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Central Asian Energy Efficiency Support Program (CAEESP)

Annual Report:
September 20, 2011 – September 30, 2012

Submitted by ICF International

October 2012

This document was prepared for the United States Agency for International Development (USAID) by ICF International under Cooperative Agreement No. 00176-LA-11-00003, Leader with Associate Cooperative Agreement AID-OAA-L-11-0000.

The contents are not the responsibility of USAID and do not necessarily reflect the views of the United States Government.

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ACRONYMS

ACF	Asian Credit Fund
ADB	Asian Development Bank
AO	Agreement Officer
AOTR	Agreement Officer's Technical Representative
CAEESP	Central Asian Energy Efficiency Support Program
CAR	Central Asian Republics
CAREC	Central Asia Regional Environmental Center
DOE	US Department of Energy
DSM	Demand Side Management
EAA	Energy Auditor's Association
EBRD	European Bank for Reconstruction and Development
EE	Energy Efficiency
EnMS	Energy Management System
ESCO	Energy Service Company
FY	Fiscal Year
GHG	Greenhouse Gas
GoK	Government of Kazakhstan
IFI	International Financial Institution
ISO	International Organization for Standardization
KAZSEFF	Kazakhstan Sustainable Energy Finance Facility
KEE	KazEnergExpertize
KTR	Kazakhstan Technical Regulation Committee
LED	Low Emissions Development
MINT	Ministry of Industry and New Technologies
O&M	Operations and Maintenance
PMEP	Performance Monitoring and Evaluation Plan
SK	Samruk Kazyna Group
STTA	Short-term Technical Assistance
UNDP	United Nations Development Program
UNECE	United Nations Economic Commission for Europe
UNIDO	United Nations Industrial Development Organization
US	United States
USAID	US Agency for International Development
USEPA	US Environmental Protection Agency
USG	US Government

1. INTRODUCTION

This Annual Performance Report, a deliverable under the Cooperative Agreement No. AID-OAA-L-11-00003-00, describes the activities and accomplishments of the first year of the **Central Asian Energy Efficiency Support Program (CAEESP)**. The CAEESP was awarded to ICF International in September 2011 and seeks to effectively lower the existing barriers to energy efficiency (EE) improvements in Central Asia, particularly Kazakhstan. The program focuses on improving the enabling environment for EE in the region by identifying commercial, residential, and industrial EE opportunities and strengthening the technical, institutional, and financial capacity of organizations, industries, and agencies in the region. With the passage of the Energy Efficiency Law in January 2012, for example, the Government of Kazakhstan (GoK) has placed high priority on improving energy efficiency in all sectors of the economy. The overall objective of the CAEESP is to assist Kazakhstan in reducing GHG intensity (and consequently GHG emissions) by stimulating investments in energy efficiency technologies and projects. Specifically, the CAEESP's objectives are to:

- Raise stakeholder awareness of the importance of, and opportunities for, energy efficiency as means of reducing end-user costs while contributing to the achievement of Kazakhstan's GHG emissions reductions targets;
- Build private sector capacity in developing and implementing energy efficiency projects;
- Increase private sector investment in energy efficiency measures (involving Public-Private Partnership mechanisms); and
- Stimulate interests within the commercial banking sector in developing lending products targeted at energy-efficiency investments.

2. CAEESP ACTIVITIES AND HIGHLIGHTS

This section provides a summary of major activities conducted in the first year of CAEESP implementation. Annex A includes a list of reports and deliverables that were submitted to USAID during this period and Annex B includes two examples of success stories during the first year of implementation. The CAEESP comprises the following five major Tasks:

- Task 1 - Initial Assessment and Prioritization
- Task 2 - Stakeholder Awareness and Training in EE Approaches and Technologies
- Task 3 - Energy Efficiency Project Development and Financing Facilitation
- Task 4 - Support for Private Sector Energy Efficiency Service Providers
- Task 5 - Regional Analysis and Recommendations in Energy Efficiency

During the first year of implementation, a solid foundation for achieving the CAEESP program objectives was established and effective working relationships with counterparts in the GoK and the private sector were developed. Highlights of Year 1 activity included the following:

- High-level stakeholders conference in March 2012 to discuss potential activities and priorities for the CAEESP;
- Two, four-day training programs in Energy Management Systems (EnMS) provided to representatives from government and industry;

- Training for industry representatives in ISO 50001, which supports organizations to use energy more efficiently, through the development of an EnMS;
- One week energy audit training for *KazEnergExpertize* (KEE) and other participants from Central Asian countries;
- Collaboration with the Asian Credit Fund (ACF) to provide training on EE for loan officers;
- Detailed analysis of the new EE law of Kazakhstan;
- Participation and presentation in a regional energy efficiency conference sponsored by the UN Economic Commission for Europe (UNECE);
- Analysis and recommendations on potential EE labeling program for Kazakhstan, modeled after elements of the US Environmental Protection Agency (USEPA)'s Energy Star Program;
- Establishment of relations with the Almaty and Pavlodar Akimats with the objective of assisting them in developing their municipal energy efficiency action plans in Year 2;
- Outreach and consultations with several industries to explore future collaboration. These included Arcelor Mittal, KazakhMys, KazChrome, KazPhosphate, KazTransMorFlot and Shymkent Oil Refinery. Ongoing discussions and specific activities stemming from them will be integrated into the work plan for the second year of CAEESP; and
- Continued coordination with other donor programs active in Kazakhstan and the region, including the Asian Development Bank (ADB), the European Bank for Reconstruction and Development (EBRD), United Nations Development Program (UNDP), UNECE, and others. The coordination effort has yielded significant opportunities to leverage CAEESP activities.

