



REQUEST FOR CEO ENDORSEMENT¹

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: GEF Trust Fund

PART I: PROJECT INFORMATION

Project Title: Reducing GHG Emissions through a Resource Efficiency Transformation Programme (ResET) for Industries in Kazakhstan			
Country(ies):	Kazakhstan	GEF Project ID: ²	4348
GEF Agency(ies):	EBRD (select) (select)	GEF Agency Project ID:	
Other Executing Partner(s):	Ministry of Industry and New Technologies (MINT)	Submission Date:	2011-12-12 2012-02-09
GEF Focal Area (s):	Climate Change	Project Duration(Months)	60
Name of Parent Program (if applicable): For SFM/REDD+ <input type="checkbox"/>		Agency Fee (\$):	709,000

A. FOCAL AREA STRATEGY FRAMEWORK³

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount (\$)	Cofinancing (\$)
CCM-2 (select)	Appropriate policy, legal and regulatory frameworks adopted and enforced	Extent to which EE policies and regulations are adopted and enforced	GEF TF	1,090,000	4,596,000
CCM-2 (select)	Sustainable financing and delivery mechanisms established and operational	Volume of investment mobilized	GEF TF	6,000,000	40,000,000
CCM-2 (select)	GHG emissions avoided (all activities)	Tonnes of CO2 equivalent avoided (all activities)	(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)			(select)		
(select) (select)	Others		(select)		
Subtotal				7,090,000	44,596,000
Project management cost ⁴			(select)		400000
Total project costs				7,090,000	44,996,000

B. PROJECT FRAMEWORK

¹ It is important to consult the GEF Preparation Guidelines when completing this template

² Project ID number will be assigned by GEFSEC.

³ Refer to the [Focal Area/LDCF/SCCF Results Framework](#) when filling up the table in item A.

⁴ GEF will finance management cost that is solely linked to GEF financing of the project. PMC should be charged proportionately to focal areas based on focal area project grant amount.

Project Objective: The proposed project will reduce energy consumption and associated GHG emissions by facilitating the adoption of more efficient technologies and processes in industries in Kazakhstan.						
Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount (\$)	Confirmed Cofinancing (\$)
Component 1: Strengthening national capacity to promote industrial resource efficiency	TA	Outcome 1: Legal and regulatory framework supports best practice in industrial energy efficiency	Output 1.1: Key sub-laws of the Law on Energy Efficiency drafted and enacted Output 1.2: Training provided to government officials on industrial energy efficiency policy Output 1.3: Harmonization of standards and certification/labeling scheme for efficient industrial equipment prepared for manufacturers	GEF TF	690,000	1,150,000
Component 2: Strengthening the capacity of industrial enterprises to improve resource efficiency	TA	Outcome 2: Industrial managers are able to identify opportunities and equipment for resource efficiency	Output 2.1: Training in resource management systems provided to managers of industrial enterprises Output 2.2: Support for the development of project assessment approaches for the Facility and capacity development of participating banks Output 2.3: Establishing and disseminating best practices and case studies	GEF TF	400,000	3,446,000
Component 3: Investments in more efficient equipment and processes	Inv	Outcome 3: Financing is leveraged to improve resource efficiency, moving the market towards more frequent use of highly efficient equipment and processes	Output 3.1: KAZSEFF+ lending to enterprises adopting highly efficient equipment and processes	GEF TF	6,000,000	40,000,000
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		

	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
Subtotal					7,090,000	44,596,000
Project management Cost ⁵				(select)		400,000
Total project costs					7090000	44996000

C. SOURCES OF CONFIRMED COFINANCING FOR THE PROJECT BY SOURCE AND BY NAME (\$)

Sources of Co-financing	Name of Co-financier (source)	Type of Cofinancing	Cofinancing Amount (\$)
GEF Agency	EBRD	In-kind	1,000,000
GEF Agency	EBRD	Hard-loan	40,000,000
GEF Agency	EBRD (EU IFCA - Central Asia Investment Facility)	Grant	3,346,000
GEF Agency	EBRD (GGGI)	Grant	150,000
National Government	MINT	In-Kind	500,000
(select)		(select)	
(select)		(select)	
(select)		(select)	
(select)		(select)	
(select)		(select)	
Total Co-financing			44,996,000

D. GEF/LDCF/SCCF/NPIF RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY¹

GEF Agency	Type of Trust Fund	Focal Area	Country Name/ Global	(in \$)		
				Grant Amount (a)	Agency Fee (b) ²	Total c=a+b
EBRD	GEF TF	Climate Change	Kazakhstan	7,090,000	709,000	7,799,000
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
Total Grant Resources				7,090,000	709,000	7,799,000

E. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

Component	Estimated Person Weeks	Grant Amount (\$)	Cofinancing (\$)	Project Total (\$)
Local consultants*	136.00	340,200	1,223,600	1,563,800
International consultants*	87.00	652,500	2,272,400	2,924,900
Total		992,700	3,496,000	4,488,700

* Details to be provided in Annex C.

⁵ Same as footnote #4.

F. PROJECT MANAGEMENT COST

Cost Items	Total Estimated Person Weeks/Months	Grant Amount (\$)	Co-financing (\$)	Project Total (\$)
Local consultants*		0	80,000	80,000
International consultants*			80,000	80,000
Office facilities, equipment, vehicles and communications*			120,000	120,000
Travel*			120,000	120,000
Others**	Specify "Others" (1)			0
	Specify "Others" (2)			0
Total		0	400,000	400,000

* Details to be provided in Annex C.

** For others, to be clearly specified by overwriting fields *(1) and *(2).

G. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT? Yes

(If non-grant instruments are used, provide in Annex E an indicative calendar of expected reflows to your Agency and to the GEF/LDCF/SCCF/NPIF Trust Fund).

H. DESCRIBE THE BUDGETED M &E PLAN:

The Monitoring and Evaluation (M&E) Plan used by the project supports the planning and adaptive management requirements of the project, meets the requirements of both EBRD and the GEF, and facilitates reporting of progress and impacts to the GEF Secretariat and the EBRD. The EBRD uses a Results Based Management approach, based on the Project's Logical Framework (Annex A).

These performance indicators, defined in the Logical Framework, will be monitored at regular intervals throughout the project implementation period. The project team will collect market level data from official sources, partner government officials and agencies on an annual basis track progress.

Mid-term Review and Final Evaluation -

Both the project mid-term review and final evaluation will be carried out by an independent party at the appropriate time and have two basic objectives:

- 1.To assess the results and impacts, both intended and otherwise, of the project (accountability function); and,
- 2.To determine whether there are lessons to be learned from past experience to make future operations better, thereby contributing to "institutional memory" (lessons learned or quality management orientation).

The mid-term review will be used to identify areas where improvements could be made and to improve the effectiveness of results and impacts. The project review and evaluation will provide the basis for a system of accountability to managers and to the GEF. EBRD will follow its normal practices of monitoring, evaluation, and reporting.

