems and identify these redundant processes.

Most original data and documents are expected to be in Russian. The Contractor shall translate the required documents into English for its use. The allowance for translation is included in the budget.

Deliverable: The Contractor shall prepare an inception Report on the state of AZHK's distribution operations, metering and billing procedures. The report shall outline specific problems that may be reduced or eliminated by the introduction of a modern SCADA system.

Task 2 - Integration Strategy

AZHK new modern system requirements include:

- Market energy purchases and sales;
- Identification of major losses and tools to minimize them;
- Ability to extensively exchange data with parts of AZHK system and external constituencies;
- Load management; and
- Comply with current laws for commercial transactions in wholesale and retail markets.

AZHK has a pre-feasibility level view of automation and data collection points including:

- Two centers for data collection and integration at corporate headquarters and distribution company control center;
- Network centers for data collection and integration at six (6) city distribution centers;
- Network centers for data collection and integration at nine (9) regional distribution centers;
- Power supply infrastructure for 195 locations;
- 10 kV Regional Substation for 111 locations;
- Metering equipment at 10/0.4 kV transformer substations - at 6904 locations; and
- Pilot initiatives at customer locations (TBD - currently over 660,000 customers).

After reviewing the current AZHK system, and keeping the above mentioned new system requirements in mind, the Contractor shall work closely with AZHK staff to develop a high-level Integration Strategy to improve the current operations of the company and allow for more seamless interaction between the key departments and data management systems. This will specifically include:

- 2.1 Gap Analysis.* Based on the system review completed in Task 1, the Contractor shall conduct a gap analysis to identify possible areas for improved systems management and information management. This will specifically include:
- An evaluation of the interdependence of each system and ways to increase efficient information flow;
 - Presentation of current operational process and work flows; and

- A review and evaluation of current human resources to determine future human resource needs.

2.2 *Integration requirements.* The Contractor shall identify key high-level integration requirements and goals for AZHK. This shall include a review of system interface and information exchange requirements mandated by the market regulator. The Contractor shall review the current and planned regulatory/standards requirements and statutes put forth by the Agency of the Republic of Kazakhstan on Regulation of Natural Monopolies (ANMR) and ensure that any plans for integration comply with these requirements and statutes.

2.3 *Integration strategy recommendation.* The Contractor shall develop a strategy to link currently systems, taking into account current operational procedures and future requirements for AZHK. This shall include:

- An assessment and analysis of the key requirements for implementation of an integrated IT and management system, specifically evaluating cost and complexity of solution/strategy.
- A clear and logical presentation of the planned changes as well as a justification for each change.
- A presentation of proposed future operational processes and work flows.
- A preliminary budget for the proposed integration strategy.
- A business case to assess and justify the potential investment requirements necessary for the proposed investment. This business case will clearly indicate the financial and economic/social return to AZHK of the proposed changes.

Deliverable: The Contractor shall provide a draft version of the Integration Strategy to AZHK for review and consideration. AZHK may require changes to the Strategy in order to more effectively meet its goals. Once the draft strategy has been approved, the Contractor shall provide a final version. These documents shall include all the work and recommendations presented in Task 2.

Task 3 – Estimate the Cost of the Compliance Plan

In this Task, the Contractor shall estimate the proposed system all-in lifecycle cost for the project plan developed in Tasks 1 and 2. The Contractor shall be responsible for recommending the least-cost capital investment plan associated with the project plan.

The estimate shall include the cost of materials, labor, logistics and contingencies for full implementation. The Grantee may provide supporting cost estimates based on

prior pilot projects. These estimates (if available) are expected to be independently assessed and verified by the Contractor.

The major equipment detail cover as a minimum the following systems:

- SCADA System ;
- Larger Commercial and Residential Smart Meters Pilot;
- Outage Management System (OMS); and
- Distribution Management System (DMS).

The estimate precision is expected to be at least 75th percentile.

The Contractor will also assess any additional costs which may arise due to the need for retaining specific labor, and pension payments for jobs lost due to the program.

Deliverable: The Contractor shall provide a detailed least-cost investment plan for project implementation.

Task 4 - Perform Financial Analysis and Sensitivities

The Contractor shall conduct an economic analysis for the plan developed in Tasks 1 and 2. It shall be based on the capital estimate developed in Task 3. Both cost estimate and the plan may need to be revised based on the conclusions of the economic analysis conducted under this Task.

The analysis will result in a set of profitability indicators, such as net present value (NPV), internal rate of return (IRR), payback period, and earnings accretion/dilution. The Contractor shall conduct an economic sensitivity analysis of each major plan component reflecting variations in interest rates, electricity tariffs, sales volumes, and equipment costs. The Contractor shall seek AZHK's input and, if obtained, reflect the input in the analyses.