2.1 Task I - Initial Assessment and Quick Start Prioritization



Stakeholders Round Table on Energy Efficiency. Astana, March 2012.

To inform the CAEESP and to further develop the detailed work plan, the program began by assessing opportunities both in Kazakhstan and the region to create an enabling framework that will focus our work over the two year timeframe and beyond. ICF continually evaluates the CAEESP approach in order to be current with the progress and priorities in Kazakhstan and the region, ensuring that the program is responsive and reflects the relevant needs of the stakeholders, both governmental and non-governmental.

Stakeholder Meetings and Consultations under Task I. The project team consulted a wide ranging group of potential project stakeholders in developing the project inception report and the Year I work plan. These included educational institutes, GoK agencies, industry members, international financial institutes (IFIs), non-governmental organizations, and other potential project partners. The stakeholders consulted included the following organizations:

Kazakhstan Agencies and Institutes

- Ministry of Industry and New Technology (MINT), Energy Efficiency Unit, Astana
- Ministry of Environmental Protection, Kyoto Protocol Department, Astana

- “Shafik Chokin” Energy Research and Design Institute, Nazarbaev University, Energy Center
- Kazakh Ecology and Climate Research Institute
- Kazakhstan Center for Communal Services Modernization and Development
- Institute of Nuclear Physics, Centre for Complex Ecological Investigations, Energy Audit Group

Non-Governmental Organizations

- Eurasia Foundation of Central Asia
- Central Asia Regional Environmental Center
- Kazakh Electro-energeticheskaya Associatsia (Kazakh Energy Association–KASEC), Astana
- JSC Kazakhstan Housing and Utilities Sector Reform Centre, Astana

International Organizations

- UNDP/GEF Project "Promotion of Energy Efficient lighting in Kazakhstan," Almaty
- UNDP Project “Removing barriers to energy efficiency in municipal heat and hot water supply”, Astana
- UNDP Project “Energy efficiency in Buildings, ” Astana
- Delegation of the EU to Kazakhstan, Operations Section
- Asian Credit Fund LLC
- EBRD’s Kazakhstan Sustainable Energy Financing Facility (KAZSEFF)
- Price Waterhouse Coopers (PWC)
- American Chamber of Commerce/Kazakhstan

Industries/Private Sector

- EnergoStroyProekt LLP
- Energy Saving Centre, Astana
- Azimut Energy Services (AES), Astana
- EnergoAuditKazakhstan (EAK), Semipalatinsk
- KazCarbon, Astana
- Climate Change Coordination Centre, Astana.

The Energy Efficiency Unit within MINT is the major governmental entity on EE policy in Kazakhstan and a key member of CAEESP’s stakeholder group. During the first year, CAEESP coordinated closely with MINT to support implementation of the new EE law, particularly in providing ISO 50001 and energy audit training. The Ministry was initially interested in working with CAEESP on the development of an energy auditor certification scheme; however UNDP has recently adopted this as part of its work action plan and the need for this project scope under CAEESP was lessened.

CAEESP continues to meet regularly with its stakeholders to assess the possibilities to leverage activities. In developing the Year 2 Work Plan, CAEESP staff met with many of the above organizations to solicit their feedback on planned activities. While Task I was completed with the submission of the Inception Report in November 2011, CAEESP maintains a continuous dialogue with its key stakeholders to stay abreast of developments in the energy sector.

2.2 Task 2 – Stakeholder Awareness Raising and Training in Energy Efficiency Approaches and Technologies.

Through the CAEESP's established working relationship with public and private stakeholders in Kazakhstan, the team developed and conducted a series of events (workshops, conferences, presentations) focusing on the subject of energy audits and ISO 50001 Energy Management Systems, in line with the requirements of the new 'Law on Energy Savings and Energy Efficiency'. Participants of events organized by the CAEESP (including participants from other Central Asian countries) consisted of governmental and non-governmental delegates who have responsibilities, directly or indirectly, for administering and implementing energy efficiency policies and measures (including the new Energy Efficiency Law in Kazakhstan).

Stakeholder awareness and furthering stakeholder support and buy-in to CAEESP objectives were important areas of focus in Year I of the CAEESP. During this period, the CAEESP team continued to strengthen its institutional relationships with such regulatory bodies as KEE and the *Kazakhstan Technical Regulation Committee (KTRM)* of MINT and organized joint planning and implementation activities. MINT has been tasked to 'make operational' the Law on Energy Efficiency, and in turn looks to its agents, such as KEE and KTRM to form the regulatory base to make the law functional. CAEESP has responded to this need by developing technical assistance activities by introducing best practices on a variety of EE issues and providing a transfer of technical expertise to build the capacity of the GoK to help operationalize the new EE law.