M&E Budget

M&E will be financed by EBRD, with US\$100,000 budgeted including \$50,000 for contracting external evaluation contractors. Other costs associated with data collection will be included in the staff costs for team members in the day-to-day execution of their tasks, and, while not tracked separately is likely to account for about \$50,000 during the course of the project. Table A.1 in Annex A provides an indicative M&E Plan.

The M&E framework will assess the Project's impact on the promotion of market transformation for energy efficiency in industry. The foundation of the framework is given in the Project Framework (see Annex A), which includes indicators, targets and timelines.

Monitoring and verification of the results is key to determining the success of the programme. The entire programme will be monitored, and will require inputs from participating stakeholders in the project (including sub-borrowers) that must agree to provide the required information on energy savings as part of the agreement that will be signed prior to their access to KAZSEFF+. The energy audits, to be conducted as part of the detailed assessments prior to fund access, will provide information on the base year energy consumption of the industry participants. Receipts and records of previous years' energy bills will also be used to establish the baseline.

The external M&E will take place with reports summarizing the overall progress and projects that receive financing and can be used officially. The project consultants will be responsible for preparation of regular progress reports with full support of, and in agreement with, the participating companies.

PART II: PROJECT JUSTIFICATION

A. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

A.1.1. The [GEF focal area/LDCF/SCCF strategies/NPIF Initiative](#):

This proposed project is a clear fit with the GEF climate change mitigation focal area objective of promoting market transformation for energy efficiency in industry (Objective 2), including the adoption and enforcement of appropriate policy, legal and regulatory frameworks. The project will establish and operationalise sustainable financing and its delivery mechanism for industrial energy efficiency investments.

The associated increase in capacity and reduction of financing barriers will provide a significant demonstration effect for the entire market as it moves towards a lower "carbon trajectory" than it would otherwise, thereby avoiding substantial emissions. Through the project, industrial energy efficiency investments in Kazakhstan will be made, and key stakeholders including both government and the private sector will receive needed training and support to enable these investments. The project supports a comprehensive and enduring programme to support energy efficiency improvements in industry in Kazakhstan, and the structures and skills will endure once the project is completed.

A.1.2. For projects funded from LDCF/SCCF: the LDCF/SCCF eligibility criteria and priorities:

Not applicable.

A.1.3 For projects funded from NPIF, relevant eligibility criteria and priorities of the Fund:

A.2. National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NIPs, PRSPs, NPFE, etc.:

The project reflects government priorities to promote sustainable development and the commitments it has assumed to mitigate greenhouse gas emissions as an Annex 1 party to the United Nations Framework Convention on Climate Change (UNFCCC). The Second National Communication of Kazakhstan to the UNFCCC⁶ specifically identifies outdated equipment in industry as a key problem contributing to sectoral GHG emissions.

The project is fully aligned with both the Concept on the Transition of Kazakhstan to Sustainable Development (2007-2024) and the Development Strategy of Kazakhstan until 2030. Kazakhstan's *Industrial and Innovation Development Strategy to 2015* specifically targets an increase in resource efficiency and a reduction in the ratio of energy to GDP output. The draft Law on Energy Saving and Energy Efficiency (2011) targets a 10% reduction in the energy intensity of GDP by 2016 (based on 2008 levels).

⁶ Available at: <http://unfccc.int/resource/docs/natc/kaznc2e.pdf>

B. PROJECT OVERVIEW:

B.1. Describe the baseline project and the problem that it seeks to address:

B.1.1 BACKGROUND

Kazakhstan is located at the crossroads of Asia and Europe, with an area of 2.71 million km² (9th in the world's largest footprints) and a population of approximately 16 million. The country is divided regionally into 14 regions (oblasts): Akmola, Aktobe, Almaty, Atyrau, East Kazakhstan, Zhambyl, West Kazakhstan, Karaganda, Kostanay, Kyzylorda, Mangistau, Pavlodar, North Kazakhstan and South Kazakhstan. Cities of national importance are Astana and Almaty.

Kazakhstan's economy centers on exports of crude oil, base metals, chemicals, food and agriculture. Exports increased from 18.5 billion USD in 2004 to 59 billion USD in 2010. A breakdown of major industries by region is provided in Figure 1. The importance of the oil industry is significant as the country is the second largest oil producer among former Soviet Republics, after Russia, producing over half a million barrels of oil a day. The most important oil field is Tengiz, which is estimated to contain 6-9 billion barrels, and other important fields are Uzen and Karachaganak.

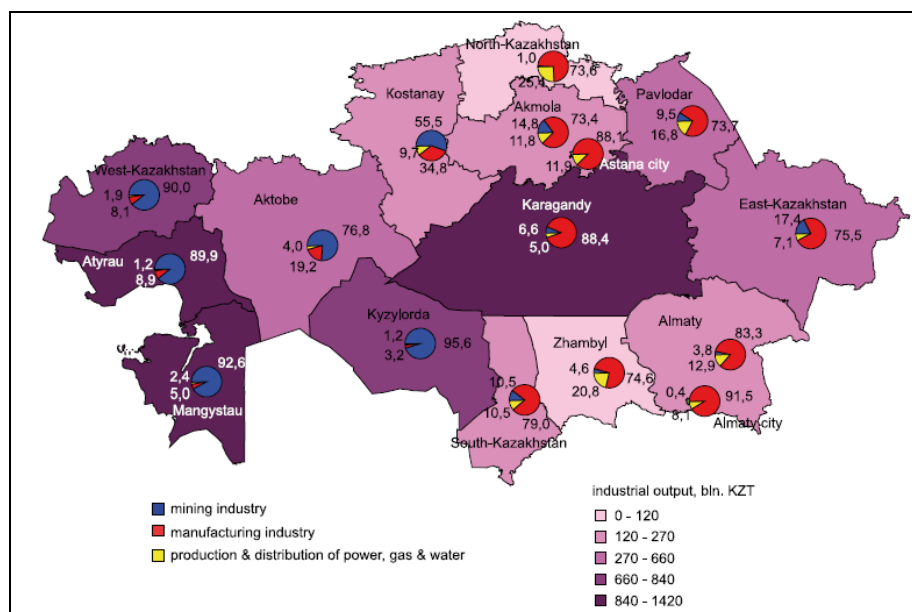


Figure 1. Map of Kazakhstan showing a breakdown of major industries per region⁷

Apart from oil and gas, the industrial sector of Kazakhstan and its development depend on raw materials and natural resources. The manufacturing industry is centered on refining ores and producing petrochemicals. In that context, the metallurgical industry (ferrous and nonferrous metals), petrochemical and chemical industry and machine building are the key industrial sectors. Other manufacturing activities include processing agricultural products and textiles.

The mining industry is the second largest source of income for the country, and the country has large quantities of coal, chromium, gold, tungsten, copper, lead and zinc. Kazakhstan is a major coal producer, consumer and exporter. The major mining areas are centered in the Karaganda (13 mines) and Ekibastuz basins. During the last few years, the production of coal has reached 110 million tones/year.