The Contractor shall include a determination of the estimated net benefits/costs (direct and indirect for the utility) expected as a result of compliance with local tariff methodology. Contractor shall estimate the impact on AZHK's customer rates and bills due to implementation of the proposed project. The Contractor shall conduct and provide a pro-forma assessment of any tariff increases required (if any) for the sustainability of the project.

Deliverable: The Contractor shall provide economic analyses including sensitivity analyses for all major elements of the project.

Task 5 - Implementation Plan

Once the Integration Strategy has been approved by AZHK, the Contractor shall develop a detailed Implementation Strategy with appropriate phasing and sequencing of business priorities and milestones. The Contractor shall provide an assessment of how the Integration Strategy will impact operations and a strategy to minimize any negative impacts. The Contractor shall present a preliminary budget for the overall cost of implementing the Integration Strategy. The Contractor shall present a detailed schedule of activities necessary to realize the proposed Integration Strategy over a 12 month period. This should include a set of targets and milestones and financial outlays.

Deliverable: The Contractor shall provide a draft version of the Implementation Plan to AZHK for review and consideration. AZHK may require changes to the Plan in order to more effectively meet its goals. Once the draft Plan has been approved, the Contractor shall provide a final version. These documents will include all the work and recommendations presented in Task 5, including goods and service requirements (including IT equipment upgrades, automation equipment, and communications equipment) and cost estimates for all recommended goods and service.

Task 6 - Preparation of All Procurement Related Documents and Specifications

Once the Integration Strategic Study and Implementation Plan have been approved by AZHK, the Contractor shall provide a procurement package, including all documents, descriptions, performance criteria, terms of reference and similar materials necessary and appropriate to support the procurement of the integrated IT system described in these Terms of Reference. The exact list of documents will depend on the final draft of the Strategic Integration study. This may include, but not be limited to, terms of reference and budgets for:

- Automation and communications equipment, and specialized implementation and design support;
- Other supporting distribution equipment upgrade requirements; and
- IT equipment, software, and specialized implementation and design support.

Deliverable: The Contractor shall provide a set of procurement documents for all major equipment and services required for project implementation.

Task 7 - Environmental and Social/Development Impact Assessment

The Contractor shall conduct an environmental and social impact assessment(s).

The proposed project is not expected to have any negative, direct environmental impacts because it is focused on replacing existing outdated equipment and software systems with the new ones. The environmental review shall include but not be limited to the following:

- Existing equipment disposition and recycling;
- Air quality and noise;
- Socio-economics/human resources;
- Environmental risk assessment;
- Occupational health and safety.

The Contractor shall also provide a report on the potential social and development impacts of the Projects in the Host Country. The Contractor shall focus on what the economic development outcomes will be if the Projects are implemented according to the Study recommendations. While the report should specifically address the immediate impact of the Projects, the Contractor shall also discuss, where appropriate, any additional developmental benefits of the Projects, including spin-off and demonstration effects. The analysis of potential benefits of the study should be as concrete and detailed as possible. The Contractor shall provide estimates of the Project's potential benefits in the following areas:

- Infrastructure: a statement on the infrastructure impacts (e.g., new automation built, additional electricity supplied).
- Market-Oriented Reform: a description of any regulations, laws, or institutional changes that are recommended and the effect they would have if implemented.
- Human Capacity Building: a description of the number and type of staff positions that would be needed to construct and operate the Project, the number of people that will be needed to process construction materials, as well as the number of people who will receive training and a brief description of the training program.
- Technology Transfer and Productivity Enhancement: a description of any advanced technologies that will be implemented as a result of the Project, and a description of any efficiency that will be gained.
- Other: any other developmental benefits of the Project, including spin-off or demonstration effects.

Deliverable: The Contractor shall provide an environmental, social and development impact assessment in the Project Report.

Task 9 – Draft Final and Final Report Preparation and Presentation

The Contractor shall prepare a Draft Final Report and present its findings to the Grantee. The presentation is expected to be attended by AZHK and some of AZHK's stakeholders as identified by the Grantee.

The Contractor shall prepare and deliver to the Grantee a substantive and comprehensive Draft Final Report and Presentation of all work performed under these Terms of Reference. The Report shall be organized according to the preceding project tasks, and shall include all deliverables and documents that have been provided to the Grantee. The Grantee is expected to provide comments on the Report within a four (4) week period.

Based on the tasks performed, the Contractor shall prepare a brief summary (less than 5 pages) of findings that can be used by ANMR in assessing regulatory aspects of the distribution grid improvements and automation implementation. Such findings shall include at least:

- Lessons learned on the cost of automation implementation;
- Implementation planning in Republic of Kazakhstan;
- Technical specification lessons learned;
- Evaluation of losses reduction assessment;
- Potential of system use for peak shift and load management; and
- Beneficial use of automation grid technology for alternative tariff R&D.