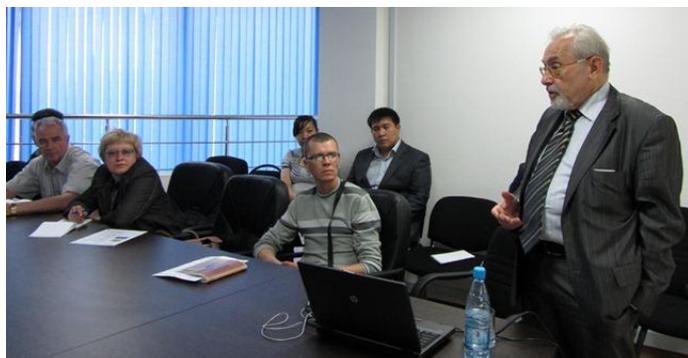


A Technical Committee (KTRM) meeting on developing an Action Plan on Improving Energy Efficiency in Kazakhstan. Astana, April 2012.

Regarding the private sector, the CAEESP team has formed a solid working relationship with the corporate offices of *Samruk Kazyna Group* for the purpose of developing EE projects in the industrial sector. CAEESP has selectively reached out to the private sector businesses and industries. Meetings were held with representatives from four companies, including *Arcelor Mittal*. The aim was to introduce EnMS that are compliant with ISO50001, as a mean for identifying investments into EE projects. CAEESP is also discussing cooperation potential with *Samruk Energo* and in the mining and metals sector.

With respect to actions concerned with the GoK's EE awareness campaign, the CAEESP team provided support to MINT on energy labeling. CAEESP expert Bizhan Zhumagali reviewed the current status and produced a report containing recommendations for policy and new actions in support of the government's awareness campaign. The report was translated into Russian, presented to and accepted by the government. It contains a pathway of activities which will support the government's energy efficiency awareness campaign and will assist Kazakhstan in the introduction of a national energy labeling program of its own based on international standards. Mr. Zhumagali returned to Kazakhstan in the second half of July to train retailers on energy appliance labeling and provide further technical information to the GoK on the US Energy Star program.

CAEESP also met with research teams based at the *Almaty University of Power Engineering and Telecommunications* and at the *Centre for Energy Research at Nazarbaev University* to discuss their research themes and progress to find means of connecting CAEESP's technical experts with those in universities within Kazakhstan. Current research interests within the universities include, among others, data management and methodologies for the application of photovoltaics, carbon capture technology, energy audits, and other related topics. These dialogues will be ongoing with various universities in Year 2.



Dr. Trofimov presenting analysis of the Kazakhstan EE law and importance of energy efficiency to the representatives of several Ministries. Astana, May 2012.

An evaluation of the 'Law on Energy Savings and Energy Efficiency' was completed by CAEESP's energy expert, Dr. German Trofimov, in both English and Russian and the findings were presented to MINT in early 2012. Dr. Trofimov's presentation also addressed implementation steps relating to the EE law and helped KEE and MINT to develop their action plan for implementation.

2.3 Task 3 - Energy Efficiency Project Development and Financing

The CAEESP places much emphasis on identifying energy efficiency projects within energy intensive users (industrial, municipal buildings, large scale residential blocks, single enterprise townships, etc.). The program works with individual industries as well as central, regional and local authorities (GoK, Akimats, municipalities) in identifying such project opportunities. These projects are mainly geared towards implementation of Energy Management Systems (EnMS) in compliance with the Energy Efficiency Law and ISO 50001. Project development activities include energy audits, process optimization and feasibility studies of improvement opportunities to facilitate individual investment or external financing.

Financing Facilitation. During the initial phases of project implementation, CAEESP consulted with representatives of several multilateral banks, including: (1) *Asian Development Bank (ADB)*; (2) *International Finance Corporation (IFC)*; and the *European Bank for Reconstruction and Development (EBRD)*. Securing investment for energy efficiency projects in Kazakhstan is a challenging problem, and the investigations conducted by the CAEESP team have revealed that organizations engaged in this effort, such as the EBRD, have during the previous three years struggled in this task¹. Risk reduction requires some creativity in an investment climate where the costs can easily outweigh the financial gains, and in a relatively tight capital market where competing commercial projects are more financially attractive than energy efficiency investment opportunities.

¹ The EBRD's *Kazseff* facility was designed and executed expressly with the aim of funding energy efficiency project investment. It had available a fund of Euro 75 Million working through national banks, but struggled to secure new projects in middle sized or smaller firms.

This reality has certain impacts on the original aims of the CAEESP. To explore options for stimulating investment into private and public sector energy efficiency projects, the CAEESP developed a two-phase structured approach. First, the CAEESP team assessed the industrial/commercial sector with the aim of finding prospective investment projects; and second, assessed the feasibility of creating a model approach for Demand Side Management (DSM) at the municipal level.