Despite its huge industrial base, the collapse of the Soviet economy and the associated destruction of industrial chains between enterprises resulted to a steep decline in industrial production. During the late 1990s, an industrial upturn occurred and the government sought an accelerated recovery through dedicated national programmes.

⁷ The Statistical GuideBook 2008, Kazakhstan Statistics Agency, www.stat.kz

Progress achieved through these initiatives resulted in industrial development during the last decade.

B.1.2 MAJOR INDUSTRIAL SECTORS

The main active industrial sectors in Kazakhstan are mining (coal, copper, zinc, chromium, manganese, lead, silver, phosphorus, etc.), metallurgy (aluminium, steel), agro business, machine building, chemical and the oil and gas sector in the last few years. Metallurgy generates about 25% of industrial output (including the energy sector), divided equally between the processing of ferrous and nonferrous metals. Engineering and metalworking account for 6.2% and the other sectors for lesser percentages as shown in Figure 2.

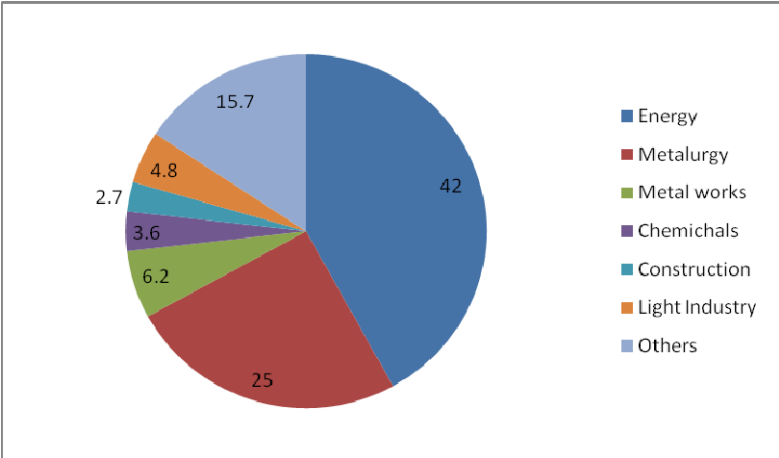


FIGURE 2. INDUSTRIAL OUTPUT ALLOCATION (SOURCE: KAZAKHSTAN STATISTICS AGENCY WWW.STAT.KZ)

During project preparation, the industrial sectors in Kazakhstan were analyzed and the key sectors that that are most in need for energy efficiency interventions were identified. Those sectors deemed highly likely to take advantage of the planned initiatives are: mining, metallurgy, machine/equipment manufacturing, chemicals, food and textiles. These sectors contribute over 75% of total energy consumption in the entire industry, with metallurgy and mining accounting for the largest share of energy use at a country level. As Figure 3 and 4 show, the importance of these sectors is almost the same when compared to electricity and thermal energy consumption. Significant consumption of thermal energy is observed in the food and textile industry, as noted in Figure 4.

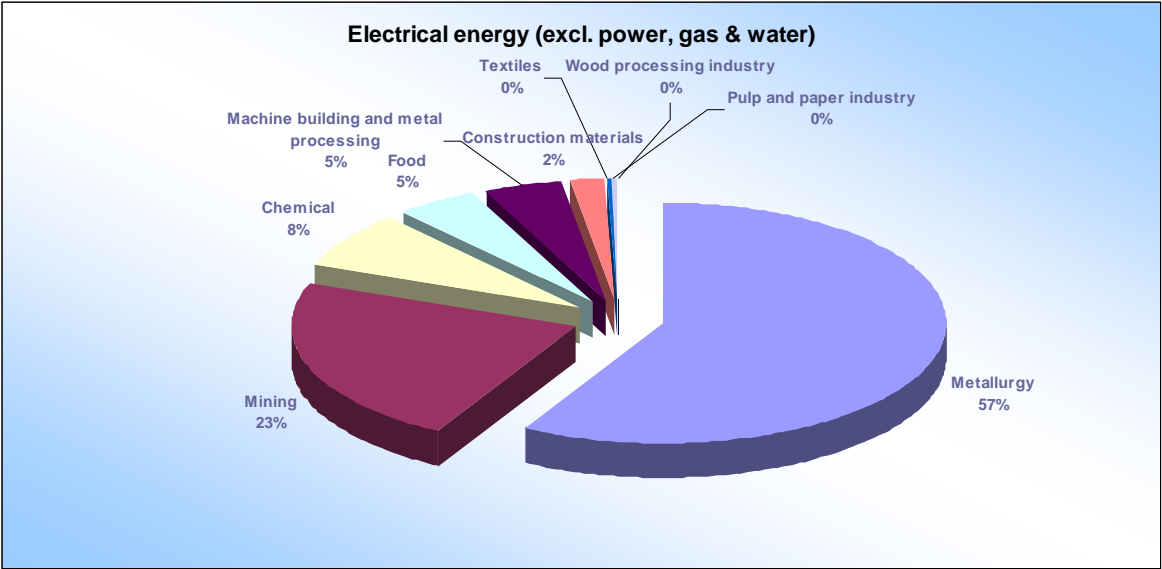


FIGURE 3. BREAKDOWN OF ELECTRICITY CONSUMED IN INDUSTRIES (2009)