Once the Grantee has provided comments and revisions to the Draft 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"). The Final Report shall incorporate all of the findings, recommendations, and conclusions of the TA and shall incorporate all other documents and/or reports provided pursuant to the preceding tasks.

It is the Contractor's responsibility to identify prospective U.S. Sources of Supply in the Final Report to be submitted to USTDA and the Grantee in accordance with Clause J of Annex II of the Grant Agreement. The U.S. Suppliers list shall identify the capabilities, addresses, and principal points of contact for each of the suppliers. The Final Report shall be provided no later than two (2) weeks after the receipt of Grantee comments. The Final Report shall be prepared in English and translated into Russian.

2.13 BUDGET AND SCHEDULE

The proposed project implementation schedule is presented in Exhibit below. The duration of the total effort is estimated at 8 months with most of the tasks being

accomplished sequentially. The Final Report issuance is expected in 8 months since notice to proceed.

Project Schedule

No.	Task Name	Duration (days)	Months								
			1	2	3	4	5	6	7	8	
1	Review of Current Business Processes, Asset Management Practices and Systems, and Tools Integration Strategy	40	█	█							
2	Estimate the Cost of the Compliance Plan	40		█	█	█					
3	Perform Financial Analysis and Sensitivities	25				█	█				
4	Implementation Plan	20					█	█			
5	Preparation of All Procurement Related Documents and Specifications	30						█	█	█	
6	Environmental and Social/Development Impact Assessment	25								█	█
7	Draft Final and Final Report Preparation and Presentation	20									█

The recommended feasibility study budget is provided below. A detailed breakdown by task and discipline is provided for labor. The total budget for this project is estimated to be \$614,615.

Feasibility Study Budget

DIRECT LABOR COSTS:

TOR Task	TOR Task Name (per Section L of application)	Contractor Labor			
		Total Person Days	x Daily Rate*	= TOTAL COST	
1	Review of Current Business Processes, Asset Management Practices and Systems, and Tools	Project Manager	15.00	\$ 1,575.00	\$ 23,625.00
		Senior Automation/Distribution Specialist(s)	15.00	\$ 1,100.00	\$ 16,500.00
		Senior Discipline Engineer	20.00	\$ 1,390.00	\$ 27,800.00
		Economics/Finance Specialist	5.00	\$ 1,100.00	\$ 5,500.00
		Legal/Development Specialist	5.00	\$ 1,390.00	\$ 6,950.00
		Estimating/Planning Specialist(s)	5.00	\$ 1,100.00	\$ 5,500.00
		Junior Engineer/Specialist	30.00	\$ 700.00	\$ 21,000.00
		Administrative	5.00	\$ 465.00	\$ 2,325.00
		TOTALS	100.00		\$ 109,200.00
		2	Integration Strategy	Project Manager	15.00
Senior Automation/Distribution Specialist(s)	15.00			\$ 1,100.00	\$ 16,500.00
Senior Discipline Engineer	15.00			\$ 1,390.00	\$ 20,850.00
Economics/Finance Specialist	2.00			\$ 1,100.00	\$ 2,200.00
Legal/Development Specialist	2.00			\$ 1,390.00	\$ 2,780.00
Estimating/Planning Specialist(s)	5.00			\$ 1,100.00	\$ 5,500.00
Junior Engineer/Specialist	40.00			\$ 700.00	\$ 28,000.00
Administrative	5.00			\$ 465.00	\$ 2,325.00
TOTALS	99.00				\$ 101,780.00
3	Estimate the Cost of the Compliance Plan			Project Manager	5.00
		Senior Automation/Distribution Specialist(s)	5.00	\$ 1,100.00	\$ 5,500.00
		Senior Discipline Engineer	5.00	\$ 1,390.00	\$ 6,950.00
		Economics/Finance Specialist	2.00	\$ 1,100.00	\$ 2,200.00
		Legal/Development Specialist	1.00	\$ 1,390.00	\$ 1,390.00
		Estimating/Planning Specialist(s)	15.00	\$ 1,100.00	\$ 16,500.00
		Junior Engineer/Specialist	15.00	\$ 700.00	\$ 10,500.00
		Administrative	1.00	\$ 465.00	\$ 465.00
		TOTALS	49.00		\$ 51,380.00
		4	Perform Financial Analysis and Sensitivities	Project Manager	5.00
Senior Automation/Distribution Specialist(s)	5.00			\$ 1,100.00	\$ 5,500.00
Senior Discipline Engineer	5.00			\$ 1,390.00	\$ 6,950.00
Economics/Finance Specialist	15.00			\$ 1,100.00	\$ 16,500.00
Legal/Development Specialist	3.00			\$ 1,390.00	\$ 4,170.00
Estimating/Planning Specialist(s)	5.00			\$ 1,100.00	\$ 5,500.00
Junior Engineer/Specialist	15.00			\$ 700.00	\$ 10,500.00
Administrative	2.00			\$ 465.00	\$ 930.00
TOTALS	55.00				\$ 57,925.00
5	Implementation Plan			Project Manager	10.00
		Senior Automation/Distribution Specialist(s)	5.00	\$ 1,100.00	\$ 5,500.00
		Senior Discipline Engineer	5.00	\$ 1,390.00	\$ 6,950.00
		Economics/Finance Specialist	2.00	\$ 1,100.00	\$ 2,200.00
		Legal/Development Specialist	1.00	\$ 1,390.00	\$ 1,390.00
		Estimating/Planning Specialist(s)	2.00	\$ 1,100.00	\$ 2,200.00
		Junior Engineer/Specialist	15.00	\$ 700.00	\$ 10,500.00
		Administrative	1.00	\$ 465.00	\$ 465.00
		TOTALS	41.00		\$ 44,955.00
		6	Preparation of All Procurement Related Documents and Specifications	Project Manager	5.00
Senior Automation/Distribution Specialist(s)	10.00			\$ 1,100.00	\$ 11,000.00
Senior Discipline Engineer	10.00			\$ 1,390.00	\$ 13,900.00
Economics/Finance Specialist	5.00			\$ 1,100.00	\$ 5,500.00
Legal/Development Specialist	5.00			\$ 1,390.00	\$ 6,950.00
Estimating/Planning Specialist(s)	5.00			\$ 1,100.00	\$ 5,500.00
Junior Engineer/Specialist	15.00			\$ 700.00	\$ 10,500.00
Administrative	5.00			\$ 465.00	\$ 2,325.00
TOTALS	60.00				\$ 63,550.00