CAEESP cooperated closely with the *Asian Credit Fund (ACF)* to assist the ACF in its energy efficiency loan evaluation tasks. CAEESP provided a quick and simple scorecard mechanism for loan officers; quick and simple because the transaction cost associated with a loan (typically <\$2,000 USD) must be small. Furthermore, CAEESP subcontracted the *Habitat for Humanity* for capacity-building training of ACF loan officers in housing loan finance and working in the housing sector. The objectives of the training were to:

- Introduce participants to the concept of housing poverty and housing finance
- Increase participants' knowledge in housing loan product features and processes.
- Build field staff capacity to provide construction technical assistance to their clients.



Training for loan officers from the Asian Credit Fund on energy efficiency for rural households. Almaty, August 2012.



Training follow-up site-visit to Shelek village of CAEESP expert and Asian Credit Fund loan officers.

Industrial Energy Efficiency Project Development and Financing. In Kazakhstan a substantial share of the economy is controlled by the state holding firm *Samruk Kazyna Group (SK)*. After initial meetings with SK, a senior industrial energy efficiency expert, Michaela Martin of ICF International, met with the SK team to discuss a scope of cooperation in order to begin designing a program of work for SK. CAEESP was able to secure a commitment to implement a joint program of cooperation in two or three pilot enterprises within the Group.

The CAEESP's objectives and plans were first introduced to SK at the Deputy Chairman level. SK's interest focused primarily on ISO 50001 training and technology process improvements. As a first stage, CAEESP conducted trainings for SK group energy managers in the ISO 50001 standard, a requirement under the energy efficiency law. The training for SK in ISO 50001 was conducted in June 2012, and was attended by energy managers sent by the SK Group. Since the training, CAEESP has reached out to several of the energy managers who attended the training to assess their interest and commitment to conduct a gap analysis and energy benchmarking consultancy in their respective enterprises. As of the end of Year I, these negotiations were ongoing. The CAEESP team also arranged a meeting

on ISO50001 for the private sector representatives, meeting with representatives from four larger companies operating in Kazakhstan, each of whom expressed interest in further cooperation.

CAEESP conducted site visits at three manufacturing companies in Semipalatinsk (Eastern Kazakhstan) to investigate possibilities for EE project implementation in the industrial sector. A CAEESP expert was accompanied by a representative from a local auditing company, *EnergoAuditKazakhstan* (EAK). The companies included a cement factory, one that produced building materials (reinforced concrete), and a machinery company. The CAEESP team held extensive discussions with the facility managers about the CAEESP and opportunities for engagement in further project activities. In addition, preliminary opportunities were identified for 15 energy efficiency sub-projects. Subsequently, CAEESP's emphasis shifted to focus on industries that are prepared to implement the EnMS and ISO 50001, following the passage of the Energy Efficiency Law. The industries that were visited were medium-sized, and were not at the stage where they are interested in implementing EnMS.

Municipal Energy Efficiency Project Development and Financing. In the DSM support area, the CAEESP established links with the State Agency for Construction and Utilities (commonly known as *Zhilishchno-Kommunalnoye Hozyaistvo*, or ZKH). This agency has made available from Treasury sources a fund valued at 60 billion Tenge, to be partly used for the refurbishment of private dwellings. The process is rather simple in that applicants for credit are only required to fill the documentation in order to qualify for a credit. Funds are then loaned through local agents controlled under ZKH. The gap in this process is that no evaluation is made of the relative value of energy efficiency gains. CAEESP met with representatives of municipal authorities and of the Fund however there was little interest in training programs for them at the time.

At the same time, there is a requirement in the law for municipal authorities to define and operationalize energy management plans. The CAEESP team arranged meetings with two municipal authorities with the aim of providing assistance in this policy stream. Consultations were held in the town of Aksu outside of Pavlodar in north-eastern Kazakhstan, and in Almaty. Aksu Akimat is interested in working with CAEESP and this will be pursued further in Year 2. In Almaty, the CAEESP secured the approval of the Akimat to engage with the consultant that has been hired by the city to prepare the municipal energy plan. The CAEESP will provide technical advisory services for the Akimat to provide critical feedback and technical expertise on the plan.

CAEESP also met with the Director of a public hospital located in the outer suburbs of Almaty. The aim was to provide an energy efficiency audit to his public facility in order that its investment in the next round of budget funding can be partially directed towards energy efficiency investments. The Director of the hospital was interested learning more about cost-effective energy efficiency improvements; however, at the time of the visit, he had already committed the funds to urgent building improvements.

2.4 Task 4 - Support for Private Sector Energy Efficiency Service Providers

During Year 1, CAEESP worked closely with the GOK and others to support rapidly changing development in the private sector for energy efficiency. Early in 2012, CAEESP was invited to make a formal presentation of our program to the representative Technical

Committee for EE, comprised of experts from the KEE, the KTR (*Kazakhstan Technical Regulation Committee*), and leaders from key industrial associations.

In the meeting, CAEESP presented the work program with KEE which included the following:

- Educational program in energy efficiency management for cross-ministry representatives
- Training to ISO 50001 for nominated representatives from KTR, Gosenergonadzor and KEE
- Training in energy auditing for experts from KEE and Gosenergonadzor

One element which has been part of our work has been to support the deepening of an understanding about how energy audits work and about the implications of implementing the ISO 50001 standard. The CAEESP team conducted targeted workshops for



Training on Energy Management Systems and ISO-50001. Astana, July 2012.