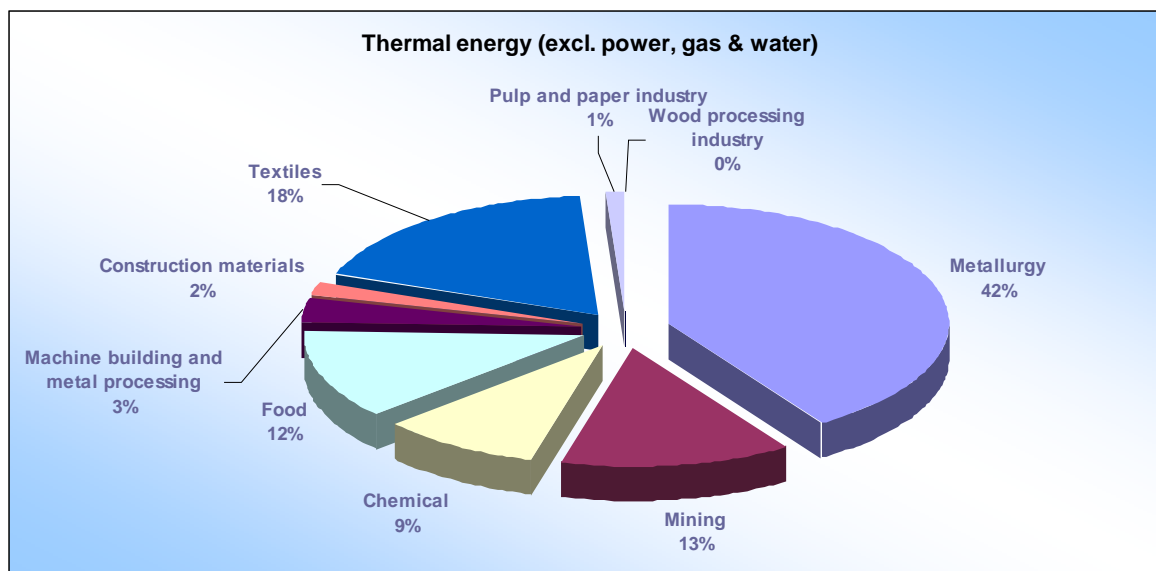
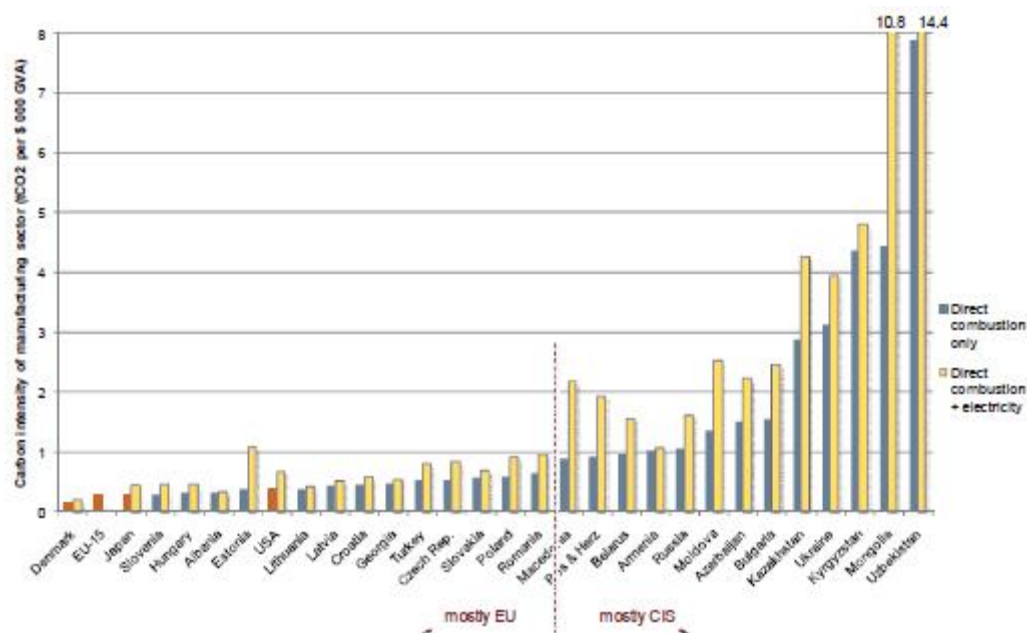


FIGURE 4. BREAKDOWN OF THERMAL ENERGY CONSUMED IN INDUSTRIES (2009)

The manufacturing sector in Kazakhstan is substantially more resource-intensive than those of advanced market economies, using more energy, water, and raw materials per unit of output. This resource intensity has an impact on the medium and long-term competitiveness of enterprises and results in a greater environmental footprint, including high GHG emissions. Various factors contribute to these circumstances, including:

- Low penetration of best practice in the area of resource management;
- Marginal market share of state-of-the-art resource efficiency technologies due to inadequate market drivers but also because of underdeveloped local supply chains;
- Information asymmetry related to engineering and economic aspects of resource efficiency technologies;
- Lack of data on internal resource use and operational parameters of systems and processes;
- Inadequate standards and regulations in the area of environmental management and resource efficiency;
- Management complexity, especially regarding project management; and
- Up-front transaction costs and scarce financial resources.

The high intensity of resource use is reflected in the carbon intensity per unit of value added in the manufacturing sector (see Figure 5 below). While this resource intensity is in part a consequence of the structure of the manufacturing base, with its focus on commodities rather than finished products, it also is a result of the inadequate technologies and processes adopted.



Source: Vivid Economics calculations using World Bank, UNESD and WRI data. GVA is calculated on a market exchange rate basis. Orange columns show comparators from outside the transition region. Data is unavailable for Serbia and Montenegro.

Figure 5: Comparison of Carbon Intensity in the Manufacturing Sector of Selected Transition Economies

As noted above, one of the underlying reasons for existing inefficiencies (especially in non-energy-intensive industries) is outdated equipment. In a recent IFC survey, for example, more than a quarter of companies in neighboring Russia were operating equipment that had been in use for more than 25 years; similar patterns have been identified in Kazakhstan. While these trends confirm the need for dedicated investments, it is worth noting the lock-in consequences associated with the choice of sub-optimal though cheaper solutions.

B.1.3 POLICY CONTEXT

Energy Efficiency Law

Coming into force in December 1997, the *Law “On Energy Saving of the Republic of Kazakhstan”* was to regulate energy saving to create economic and organizational conditions for effective use of fuel and energy resources in Kazakhstan, and to contribute to environmental protection. Its scope covers processes related to production, processing, transportation, generation, storage and use of all types of fuel and energy resources, thermal and electric energy, including supply and distribution of heat through district heating networks.

Preceded by the National Energy Saving Programme, adopted in 1996, neither the Law nor the Programme yielded the expected results due to a lack of specific energy saving goals, incentives, effective secondary legislation, and establishment and empowerment of administrative bodies responsible for the implementation of energy saving action plans. Nevertheless, both the Programme and the Law were considered pioneer initiatives in Central Asia as they involved positive elements such as increasing public awareness of energy saving and energy efficiency, introducing fuel and energy consumption standards, and certification of equipment, etc.

Since 2007, energy efficiency has regained significant attention in Kazakhstan. A Government-sanctioned draft *Law on Energy Efficiency* was initiated in that year and, in June 2009 the draft Law was filed with the Majilis - the lower chamber of Kazakhstan's Parliament - for eventual adoption. Upon request of the Kazakh Government, EBRD provided technical assistance for drafting the new Law, to help ensure that international best practice was taken into account in its preparation. The draft *Law on Energy Efficiency* provided general targets and directions for policy, and it established the roles and responsibilities of the government and energy consumers. The Government was tasked with setting requirements for energy management, coordinating work on energy conservation, and determining specific forms of government support, among other tasks. Its authorized agency would implement government strategy, coordinate training activities, develop plans for technical standards, and draft necessary laws

and decrees to implement the *Law on Energy Efficiency*. Finally, the draft Law mandated audits for large energy consumers, which may include industrial facilities. The draft Law was sufficiently broad in scope and supportive of energy savings in industry to provide a foundation for work on industrial energy efficiency.

In June 2010, the draft Law was returned to Ministry of Industry and New Technologies (MINT) with a request for further refinement. The draft Law has since been expanded to include the regulation of Energy Services Companies (ESCO), and defines specific goals for the reduction of energy intensity as a factor of energy consumption over GDP by 10% in 2015 through the effective use of fuel and energy resources. This draft Law - renamed the *Law "On energy saving and energy efficiency"* - has been submitted to Kazakhstan's Parliament and is expected to be passed by January 2012. Secondary legislation is to be introduced as amendments to the main law, or on a stand-alone basis, within 3 years of the approval of the main law.