Feasibility Study Budget (Continued)

7	Environmental and Social/Development Impact Assessment	Project Manager	5.00	\$	1,575.00	\$	7,875.00
		Senior Automation/Distribution Specialist(s)	5.00	\$	1,100.00	\$	5,500.00
		Senior Discipline Engineer	10.00	\$	1,390.00	\$	13,900.00
		Economics/Finance Specialist	0.00	\$	1,100.00	\$	-
		Legal/Development Specialist	10.00	\$	1,390.00	\$	13,900.00
		Estimating/Planning Specialist(s)	0.00	\$	1,100.00	\$	-
		Junior Engineer/Specialist	10.00	\$	700.00	\$	7,000.00
		Administrative	1.00	\$	465.00	\$	465.00
		TOTALS	41.00			\$	48,640.00
8	Draft Final and Final Report Preparation and Presentation	Project Manager	10.00	\$	1,575.00	\$	15,750.00
		Senior Automation/Distribution Specialist(s)	5.00	\$	1,100.00	\$	5,500.00
		Senior Discipline Engineer	5.00	\$	1,390.00	\$	6,950.00
		Economics/Finance Specialist	2.00	\$	1,100.00	\$	2,200.00
		Legal/Development Specialist	3.00	\$	1,390.00	\$	4,170.00
		Estimating/Planning Specialist(s)	3.00	\$	1,100.00	\$	3,300.00
		Junior Engineer/Specialist	15.00	\$	700.00	\$	10,500.00
		Administrative	5.00	\$	465.00	\$	2,325.00
		TOTALS	48.00			\$	50,695.00
		TOTAL CONTRACTOR LABOR	493.00				528,125.00
TOR Task	TOR Task Name		Non-Employee Labor				
			Total Person Days x		Daily Rate**	=	TOTAL COST
1	Review of Current Business Processes, Asset Management Practices and Systems, and Tools	Local Specialists	35	\$	250.00	\$	8,750.00
2	Integration Strategy	Local Specialists	35	\$	250.00	\$	8,750.00
3	Estimate the Cost of the Compliance Plan	Local Specialists	20	\$	250.00	\$	5,000.00
4	Perform Financial Analysis and Sensitivities	Local Specialists	10	\$	250.00	\$	2,500.00
5	Implementation Plan	Local Specialists	25	\$	250.00	\$	6,250.00
6	Preparation of All Procurement Related Documents and Specifications	Local Specialists	30	\$	250.00	\$	7,500.00
7	Environmental and Social/Development Impact Assessment	Local Specialists	35	\$	250.00	\$	8,750.00
8	Draft Final and Final Report Preparation and Presentation	Local Specialists	5	\$	250.00	\$	1,250.00
		TOTAL HOST COUNTRY LABOR	195.00			\$	48,750.00
	TOTAL DIRECT LABOR COSTS					\$	576,875.00
OTHER DIRECT COSTS:							
<u>Purchased Services/Contracts***</u>	<u>Tasks</u>						TOTAL COST
<u>Travel</u>			<u>Trips</u>		<u>Trip Cost</u>		<u>Total Cost</u>
International Air Travel			6	\$	2,500.00	\$	15,000.00
Domestic Travel			6	\$	400.00	\$	2,400.00
Per Diem			<u>Trip Days</u>		<u>Per Diem Rate</u>	\$	
Other (travel, etc.)			30	\$	338.00	\$	10,140.00
						\$	1,500.00
<u>Other</u>						\$	
Reproduction and Binding						\$	1,000.00
Translations						\$	4,500.00
Communication						\$	1,000.00
Courier Services						\$	1,000.00
Insurance						\$	1,200.00
	TOTAL OTHER DIRECT COSTS					\$	37,740.00
	TOTAL COSTS (DIRECT LABOR COSTS + OTHER DIRECT COSTS)					\$	614,615.00
	Total Cost Share	Draft @	0%			\$	-
	PROPOSED USTDA GRANT					\$	614,615.00