KEE and KTRM, but these workshops were also attended by other governmental agencies in order to support their actions as government and/or quasi-governmental functionaries. Several participants also came from other Central Asian countries.

CAEESP also organized a one day session, targeted at non-technical representatives of various Government ministries, to explain the aims of an energy efficiency policy and its consequences. This session was intended to broaden awareness of the new energy law, its implications, and the activities and actions that will likely be needed to operationalize it.

2.5 Task 5 – Regional Analysis and Recommendations

All of the training and outreach activities included invitations to selected regional ministries, universities and other stakeholders who could benefit from the training. CAEESP also participated in a regional energy efficiency forum in September that was sponsored by UNECE.

In September 2012, CAEESP's CoP Mary Worzala and EE specialist Vitaliy Bekker participated in the International Energy Efficiency Forum in Kyrgyzstan, sponsored by the UNECE. Both presented papers at the Forum, which attracted participants from all five of the Central Asian countries as well as other countries in Eastern Europe, Russia, India, China and others. The major focus of the Forum was on EE for buildings and on energy policy and regulatory development. The Forum was an excellent opportunity for CAEESP to meet others working in EE throughout the region, establish cooperative relationships for regional activities, and to raise awareness of the CAEESP's objectives and plans.

CAEESP invited representatives from Central Asian countries to each of the energy audit and ISO events held in Astana during Year I. Meetings were held to coordinate the CAEESP's work with other agencies implementing programs in the Central Asia region, such as the Central Asia Regional Environmental Center (CAREC) and various IFIs. The regional

work will intensify in the second year. Technical assistance will be aligned with specific needs identified by USAID or CAEESP. The first such activity is in the planning stages for Turkmenistan.

2.6 Other CAEESP-Sponsored Events

CAEESP organized two events in addition to those aforementioned ones. A CAEESP Roundtable was organized in Astana on March 14, 2012 to further introduce the project to key stakeholders and ascertain additional priorities and interest in engagement in CAEESP activities. The quality of presentations from both the CAEESP and local and national stakeholders were high, as was the discussion, reflecting the level of core interest in energy efficiency in Kazakhstan. One measure of its success was the low level of loss of the number of participants as the event progressed. By the conclusion there were approximately fifty people still in attendance.

CAEESP representatives also attended a roundtable event in February organized by the ADB in cooperation with MINT. The explicit aim was to assist the Ministry to develop a 'road map' of policy development in the energy efficiency domain. During the meeting, CAEESP offered to organize coordination of the international donor side, which was agreed at the table. Subsequently, KEE was delegated to the responsibility for donor coordination.

3. PROGRAM COORDINATION

The CAEESP team has built coordination with other projects and government initiatives into all activities in order to avoid redundancy and increase impact. The specific mechanisms for coordination include: (1) implementing joint workshops and trainings; (2) collaborating on individual programs and activities; and (3) sharing of intermediate results. The CAEESP team held numerous consultations with a variety of organizations during the first year and will continue to seek collaboration with them throughout the program.

For example, CAEESP is collaborating with DOE on the industrial sector ISO 50001 task. CAEESP initiated the selection of two industrial plants for ISO 50001 certification gap analysis and establishing a functioning energy management system. DOE will send two or three experts to conduct an audit of one of the highest energy consuming systems within each of the selected plants. By combining these efforts, the CAEESP is leveraging the results of both DOE's Energy Partnership with the GoK and CAEESP.

CAEESP worked with ACF to develop an energy efficiency scorecard for its loan officers to assist them in evaluating energy efficiency loans. CAEESP has already developed ideas for collaboration in the second year, including developing simple, easy-to-understand brochures and videos on energy efficiency for rural households.

CAEESP also collaborated with UNECE, the Energy Auditor's Association and others on training and outreach events. CAEESP will continue to coordinate on upcoming activities with other development programs such as UNDP, UNIDO, EBRD, ADB and others.

4. MONITORING AND EVALUATION

The CAEESP Performance Monitoring and Evaluation Plan (PMEP) was prepared and submitted to USAID/CAR in November 2011. Comments were received and the team revised the PMEP to align with the revised work plan. Table 2 below provides the targets and achievements in Year 1.