B.1.4 BARRIER ANALYSIS

Despite the positive recent developments with the energy efficiency Law as described above, there remain barriers that limit the potential for energy efficiency investments by industries in Kazakhstan. Significant barriers that must be overcome are summarized under the following categories:

1. *Policy and institutional barriers* – anticipated regulatory framework regarding energy efficiency that has significant requirements for guidelines and detailed sub-laws;
2. *Awareness and knowledge barriers* – low level of awareness among small- and medium-sized industries regarding best available technology (BAT) techniques and other cost-benefit solutions for energy efficiency implementation; and,
3. *Financial and market barriers* – the financial status of many local industries is poor and provision of debt from local banks is challenging due to very high interest rates.

Table 1 provides additional details on each of these barriers. Table 3 in Section B.2.1 lists the corresponding barrier removal activities as integrated in the Project's design.

Table 1. Key barriers identified

Barriers	Description
1. Policy and institutional barriers	Unclear or underdeveloped secondary legislation regulatory framework and standardization for energy efficiency
	Lack of institutions and capacities for public agencies to organize, transform and develop new and emerging markets for energy efficiency goods and services, and for local private sectors to adopt state-of-the-art energy efficiency technologies and practices.
	Poor energy efficiency governance among related institutions which undermines government policy frameworks and initiatives, including inability to enforce or govern energy efficiency regulations and coordinate different levels of government, the international community, the private sector and civil society
	Lack of consensus on best practices to promote energy efficiency (e.g. regulations, incentives/subsidies, market-based schemes and awareness/informational issues), the right balance between these practices, and the appropriate role of government
2. Awareness and knowledge barriers	Lack of energy efficiency data, which is compounded by the lack of internationally-recognized indicators to adequately compare countries' relative energy intensity levels to take into account their economic structure, climate, geography, population, and other factors, and to effectively determine the real potential for improvements
	Lack of awareness of energy efficiency potential and opportunities
	Lack of customer awareness and a very high perceived risk of new more efficient technologies by both users and financiers; mistrust of energy audits; benefits not visible
3. Financial and market barriers	High pre-investment development and transaction costs partially due to the large number and medium size of projects
	General lack of energy efficiency finance experience within local financial institutions and lack of dedicated time and resource to develop energy efficiency capacity and activities in-house
	Limited visibility and scale of energy efficiency finance because such projects often represent a relatively small niche business for major banks
	Long market cycles associated with, and scarcity of, investment-ready energy efficiency projects
	Usually capital intensive investments with high upfront cost
	Lack of full economic costing of energy, subsidies and inadequate market signals. Fossil fuels energy subsidies, which continue to diminish the returns from energy efficiency improvements.
	Low commitment from participating banks to provide financing to energy efficiency projects
	The energy efficiency market is diverse and complex; it has a range of end-users, a variety of end-use technologies and a number of market sectors and solutions are often customized and not always replicable

B.1.5 BASELINE PROJECT AND PROBLEM TO BE ADDRESSED

The Kazakhstan Government directly supports industrial energy efficiency efforts through the development and promotion of the draft Law *on Energy Saving and Energy Efficiency*, which is currently under consideration by Parliament. As noted above, this Law will provide a foundation for work on industrial energy efficiency.

However, significant work on the secondary legislation and regulatory measures to implement specific sectoral and sub-sectoral programs is required. The Ministry of Industry and New Technologies (MINT), which is the authorized agency for implementing the Law, will continue to invest in capacity building and legislative/regulatory development related to industrial energy efficiency through the implementation of the law and ensuing secondary legislation. MINT's contributions to the regulatory framework have been included as co-financing of US\$500,000. The sub-laws that are relevant to industry, and have been assessed as part of the baseline regulatory framework, are noted in Table 2 (although some need for external assistance has been identified as noted in Table 4). Missing provisions that should be considered additional to achieve a comprehensive framework are included under Component 1 of Section B2. Incremental/Additional cost reasoning.

Table 2. Baseline regulatory initiatives under development by MINT

<i>Regulations</i>	<i>Specific Draft EE Law provision identification</i>
Development of an energy audit regulation (in industry) This requires the development of technical rules but also administrative procedures (i.e. training, accreditation, registry, etc.) for the deployment of basic energy services in the market.	Article 5 Authorized state body competences and functions Article 9 State energy registry- functions of EAs, Article 15 Accreditation Article 17: General requirements Article 18 (training, establishment of training centers), Article 22 Obligations of end-users subject to EAs
Development/enforcement of power factor tariff/metering regulations To date, reactive power is not charged and contemporary metering roll-outs have been selectively carried out in some regions (or parts of them) for demonstrative purposes. Consumers' price response is an essential measure to demand side management and its development must sought in parallel to the development of the EE market.	Article 7 State control over observance of EE law Article 8 (mandatory energy resources meters and automated control systems in new facilities) Article 9 (information about availability energy meters to be included in the State energy registry), Article 22 Rights and responsibilities of subjects (entrepreneurs and legal entities shall observe the norms of energy consumption and power factor values in the electricity networks),
Establishment of a State Energy Registry This activity is the cornerstone of the Kazakh EE policy and the draft law itself provides an adequate level of detail for it. Establishment of the procedures for the creation, maintenance and administration of the registry including the relevant regulatory decisions that originate or refer to it will need to be developed prior to its official launch and during the course of its operation.	Article 9 State Energy Registry Article 21. Obligations of operator of Registry
Performance monitoring plan for local executive bodies in the implementation of energy conservation policy This activity involves assigning an additional mandate to the local executive bodies.	Article 4 Competences of the Government of RK (develops and implements mechanism of evaluation of local executive bodies activities on energy saving and energy efficiency); Article 5 Competence of the authorized body (coordinates the program of energy conservation and energy efficiency of akimats of regions and cities of republican status, capital)
Development of role and responsibilities of local executive bodies for the program of energy conservation and energy efficiency The local executive bodies are foreseen by the Law to play a market-maker role in the development of national energy efficiency programmes by assisting the state authority (within MINT) with the programmes' implementation.	Article 6 Competences of other state bodies Article 19. Voluntary Agreements with energy consumers
Requirements on the form and content of the action plan on energy conservation and efficiency, based on energy audits An action plan is an integral part of a strategy (in our case	Article 19 Agreement on energy conservation and energy efficiency Article 22 Information on annual reduction defined on the basis of audits

for industrial energy efficiency). The action plan itself denotes activities of a specified budget and time scale that effectively lead to the fulfillment of an ex-ante defined target. Energy audits on representative installations should lead-in this process by showcasing what is feasible to be achieved at what time-frame and spent-resources.	
Criteria for risk assessment in accordance with the Law of the Republic of Kazakhstan "On state control and supervision" With the gradual gain of experience by the state control mechanisms, criteria for risk assessment will be calibrated.	Article 5 Competence of the authorized body (develops and approves criteria for risk assessment)
Voluntary implementation of ISO International Energy Management Standard 50001 The standard provides organizations and companies with technical and management strategies to increase energy efficiency, reduce costs and improve environmental performance. This is effected by addressing aspects of energy management that are prerequisites in the control over energy consumption and costs: energy efficiency policy, energy metering, recording and reporting, procurement procedures, analysis, target setting, organisational and administration roles/ structure. The standard is anticipated to be attractive for large international companies with investments in Kazakh industrial plants.	Article 10: Energy management (Subjects of the State energy registry consuming energy resources in the amount equivalent to 1500 and higher tons of o.e. shall establish, implement and organize a system of energy management in compliance with the international standard on energy management ISO 50001)