* Primary Contractor (Employee) Labor Costs = Salary + Overhead + Benefits (No Fee or Profit)

** Non-Employee Labor Cost = Salary + Overhead + Benefits + Reasonable Fee or Profit

*** Purchased Services/Contracts may include engineering drawings, lab work, surveys, translation, etc. which would not be included in Non-Employee Labor Cost above

ANNEX 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 this nationality, source and origin requirements may be addressed to the USTDA Office of General Counsel.

ANNEX 4

GRANT AGREEMENT



This Grant Agreement is entered into between the Government of the United States of America, acting through the U.S. Trade and Development Agency ("USTDA") and JSC Alatau Zharyk Company ("Grantee"). USTDA agrees to provide the Grantee under the terms of this Grant Agreement US\$614,615 ("USTDA Grant") to fund the cost of goods and services required for a feasibility study ("Study") on the proposed AZHK Smart Grid project ("Project") in Kazakhstan ("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 by mutual consent 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) subject to the conditions specified in Article 5 (C) (2) above, 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.

(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 Deputy Managing Director for Finance. 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. Dauren Baimagambetov
Deputy Managing Director for Finance
JSC Alatau Zharyk Company
7 Dostyk Avenue
050002 Almaty
Kazakhstan

Phone: +7-717-255-30-21
Fax: +7-717-255-30-30
E-Mail: dbaimagambetov@azhk.kz

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.: 1112/131001
Activity No.: 2013-21004A
Reservation No.: 2013140
Grant No.: GH201321140

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.

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IN WITNESS WHEREOF, the Government of the United States of America and JSC Alatau Zharyk Company, each acting through its duly authorized representative, have caused this Grant Agreement to be signed in the English language in their names and delivered as of the day and year written below. In the event that this Grant Agreement is signed in more than one language, the English language version shall govern.

**For the Government of the
United States of America**

By: 

Date: 15 May 2013

Witnessed:

By: 

For JSC Alatau Zharyk Company

By: 

Date: 15.05.2013,

Witnessed:

By: _____

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 JSC Alatau Zharyk Company ("Client"), dated _____ ("Grant Agreement"). The Client has selected _____ ("Contractor") to perform the feasibility study ("Study") for the AZHK Smart Grid project ("Project") in Kazakhstan ("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.: 1112/131001
Activity No.: 2013-21004A
Reservation No.: 2013140
Grant No.: GH201321140

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. Dauren Baimagambetov
Title: Deputy Managing Director for Finance
Phone: +7-717-255-30-21
Fax: +7-717-255-30-30
E-Mail: dbaimagambetov@azhk.kz

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 vision of the Grantee, an Almaty area electricity distribution company, is to provide world-class service to its customers by employing an integrated distribution system. The integrated system would allow AZHK to tie customer data with supply information in real time, resulting in more cost-effective service, lower losses, and quicker responses to network and system problems. The Study will provide the necessary analysis, evaluation, and planning for this system.

The aim of this Study is to develop the planning and technical design aspects of a high-level distribution systems integration strategy. The Contractor shall provide:

- a strategic evaluation and assessment of the suitability of the current technology, software, and distribution management systems;
- a high level integration plan/strategy to help inter-link the numerous databases and information systems; and
- a detailed implementation plan and supporting requests for proposals, terms of reference, and budget estimates for all the major elements of the strategy.

Task 1 - Review of Current Business Processes, Asset Management Practices and Systems, and Tools

The Contractor shall travel to Kazakhstan to meet with Grantee staff to review the Grantee's current system for managing company resources and delivery of power to customers. Specifically, the Contractor shall:

1.1. Review current distribution system management practices and IT applications.

For this subtask, the Contractor shall examine the following systems and tools in place at AZHK:

- 220/110/35 kilovolt (kV) interfaces;
- 35/6-10/0.4 kV interfaces;
- Geographic Information Systems (GIS) Planning and Design;
- Enterprise Resource Program (ERP);
- Customer Information System (CIS);
- Customer Relations Management (CRM) and Customer Database; and
- Communications Inter-link.