Year I – Performance Indicators Targets and Achieved

Project Level Outcome: GHG intensity of energy sector in Kazakhstan is reduced by stimulating investments in energy efficiency		
Indicator	YI Target	Achieved
Indicator P1: Quantity of greenhouse gas emission, measured in metric tons of CO ₂ equivalent reduced as a result of USG Assistance*	No target set	NA
Indicator P2: Energy and materials saving due to improved practices as percentage of overall country's consumption*	No target set	NA
Expected	Intermediate	Results (IR)/
Task Level Intermediate Results (IR) – Indicators, Targets, Milestones		Outcomes
IR 1: Raised stakeholders' awareness of the importance of, and opportunities for, energy efficiency as a means of reducing end-user costs and GHG emissions (Task 2)		
Indicator	YI Target	Achieved
Indicator 1.1: Number of awareness/outreach activity/events held	4	7
Indicator 1.2: Number of institutional stakeholders, firms, and industry targeted by awareness campaigns	80	88
Indicator 1.3: Number of people covered by awareness campaigns	800	319
Mile stone 1.1: Stakeholders awareness and education plan is prepared – Month 5 ++		
Mile stone 1.2: Training events completed – Month 20 ++		
IR 2: Commercial banking sector is interested in developing lending products targeted at energy-efficiency investments (Task 2)		
Indicator	YI Target	Achieved
Indicator 2.1: Number of awareness/orientation/education activity implemented targeting financial sector	2	1
Indicator 2.2: Number of commercial banks represented in project sponsored activities (including Asian Credit Fund)	3	1
Mile stone 2.1: Specific orientation/education activity is designed for commercial banking sector – Month 6		
IR 3: Increased private sector investment in energy efficiency measures (Task 3)		
Indicator	YI Target	Achieved
Indicator 3.1: Number of small scale EE walk-through audits completed ++	5	0
Indicator 3.2: Amount of public and private funding leveraged for EE investments ++	No target set	NA
Mile stone 3.1: Energy efficiency audit guidelines is prepared and approved by USAID – Month 6 superseded by the energy efficiency law		
Mile stone 3.2: Recommendations for market and policy framework development to improve conditions for energy-efficiency investments is prepared and shared with stakeholder through workshop in the region. – Month 12 ++ superseded by the energy efficiency law		
IR 4: Increased private sector capacity in developing and implementing energy efficiency projects (Task 4)		
Indicator	YI Target	Achieved
Indicator 4.1: No. of people receiving USG supported training in energy auditing, ESCO and EPC practices; low-cost measures; voluntary EE policies, strategies and techniques (gender target –at least 30% of trainee will be women)	20	164 (40% - women)
Indicator 4.2: Number of Energy Audit and Energy Service Companies ESCOs with increased capacity to develop and implement energy efficiency projects (gender target –at least 30% of trainee will be women)	3	0
Mile stone 4.1: Training module for ESCOs is developed and approved by USAID – Month 9 determined not necessary by the needs assessment and under USAID guidance		
Mile stone 4.2: Energy auditing certification scheme and training program is established with necessary GOKZ approvals - Month 15 ++ being developed by KEE		

For Year 2, the indicators and targets are included in the Annual Work Plan, submitted to USAID in October 2012.

5. IMPLEMENTATION CHALLENGES

Administrative challenges. During the first quarter of the project, typical start-up obstacles were encountered, including working within the complex legal structure of Kazakhstan as a new firm beginning a new project. The pace of acquiring legal support and addressing legal requirements for local staffing and registration hampered immediate, quick operational start-up but it did not significantly affect the early Task 1 assessment and stakeholder outreach efforts. The project team was able to nevertheless meet a variety of stakeholders and conducted three visits to Kazakhstan during the quarter. However, the CAEESP team overcame initial start-up delays and has a strong and experienced team in place to accelerate the pace of implementation during the second year as outlined in the Year 2 Work Plan submitted to USAID in October 2012.

Adapting to new GOK EE Law in Kazakhstan. The new Energy Efficiency Law came into force in January 2012 which provided both an excellent opportunity and a challenge for CAEESP. The opportunity for CAEESP is that there is a higher priority and direction from the GoK for EE and therefore provide opportunities for CAEESP to engage with government and related institutions. However, with the new law and its corresponding mandates and priorities, the CAEESP needed to adjust its proposed activities accordingly in order to be responsive and relevant within the context of Kazakhstan, particularly because the original Terms of Reference for CAEESP was prepared before the new law took effect. Some of the planned activities needed to be re-designed to align more closely with the needs of the government partner agencies for CAEESP, such as MINT. The work program was adapted to support the implementation of the new law, with a reduced focus on EE project financing and developing credit-worthy projects.

Lack of clarity among stakeholders. The new Energy Efficiency Law in Kazakhstan provides a needed mandate for EE improvements in the country, but without a supporting regulatory framework, it remains somewhat vague and lacks in implementation details. Without the supporting framework, the Law serves more as guiding principles in some respects than a prescriptive approach to EE improvements and energy savings. Roles and responsibilities for GOK agencies and stakeholders are not clearly defined. The lack of clarity represented a challenge for the CAEESP team to properly target specific technical assistance for each GOK entity (e.g., developing EE audit standards and certification procedures) as part of the CAEESP's capacity building efforts in the EE sector. The responsibility has also shifted in some cases, or competing agencies claim responsibility for the same task, such as which one is responsible for establishing energy efficiency standards.

Limited opportunities in other CAR countries. While the scope of CAEESP remains regional, CAEESP has not had



Training on Energy Audit with participants from Central Asia.

extensive regional engagement during the first year from other countries in the Central Asian Republics outside of Kazakhstan. During the first year, the CAEESP team conducted outreach to the USAID bilateral missions as well as respective governmental ministries and agencies in the other countries. Participants from the region were invited to participate in several project-sponsored events; however, due to logistical and travel constraints, regional participation was often low. Participants from Kyrgyzstan attended all of the events while those from Tajikistan were only able to participate in the energy audit trainings. Participants from Uzbekistan were able to participate in energy audit training, but then experienced visa restrictions which prevented any further participation in project-sponsored events during the first year. Turkmenistan representatives did not respond to any of the invitations that were issued but toward the end of the first year, progress was made to engage Turkmenistan over Year 2.