EBRD is currently supporting energy efficiency in Kazakhstan through the Kazakhstan Sustainable Energy Financing Facility (KAZSEFF). The EBRD developed KAZSEFF is a credit line for industrial and commercial enterprises that seek to invest in energy efficiency or renewable energy projects. It was developed by the EBRD and credits are disbursed through the local banks. The Sustainable Energy Financing Facility (SEFF) approach is currently being used by EBRD in a number of countries, and it includes a credit line or guarantee from the EBRD to local banks, specifically dedicated for on-lending to medium-sized and smaller companies that are considering energy efficiency projects. Local banks use these credit lines to provide commercial loans to borrowers with eligible investment opportunities. Every credit line is supported by a comprehensive technical assistance package that helps borrowers prepare loan applications and trains local bank loan officers to process sustainable energy investment opportunities. Grant funding from donors supports this assistance.

In the absence of the proposed EBRD-GEF project, opportunities for efficiency improvements in industry are limited by the awareness and capacity barriers that will limit the effective implementation of the new *Law on Energy Saving and Efficiency*; and the lack of financing for highly efficient technologies and approaches would continue. Specifically:

- While the Government is highly likely to adopt the draft *Law on Energy Saving and Energy Efficiency* in the short term, the MINT lacks the experience and capacity to develop and implement all of the policies and regulations that would allow this Law to translate into an effective legal and policy environment for promoting industrial efficiency.
- While some companies would undertake investments to improve their resource efficiency, many others would continue to lack awareness of these opportunities and would find themselves competing for a relatively limited source of available funding. While the current situation in theory provides the opportunity for companies to invest in projects aimed at increasing their competitiveness in the marketplace through resource efficiency, cost control, technological innovation and advanced management practices, sufficient momentum would not be generated without outside support.
- EBRD would continue to provide a credit line through KAZSEFF and generate some resource efficiency benefits; however, companies would lack the awareness and funding to adopt best available technologies (BAT), which could substantially increase GHG savings upgrading their facilities, and there would not be explicit focus by KAZSEFF on climate change mitigation.

Under the baseline, therefore, EBRD would continue to provide part of its KAZSEFF credit line to the industrial

sector that would generate some resource efficiency benefits. However, experience to date is that companies lack the awareness, incentive and funding to adopt best available technologies (BAT), which could substantially increase GHG savings while upgrading their facilities. Therefore, under a business-as-usual scenario, in the next phase of KAZSEFF there would not be an explicit focus on climate change mitigation and, further, it is very likely that the investment would go towards renewable energy or other eligible sub-projects. As such, for the baseline of this project (based on the KAZSEFF experience) we would anticipate approximately 5M USD of KAZSEFF funding would be provided meeting a minimum criteria of 4 kWh per USD investment. There is, therefore, a major opportunity for the proposed project to provide for the needs of companies in the current market context while generating significant climate benefits.

B. 2. [incremental /Additional cost reasoning](#): describe the incremental (GEF Trust Fund/NPIF) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF/NPIF financing and the associated [global environmental benefits](#) (GEF Trust Fund) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project:

B.2.1 PROJECT OBJECTIVE AND APPROACH

The proposed project will reduce energy consumption and associated GHG emissions by facilitating the adoption of more efficient technologies and processes in industries in Kazakhstan. EBRD will catalyse market transformation in the manufacturing sector in Kazakhstan by blending its financing with technical assistance and concessional funding to support improvements in industrial energy efficiency. Specifically, EBRD aims to establish a new programme in Kazakhstan, the **Resource Efficiency Transformation Programme (ResET)**, to support implementing best international technologies and practices in the area of resource efficiency. ResET – designed to remove key barriers as noted in Table 3 – consists of technical assistance coupled with a facility blending EBRD conventional lending with funding provided by the GEF as an investment incentive using KAZSEFF as a basis. The GEF financing will apply only where there will be substantial incremental carbon mitigation benefits.

Table 3. Key Barriers and actions designed address them as integrated in the Project design

Barriers	Actions integrated in the Project design	Relevant Components, Outputs, Activities
1. Policy and institutional barriers		Component 1
Unclear or underdeveloped secondary legislation regulatory framework and standardization for EE	Continuous cooperation and assistance to the MINT in each role and responsibility for developing the EE market	Output 1.1; Activity 1.1.1
Lack of institutions and capacities for public agencies to organize, transform and develop new and emerging markets for EE goods and services, and for local private sectors to adopt state-of-the-art EE technologies and practices.	Showcase in 1 the effectiveness of EE programmes will act as a demonstration activity for creating-strengthening public institutions responsible for EE (Agency)	Output 1.2; Activity 1.2.1, 1.2.2
Poor EE governance among related institutions which can undermine government policy frameworks and initiatives, including inability to enforce or govern EE regulations and coordinate different level of government, the international community, the private sector, civil society	Continuous cooperation and assistance to the MINT in each role and responsibility for developing the EE market	Output 1.1; Activity 1.1.1
Lack of consensus on best practices to promote EE (e.g. regulations, incentives/subsidies, market-based schemes, standards and labelling, and awareness/informational issues), the right balance between these practices, and the appropriate role of government	Continuous cooperation and assistance to the MINT in each role and responsibility for developing the EE market	Output 1.1; Activity 1.1.1 Output 1.3; Activity 1.3.2 and 1.3.3
2. Awareness and knowledge barriers		Component 2
Lack of awareness of EE potential and opportunities	Training, awareness raising and education activities to be provided as an integral part of the programme	Output 2.1, 2.2, 2.3
Lack of customer awareness and a very high perceived risk of new more efficient technologies by both users and financiers mistrust, in energy audits and benefits initially invisible	Integral technical assistance part including marketing, technical assessment and dissemination of information	Output 2.1, 2.2; Activity 2.2.3 and 2.1.2
Limited visibility and scale of EE finance because EE projects often represent a relatively small niche business for major banks	The project is designed to cover a large but focused scope i.e. industry-wide EE actions	Output 2.3; Activity 2.3.1; 2.3.2