The Grantee is presently considering the following systems and tools that would also need to be integrated into its operations, which Contractor shall also review:

- Modern Supervisory Control and Data Acquisition (SCADA) system at 220 kV to 0.4 kV levels;
- Smart metering at large commercial customers;

- Outage Management System (OMS);
- Communications System for Distribution Automation; and
- Potential smart metering (on a pilot scale) for small commercial and residential customers.

1.2. Assess current linkages to the national transmission system. The Contractor shall meet with the Grantee's transmission staff to better understand how the Grantee interacts with the transmission operator, Kazakhstan Electricity Grid Operating Company (KEGOC), at the transmission level. The Grantee currently purchases approximately 5,200 Gigawatt hours (GWh) of power annually from KEGOC. The Contractor shall also assess the future needs and integration requirements that will allow for better management of the Grantee's distribution system and link to the national transmission system.

1.3. Data and database evaluation. The Contractor shall review currently available data and assess future needs under an integrated system. The Grantee currently operates several separate databases that are currently not linked. In many cases data capture processes are redundant and inefficient. The Contractor shall review these databases and data collection systems and identify these redundant processes.

Most original data and documents are expected to be in Russian. The Contractor shall translate the required documents into English for its use at its own expense.

Deliverable: The Contractor shall provide the Grantee a comprehensive report of the results of all the work in Task 1 including an inception Report on the state of the Grantee's distribution operations, metering and billing procedures. The report shall outline specific problems that may be reduced or eliminated by the introduction of a modern SCADA system.

Task 2 - Integration Strategy

The Grantee's new modern system requirements include:

- *Market energy purchases and sales;*
- *Identification of major losses and tools to minimize them;*
- *Ability to extensively exchange data with parts of the Grantee's system and external constituencies;*
- *Load management; and*
- *Comply with current laws for commercial transactions in wholesale and retail markets.*

The Grantee has a pre-feasibility level view of automation and data collection points including:

- Two centers for data collection and integration at corporate headquarters and distribution company control center;
- Network centers for data collection and integration at six (6) city distribution centers;
- Network centers for data collection and integration at nine (9) regional distribution centers;
- Power supply infrastructure for 195 locations;
- 10 kV Regional Substation for 111 locations;
- Metering equipment at 10/0.4 kV transformer substations – at 6904 locations; and
- Pilot initiatives at customer locations (number of customers and location to be determined – Grantee currently has over 660,000 customers).

After reviewing the Grantee's current system, and keeping the above mentioned new system requirements in mind, the Contractor shall work closely with Grantee staff to develop a high-level Integration Strategy to improve the current operations of the company and allow for more seamless interaction between the key departments and data management systems. The Contractor shall perform the following:

2.1 Gap Analysis. Based on the system review completed in Task 1, the Contractor shall conduct a gap analysis to identify possible areas for improved systems management and information management. This will specifically include:

- An evaluation of the interdependence of each system and ways to increase efficient information flow;
- Presentation of current operational process and work flows; and
- A review and evaluation of current human resources to determine future human resource needs.

2.2 Integration requirements. The Contractor shall identify key high-level integration requirements and goals for the Grantee. This shall include a review of system interface and information exchange requirements mandated by the market regulator. The Contractor shall review the current and planned regulatory/standards requirements and statutes put forth by the Agency of the Republic of Kazakhstan on Regulation of Natural Monopolies (ANMR) and ensure that any plans for integration comply with these requirements and statutes.

2.3 Integration strategy recommendation. The Contractor shall develop a strategy to link currently systems, taking into account current operational procedures and future requirements for the Grantee. This shall include:

- An assessment and analysis of the key requirements for implementation of an integrated information technology (IT) and management system, specifically evaluating cost and complexity of solution/strategy.
- A clear and logical presentation of the planned changes as well as a justification for each change.
- A presentation of proposed future operational processes and work flows.
- A preliminary budget for the proposed integration strategy.
- A business case to assess and justify the potential investment requirements necessary for the proposed investment. This business case will clearly indicate

the financial and economic/social return to the Grantee of the proposed changes.

Deliverable: The Contractor shall provide the Grantee a comprehensive report of the results of all the work in Task 2 including a draft version of the Integration Strategy to the Grantee for review and consideration. The Contractor shall implement any changes required by the Grantee to the Integration Strategy in order to more effectively meet the Grantee's goals. Once the draft Integration Strategy has been approved, the Contractor shall provide a final version. These documents shall include all the work and recommendations presented in Task 2.