The first year experience was reviewed during the development of the Year 2 Work Plan and a more proactive strategy was developed to seek opportunities to complement ongoing CAR regional activities. For example, CAEESP will participate in an energy workshop being organized by the CAREC in Tajikistan in November 2012 and will work with the CAREC and other regional platforms to better regionalize the work and scale up the impacts of the CAEESP. While we will continue to invite regional participants to project-sponsored activities, we will also look for opportunities that will not require regional participants to travel to Kazakhstan.

6. FINANCIAL INFORMATION

As of the end of Year 1, expenditures are as follows:

7. PROJECT PERSONNEL

During the first year, the CAEESP team has gone through some changes to keep up with the needs of the program; however these changes did not significantly affect the pace of the program implementation. The Chief of Party (CoP) position underwent some changes, as Keith Little, who assumed the role after the original CoP Evgeniy Nadezhdin was unable to mobilize to Kazakhstan, was himself replaced with Mary Worzala in August 2012. Additional

local staff support was recruited during the first year. Short-term technical assistance (STTA) support included some changes from some proposed during the proposal stage.

As of end of Year I, the core project team comprised the following members:

Name	Position	Location
Mary Worzala	Chief of Party (CoP)	ICF - Almaty
Nadezhda Trubova	Local Operations Manager	ICF - Almaty
Daniyar Buxukbaev	Technical EE Expert	ICF-Almaty
German Trofimov	Senior EE Consultant	ICF- Almaty
Vitaliy Bekker	Senior Industrial EE Expert	ICF- Moscow
Andrei Dodonov	Senior Buildings Expert	ICF-Moscow
Alexei Sankovski	Technical Director	ICF- Moscow
Yeen Chan	EnMS Expert	ICF-London
Bizhan Zhumagali	Energy Labeling Expert	ICF-London

Overall program management and operations support is provided by the ICF International's headquarters office in Fairfax, Virginia by Hoai Huynh, the Project Director and Principal for International Development and by Laura Bell, Project Manager. Mr. Huynh is also the Deputy Chief of Party (DCOP) for the overall Energy Efficiency and Clean Development Program (EECDP), a Leader with Associates Award (LWA) under which CAEESP is implemented. Specialized short-term technical assistance was also provided periodically by ICF's Michaela Martin, Vice President for Industrial Energy Efficiency and Mark Allington, Vice President, ICF Consulting London.

ANNEX A: DOCUMENTS SUBMITTED AND STTA TRAVELS IN YEAR I

CAEESP Documents Submitted to USAID

No.	Date	Document
1.	January 2012	Inception Report submitted
2.	February 2012	Work plan & PMP submitted
3.	19/01/2012	Quarterly Report 1 submitted
4.	25/04/2012	Quarterly Report 2 submitted
5.	20/04/2012 (English) 30/05/2012 (Russian)	Recommendations for Awareness on Energy Efficiency by Bizhan Zhumagali
6.	31/05/2012 – translated & submitted to USAID	Critical Analysis of the Energy Efficiency Law by German Trofimov
7.	19/07/2012	Quarterly Report 3 submitted
8.	17/07/2012	CD with all training materials (as of July 10, 2012) given to Sergey Yelkin

CAEESP STTA Travels:

No.	Date	Who	Purpose
1.	17-27/ 10/2011	Eric Boyle, Stephanie Barrett, Alexei Sankovski, Elena Parkhomenko Evgeniy Nadezhdin	Initial meetings Almaty: with USAID CAR and stakeholders; collecting info on registration & office space Astana: Initial meetings with potential stakeholders
2.	End of November	Mark Allington, Elena Parkhomenko, Vitaliy Bekker	Almaty: Recruitment and office Semipalatinsk: site-visits to some industries (Bekker)
3.	11-23/ 12/2011	Hoai Huynh, Keith Little, Elena Parkhomenko	Almaty: Presenting COP to USAID CAR, meeting stakeholders
4.	28/02 - 16/03/ 2012	Bizhan Zhumagali	Developing recommendations for awareness campaign on energy efficiency for KEE, KTRM; participation in the CAEESP Round Table in Astana on March 14, 2012
5.	12-16/ 03/2012	Michaela Martin, Alexei Sankovski, Elena Parkhomenko, Bizhan Zhumagali, Vitaliy Bekker,	The CAEESP Round Table in Astana on March 14, 2012
6.	10-12/ 04/2012	Vitaliy Bekker	Design energy audit training course; visit to a hospital for potential energy audit
7.	3-7/ 06/2012	Vitaliy Bekker, Andrey Dodonov, Aleksey Kholodov	Seminar on Energy Audit for governmental structures in Astana
8.	17-24/	Vitaliy Bekker,	Conducting a seminar on ISO 50001 for