Lack of EE data, compounded by a lack of internationally recognized indicators to adequately compare countries relative energy intensity levels to take into account their economic structure, climate, geography, population, and other factors, and to effectively determine the real potential for improvements	Information campaigns, data collection and web site	Output 2.3; Activity 2.3.1 and 2.3.2
3. Financial and market barriers		Component 3
High pre-investment development and transaction costs partially due to the large number and medium size of projects	Economies of scale through the aggregation of medium sized individual projects	Output 3.1; Activity 3.1.1
General lack of EE finance experience within local financial institutions and lack of dedicated time and resource to develop EE capacity and activities in house	Participation of local banks with the Multilateral Development Banks	Output 2.1; Activity 2.1.2
Long market cycles associated with selling EE and scarcity of investment ready projects	Dealt with by aggregation of smaller projects and building of capacities for energy services	Output 3.1; Activity 3.1.1
Usually capital intensive investments	Incentive is used as a means of lowering overall investment	Output 3.1; Activity 3.1.1
Lack of full economic costing of energy, subsidies and inadequate market signals. Fossil fuels energy subsidies, which continue to diminish the returns from energy efficiency improvements.	Implicitly factored-in through the commitment of MINT in restructuring energy tariffs	Output 3.1; Activity 3.1.1
Low commitment from participating banks to provide financing to EE projects	Provision of targeted actions to increase understanding of the benefits of energy efficiency investments increases the comfort level and ensures mutual trust among stakeholders	Output 3.1; Activity 3.1.1
The energy efficiency market is diverse and complex; it has a range of end-users, a variety of end-use technologies and a number of market sectors and solutions are often customized and not always replicable	Adoption of list of BATs for standardization of investments	Output 3.1; Activity 3.1.1

B.2.2 INCREMENTAL PROJECT ACTIVITIES

As noted above, ResET is a programme composed of both technical assistance and a facility blending EBRD conventional lending with funding provided by the GEF. Two components of ResET provide technical assistance on energy efficiency regulations and capacity development to establish an enabling environment, and technical support for the facility itself. The third Component of ResET is the investment component that uses an enhanced facility – termed “KAZSEFF+” – which is based on the EBRD’s KAZSEFF. The KAZSEFF+ facility will lend to industrial enterprises adopting specific efficient technologies and processes, thereby leveraging additional financing for industrial enterprises. Under ResET, the definition of “highly efficient equipment and processes” specifically refers to a refined list of BAT that meets high standards of energy efficiency and are therefore considered eligible for financing under KAZSEFF+.

The ResET Components, described in this section, include:

- Component 1 – Strengthening national capacity to promote industrial resource efficiency;
- Component 2 - Strengthening the capacity of industrial enterprises to improve resource efficiency;
- Component 3 – Investments in more efficient equipment and practices.

COMPONENT 1 - STRENGTHENING NATIONAL CAPACITY TO PROMOTE INDUSTRIAL RESOURCE EFFICIENCY

This component supports the increased capacity of government officials to oversee industrial energy efficiency policies. The government is already working in this area and this existing investment has been included as baseline co-financing as noted in the previous section. Support will be targeted at developing key sub-laws of the *Law on Energy Savings and Energy Efficiency*; training of government officials on industrial energy efficiency policy; and developing of a certification / labelling scheme for efficient industrial equipment.

For this Component, GEF funding of \$690,000 is requested for technical assistance, with co-financing of \$1,150,000 provided for additional technical assistance.

Outcome 1. Legal and regulatory framework supports best practice in industrial energy efficiency

Output 1.1: Key sub-laws of the Law on Energy Savings and Energy Efficiency drafted

Activity 1.1.1 Advise and work with the Ministry of Industry and New Technologies, and other relevant ministries or agencies, on the development of secondary legislation and related essential provisions

Technical support is required to provide input to, and assistance with, drafting key secondary legislation related to the draft *Law on Energy Savings and Energy Efficiency* and ResSET will work closely with the government to support passage of this secondary legislation. During the project design stage, an initial review was conducted to determine the extent of this external assistance required to develop the legislative documents listed in Table 2. As previously noted, secondary legislation is to be introduced as amendments to the main law or on a stand-alone basis within 3 years of the approval of the main law. Further, provisions/elements not explicitly foreseen within the legislative framework – based on international best practice – must be addressed to ensure a successful, comprehensive framework for industrial energy efficiency. Therefore, at the outset of the project, a detailed needs analysis will be conducted to confirm the technical assistance required for the industrial energy efficiency legislative framework. Table 4 provides a preliminary list of areas requiring technical assistance.

Table 4. Preliminary list of regulatory initiatives under development by MINT requiring external support

<i>Link with Draft EE Law</i>	<i>Regulations requiring additional support</i>	<i>External assistance required</i>
Article 5 Authorized state body competences and functions Article 9 State energy registry-functions of EAs, Article 15 Accreditation Article 17: General requirements Article 18 (training, establishment of training centers), Article 22 Obligations of end-users subject to EAs	Development of an energy audit regulation (in industry)	For standardising the process and creating a certain degree of confidence for EE investments, an energy audit regulation including the qualifications of auditors will be required.
Article 9 State Energy Registry Article 21. Obligations of operator of Registry	Establishment of a State Energy Registry	IT contractor for the day-to-day operation as well as for the editing of regular information releases (i.e. quarterly, annual, etc.)
Mentioned as part of the contents of the State Energy Registry (Article 9 par. 1 point 5)	Development of energy benchmarks for industry <i>Resolution of the Government of the Republic of Kazakhstan dated January 26, 2009 № 50 on approval of standards for energy consumption</i> provides a sound basis for the development of energy benchmarks for the industrial sector.	A validation exercise is necessary to derive more realistic and applicable benchmarks. Benchmarks are the starting points from which efficiency improves, measured in standard specific units of energy. The provision of energy performance benchmarking allows international and national economy comparisons. In the early stage of the development and pilot operation of the State Energy Registry the benchmarks may be used as reference values to test the validity of data flowing into the databases. Benchmarks should be revised and amended, and the EE policy target set based on the information provided by the benchmarks (i.e. 5-year review of EE benchmarks, review of achievements against EE policy targets and cost-benefit analysis of possible corrective actions leading to a 5-year ahead EE action plan).

Output 1.2: Training provided to government officials on industrial energy efficiency policy

Based on consultations with government officials, it was determined that many officials lack up-to-date knowledge of energy efficiency and energy management development, implementation and verification procedures. The purpose of the capacity development support to government, therefore, is to provide stakeholders from Governmental and other State institutions with a wider view regarding energy efficiency and its importance along with a review of the regulatory background in EU countries.

Activity 1.2.1: Prepare training and support materials for government officials

Training and support materials will address the following issues relevant to government officials:

- Technical issues on energy efficiency technologies and the importance of energy efficiency in industry;
- Best practices from other countries, including examination of case studies from other credit lines similar to KAZSEFF that involve incentive schemes;
- Regulatory background on EU countries regarding energy efficiency, strategies and policies; and,
- Facilitated discussion of the implementation of the new regulatory framework in Kazakhstan.