Task 3 – Estimate the Cost of the Capital Investment Plan

In this Task, the Contractor shall estimate the proposed system all-in lifecycle cost for the project plan developed in Tasks 1 and 2. The Contractor shall be responsible for recommending the least-cost capital investment plan associated with the project plan.

The estimate shall include the cost of materials, labor, logistics and contingencies for full implementation. The Grantee may provide supporting cost estimates based on prior pilot projects. These estimates (if available) are expected to be independently assessed and verified by the Contractor.

The major equipment detail cover as a minimum the following systems:

- SCADA System ;
- Larger Commercial and Residential Smart Meters Pilot;
- Outage Management System (OMS); and
- Distribution Management System (DMS).

The estimate precision is expected to be at least 75th percentile.

The Contractor will also assess any additional costs which may arise due to the need for retaining specific labor, and pension payments for jobs lost due to the program.

Deliverable: The Contractor shall provide the Grantee a comprehensive report of the results of all the work in Task 3 including a detailed least-cost investment plan for project implementation.

Task 4 – Perform Financial Analyses and Sensitivity Analyses

The Contractor shall conduct an economic analysis for the plan developed in Tasks 1 and 2. It shall be based on the capital estimate developed in Task 3. Both the cost estimate and the plan may need to be revised based on the conclusions of the economic analysis conducted under this Task.

The analysis will result in a set of profitability indicators, such as net present value (NPV), internal rate of return (IRR), payback period, and earnings accretion/dilution. The Contractor shall conduct an economic sensitivity analysis of each major plan component reflecting variations in interest rates, electricity tariffs, sales volumes, and equipment costs. The Contractor shall seek the Grantee's input and, if obtained, reflect the input in the analyses.

The Contractor shall include a determination of the estimated net benefits/costs (direct and indirect for the utility) expected as a result of compliance with local tariff methodology. Contractor shall estimate the impact on the Grantee's customer rates and bills due to implementation of the proposed project. The Contractor shall conduct and provide a pro-forma assessment of any tariff increases required (if any) for the sustainability of the project.

Deliverable: The Contractor shall provide the Grantee a comprehensive report of the results of all the work in Task 4 including economic analyses and sensitivity analyses for all major elements of the project.

Task 5 - Implementation Plan

Once the Integration Strategy from Task 2 has been approved by the Grantee, the Contractor shall develop a detailed Implementation Strategy with appropriate phasing and sequencing of business priorities and milestones. The Contractor shall provide an assessment of how the Integration Strategy will impact operations and a strategy to minimize any negative impacts. The Contractor shall present a preliminary budget for the overall cost of implementing the Integration Strategy. The Contractor shall present a detailed schedule of activities necessary to realize the proposed Integration Strategy over a 12 month period. This shall include a set of targets and milestones and financial outlays.

Deliverable: The Contractor shall provide the Grantee a comprehensive report of the results of the work in Task 5 including a draft version of the Implementation Plan (Plan) to the Grantee for review and consideration. The Grantee may require changes to the Plan in order to more effectively meet its goals. Once the draft Plan has been approved, the Contractor shall provide a final version. These document shall include all the work and recommendations presented in Task 5, including goods and service requirements (including IT equipment upgrades, automation equipment, and communications equipment) and cost estimates for all recommended goods and service.

Task 6 - Preparation of All Procurement Related Documents and Specifications

Once the Integration Strategy from Task 2 and the Implementation Plan from Task 5 have been approved by the Grantee, the Contractor shall provide a procurement package,

including all documents, descriptions, performance criteria, terms of reference and similar materials necessary and appropriate to support the procurement of the integrated IT system described in these Terms of Reference. The exact list of documents will depend on the final draft of the Integration Strategy. This may include, but not be limited to, terms of reference and budgets for:

- Automation and communications equipment, and specialized implementation and design support;
- Other supporting distribution equipment upgrade requirements; and
- IT equipment, software, and specialized implementation and design support.

Deliverable: The Contractor shall provide the Grantee a comprehensive report of the results of all the work in Task 6 including a set of procurement documents for all major equipment and services required for project implementation.

Task 7 – Preliminary Environmental and Social/Development Impact Assessment

The Contractor shall conduct a preliminary environmental and social impact assessment(s).

The proposed project is not expected to have major negative, direct environmental impacts because it is focused on replacing existing outdated equipment and software systems with the new ones. The Contractor shall make the preliminary review of the Project's environmental impact with reference to local requirements and those of multi-lateral lending agencies (such as the World Bank). This review shall identify potential negative impacts, discuss the extent to which they can be mitigated, and develop plans for full environmental impact assessment in anticipation of the Project moving forward to the implementation stage. The environmental review shall include but not be limited to the following:

- Existing equipment disposition and recycling;
- Air quality and noise;
- Socio-economics/human resources;
- Environmental risk assessment;
- Occupational health and safety.