	06/2012	Andrey Dodonov, Daria Rudova, Yeen Chan	governmental structures; private industries in Astana & for KTRM in Almaty
9.	23/06 - 01/07/ 25/06 - 7/07 2012	Hoai Huynh Laura Bell	Program management and administration
10.	2-3/ 07/2012	Yeen Chan	Conducting a seminar on ISO 50001 for Samruk-Kazyna enterprises
11.	18/07 - 02/08/ 2012	Bizhan Zhumagali	Follow-up with KEE, KTRM and chain shops selling “white goods” on awareness activities related to energy efficiency
12.	7-23/ 08/2012	Vitaliy Bekker	Review and follow-up contacts after the trainings
13.	31/08-7/09 2012	Andrey Dodonov, Yeen Chan	Seminar for loan officers of ACF on energy efficiency for rural households (Dodonov) Work plan for Year 2, help in transition of new COP
14.	10/09-1/11 2012	Vitaliy Bekker	Participation in Energy Efficiency Forum organized by UNECE in Issyk-Kul, Kyrgyzstan; Project development
15.	14/10-29/11 2012	Andrey Dodonov	Project development; work with ACF

ANNEX B: SUCCESS STORIES



SUCCESS STORY

Promoting Energy Efficiency Loans in Rural Households in Kazakhstan

Building the capacity of loan officers to improve project financing for household energy efficiency.



Photo made by ACF and ICF



A training program sponsored by CAEESP provided ACF loan officers with skills to help their clients in rural areas evaluate energy efficient measures and to select materials for energy efficient renovation projects.

Challenge

Homeowners in rural Kazakhstan with limited savings or credit history have few options to borrow money from commercial banks for home improvement projects. These include projects aimed at improving home energy efficiency (EE). The Asian Credit Fund (ACF) was established in 1997 as a micro and small business lending program in Kazakhstan, serving as a community lending institution and providing financial solutions, business advice and technical assistance through trained personnel and partners. ACF also provides microfinance services to rural households. As part of its technical assistance services and emphasis on household EE, ACF sought to provide a credit line for EE improvements, but lacked knowledge and expertise on how to evaluate energy efficiency loan requests.

Initiative

In 2012, USAID’s Central Asian Energy Efficiency Support Program (CAEESP) teamed up with ACF to help homeowners identify and evaluate EE investment opportunities and improve access to funding. CAEESP organized a 3-day training program that included the development of a methodology and scorecard for ACF loan officers to use in evaluating energy efficiency loans. The scorecard evaluates common measures such as insulating doors and windows, heating supply options, lighting, solar hot water and wall insulation. *Habitat for Humanity International*, a U.S.-based non-profit organization, participated in the training to share its practical experience from Tajikistan on monitoring small construction projects in rural areas.

Result

ACF loan officers acquired necessary skills to assist their rural clients with incorporating energy efficient measures into their loan applications. For CAEESP and ACF, the training was a first step in cooperating on energy efficient programs. The teams will develop joint promotional materials, such as brochures, “how-to” videos, and case studies of energy efficient households. The materials will be used to promote energy efficiency loans throughout ACF’s 21 loan offices in Kazakhstan.



SUCCESS STORY

CAEESP Workshop Series: Improving Energy Management Systems (EnMS) through ISO-50001

Introducing EnMS and ISO-50001 to different sectors in Central Asia



photo made by ICF

The CAEESP workshops covered practical topics related to EnMS development and implementation.

For some Kazakhstani energy-intensive companies, the workshops were the first step towards ISO-50001 certification.

Challenge

USAID's Central Asian Energy Efficiency Support Program (CAEESP) is working to reduce greenhouse gas (GHG) intensity and emissions by stimulating investments in energy efficiency technologies and programs. A key step towards industrial energy efficiency (EE) is the development and implementation of sound Energy Management Systems (EnMS), as developed under the ISO-50001 standard. An effective EnMS will enable a company to systematically improve energy performance, including EE, energy use and consumption. The concepts of EnMS and ISO-50001 are still new in the Central Asian Republics. Kazakhstan's Energy Efficiency Law, for example, directs energy-intensive entities to introduce and develop EnMS within their organizations. CAEESP is working to expand awareness and demonstrate the value of EnMS in achieving industrial EE.

Initiative

In 2012, CAEESP presented a series of workshops in Astana, Kazakhstan on EnMS and ISO-50001 to help build capacity and share best practices. The workshops were attended by over 70 participants from governmental agencies and industrial enterprises from the national holding group, "Samruk-Kazyna" and others. Participants were introduced to best practices on energy audits, energy resources management, elements of the ISO-50001 standard, and EnMS planning and implementation. CAEESP presenters described the structure and mechanisms needed to support effective energy management and continuous energy efficiency improvements.

Result

Industry participants appreciated the CAEESP team's approach, with practical case studies on sectors such as oil shipping, railways, mining, oil refining and chemical processing. They applied the PLAN-DO-CHECK-ACT continual improvement structure of an ISO 50001 EnMS under a number of scenarios through small breakout groups. Participants also visited a Rubber Recycling Plant for first-hand demonstration and reinforcement of EnMS concepts. The workshops were the first step for many companies towards ISO-50001 certification. Energy-intensive users such as Kazphosphate and KazChrome have expressed interest in on-site consultations related to EnMS.