The Contractor shall also provide a report on the potential social and development impacts of the Project in the Host Country. The Contractor shall focus on what the economic development outcomes will be if the Project is implemented according to the Study recommendations. While the report should specifically address the immediate impact of the Project, the Contractor shall also discuss, where appropriate, any additional developmental benefits of the Project, including spin-off and demonstration effects. The analysis of potential benefits of the study should be as concrete and detailed as possible. The Contractor shall provide estimates of the Project's potential benefits in the following areas:

- **Infrastructure:** a statement on the infrastructure impacts (e.g., new automation built, additional electricity supplied).
- **Market-Oriented Reform:** a description of any regulations, laws, or institutional changes that are recommended and the effect they would have if implemented.
- **Human Capacity Building:** a description of the number and type of staff positions that would be needed to construct and operate the Project, the number of people that will be needed to process construction materials, as well as the number of people who will receive training and a brief description of the training program.
- **Technology Transfer and Productivity Enhancement:** a description of any advanced technologies that will be implemented as a result of the Project, and a description of any efficiency that will be gained.
- **Other:** any other developmental benefits of the Project, including spin-off or demonstration effects.

Deliverable: The Contractor shall provide the Grantee a comprehensive report of the results of all the work in Task 7 including a preliminary environmental, social and development impact assessment in the Project Report.

Task 8 – Draft Final and Final Report Preparation and Presentation

The Contractor shall prepare a Draft Final Report and present its findings to the Grantee. The presentation is expected to be attended by Grantee representatives and some representatives of the Grantee’s stakeholders as identified by the Grantee.

The Contractor shall prepare and deliver to the Grantee a substantive and comprehensive Draft Final Report and Presentation of all work performed under these Terms of Reference in English and Russian. The Report shall be organized according to the preceding project tasks, and shall include all deliverables and documents that have been provided to the Grantee. The Grantee is expected to provide comments on the Report within a four (4) week period.

Based on the tasks performed, the Contractor shall prepare a brief summary (less than 5 pages) of findings that can be used by ANMR in assessing regulatory aspects of the distribution grid improvements and automation implementation. Such findings shall include at least:

- Lessons learned on the cost of automation implementation;
- Implementation planning in Republic of Kazakhstan;
- Technical specification lessons learned;
- Evaluation of losses reduction assessment;
- Potential of system use for peak shift and load management; and
- Beneficial use of automation grid technology for alternative tariff research and development.

Once the Grantee has provided comments and revisions to the Draft 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"). The Final Report shall incorporate all of the findings, recommendations, and conclusions of the TA and shall incorporate all other documents and/or reports provided pursuant to the preceding tasks.

It is the Contractor's responsibility to identify prospective U.S. Sources of Supply in the Final Report to be submitted to USTDA and the Grantee in accordance with Clause J of Annex II of the Grant Agreement. The U.S. Suppliers list shall identify the capabilities, addresses, and principal points of contact for each of the suppliers. Listing of U.S. Sources of Supply does not bind the Grantee to procure from U.S. Sources of Supply.

No later than two (2) weeks after receipt of Grantee comments on the Draft 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"). 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 be prepared in accordance with Clause J of Annex II of the Grant Agreement. The Contractor shall prepare the Final Report in English and Russian.

ANNEX 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]*

Activity Type <i>[To be completed by USTDA]</i>	Feasibility Study	Technical Assistance	Other (specify)
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Activity Title *[To be completed by USTDA]*

Full Legal Name of U.S. Firm

Business Address (street address only)

Telephone		Fax		Website	
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Year Established (include any predecessor company(s) and year(s) established, if appropriate).
Please attach additional pages as necessary.

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 (please specify)

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(s). 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.	
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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 any 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:
 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:
 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.
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	<input type="text"/>	Signature	<input type="text"/>
Title	<input type="text"/>		
Organization	<input type="text"/>	Date	<input type="text"/>



ATTACHMENT B

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

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

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 <i>[To be completed by USTDA]</i>	
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Activity Title <i>[To be completed by USTDA]</i>	
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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	<input type="checkbox"/> Publicly Traded Company
	<input type="checkbox"/> Private Company
	<input type="checkbox"/> 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?	<input type="checkbox"/> Yes
	<input type="checkbox"/> 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]	
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Activity Title [To be completed by USTDA]	
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Full Legal Name of Prime Contractor U.S. Firm ("U.S. Firm")	
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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 <i>[check one]</i>	<input type="checkbox"/> Corporation	<input type="checkbox"/> LLC	<input type="checkbox"/> Partnership	<input type="checkbox"/> Sole Proprietor	<input type="checkbox"/> Other
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duly organized, validly existing and in good standing under the laws of: _____ .

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	