Activity 1.2.2: Provide a series of tailored training sessions for government officials

According to experience from similar initiatives, it is proposed that the initial capacity building begin prior to the actual start of investments implementation. Workshops will be organized at the main city centres (Astana and Almaty) and also, where appropriate, in oblasts to maximize the knowledge gains and project promotion among key government stakeholders.

These workshops will be coordinated with the training of industries and associations (under Component 2). Therefore, the government sessions will take place right after the end of the industry workshops, initially in Almaty and Astana and possibly in some major centres where target groups are present.

A target of four (4) two-day events involving 10 to 15 officials each will be offered in Almaty, Astana, and other key locations in Kazakhstan. The baseline level of knowledge will first be measured, so that the increase in capacity can be determined.

Output 1.3: Harmonization of standards and certification/labelling scheme for efficient industrial equipment prepared

The lack of harmonized standards, codes and practices regarding equipment used in the industrial sector has been identified by numerous studies and analyses as one of the obstacles for cooperation between the technology exporters and the Kazakh market. Currently, energy efficient equipment is generally available in the local market but there is no mandatory or voluntary mechanism promoting the high-spec equipment against the lower-priced alternatives that generally do not conform to international energy efficiency standards. For the industrial sector, standard harmonization will work in parallel with the modernization efforts of the Kazakh government and would apply to equipment standards (electrical, manufacturing, construction, etc.) for which ISO, CEN/Cenelec have published or developed relevant standards.

Activity 1.3.1. Assess national testing and certification facilities

As a baseline, Kazakhstan has initiated the adoption of international standards and has formed a standardization organization with the intent of having sufficient capacity to deal with complex projects. However, progress has only been at the governmental level and actual implementation of standards through proper testing and certification is at a relatively low level. National standards for crucial equipment are still non-existent. Further, certification laboratories in the region are considered to have questionable abilities and certification procedures, with the majority of laboratories not accredited by an international body. Therefore locally produced equipment lacks both testing standards and certification opportunities leading to a non-healthy market situation.

This activity will (a) review the national testing and certification facilities, focusing on gaps in both capacity and facilities, and (b) provide recommendations for specific improvements.

Activity 1.3.2. Develop national guidelines and requirements for local testing laboratories

European standards regarding production and certification of energy consuming equipment have been proposed for adoption. While significant baseline work has been carried out on implementing energy benchmarks for industrial enterprises⁸, these figures were not calculated based on the Kazakhstan industrial status of energy consumption and production but rather were a correlation of the average world mean values for the respective industrial indexes.

Recommendations for revisions to this Degree will be made, taking into account the actual Kazakh industrial status. Guidelines and requirements for local testing laboratories and manufacturers of equipment will also be developed and issued. The national standardization organization is to be set in charge of all certification activities.

Activity 1.3.3. Support voluntary adoption of ISO 50001

The energy management standard is designed to provide organizations and companies with technical and management strategies to increase energy efficiency, reduce costs and improve environmental performance. Energy management controls energy consumption and costs (i.e. energy efficiency policy, energy metering, recording and reporting, procurement procedures, analysis, target setting as well as organisational and administration roles and structure) and the standard is anticipated to be attractive for large international companies with investments in Kazakh industrial plants and latter on to expand as a result of internal competition.

The project will work towards encouraging the market to adopt these voluntary standards, including supporting stakeholders on how to meet them. In particular, external assistance is required for capacity building, certification and quality assurance.

COMPONENT 2: STRENGTHENING THE CAPACITY OF INDUSTRIAL ENTERPRISES TO IMPROVE RESOURCE EFFICIENCY

This component will provide technical assistance to allow for more effective identification, pursuit and development of opportunities for energy efficiency. Specific activities will focus on: (1) training industrial personal in energy efficiency, BAT, energy management, auditing, reporting and financial evaluation of energy efficiency projects; (2) capacity development and support for the development of project assessment approaches for the Facility; and (3) establishment and dissemination of best practices in industrial energy efficiency.

GEF funding of \$400,000 is requested for technical assistance, with co-financing of \$3,446,000 provided for additional technical assistance.

Outcome 2. Industrial managers are able to identify opportunities and equipment for resource efficiency

The overall academic capacity of industrial personnel was confirmed during the project design stage to be sufficiently high. On-site visits and discussions with the majority of heads of departments of industries and equipment suppliers determined that many held post-graduate titles. Still, energy efficiency topics are considered to be of low priority among industry stakeholders. Managers lack financial backgrounds and have low awareness of energy efficiency best practices. As such, capacity development is needed to promote general knowledge of energy efficiency, BATs at a detailed engineering level, and energy efficiency project assessment and evaluation.

Output 2.1: Training in resource management systems provided to managers of industrial enterprises and industry associations

⁸ This work has been put into action with the Degree No 50/1999. This degree sets the target Energy consumption per unit product for all industries and forms a solid basis for Energy Policy initiatives in various industries.

Training to industry is considered an essential tool for the penetration of energy efficiency initiatives in Kazakhstan. As such, as many industries as possible will be involved. Participants will include engineers from selected industries that have expressed interest in participating in the project. Further, based on discussions with key stakeholders during project design, there is a strong willingness of industrial associations to play a role of liaison and participate actively in the capacity development activities. Their participation is considered to be critical and highly appreciated, since associations can guarantee the participation of the widest range, and most representative and appropriate target groups among industrial representatives in the relevant events to be planned (e.g., workshops, seminars).

Activity 2.1.1: Prepare training and support materials for industry

Training and support materials will address the following topics and issues relevant to industry:

- Technical issues such as best practice technologies, audits, metering. These are considered as very important but current knowledge has been assessed at a modest to low level (especially within medium to small-sized enterprises), thus there is high interest for further technical training;
- Energy efficiency basic topics and energy efficiency technologies;
- BAT detailed analysis;
- Energy management topics;
- Energy auditing and reporting;
- Financial evaluation of EE projects Basic technological and economic aspects of energy efficiency project development will be assessed in every training program with support provided as appropriate; and
- Skill development in reporting, communication and project management for energy efficiency initiatives, as necessary.

Activity 2.1.2: Provide a series of tailored training sessions for industry and industrial associations

Similar to government capacity development, initial capacity building for industry will begin prior to the start of the investments implementation stage. One to two full-day workshops will be organized at the main city centres (Astana, Almaty) and some of these workshops will be coordinated with the training of government (under Component 1), particularly in Almaty and Astana.

For industries, a survey conducted during project design found that interest in energy efficiency training differed by region. Based on industrial candidates developed by KIDI and a list of the 900 GHG emitters under development by the KAZNIEK institute, candidates in every oblast will be targeted. Workshops of 30 to 50 persons on average will be conducted, with those in Almaty and Astana including slightly larger numbers of participants. Each industrial association, representing the nine industrial sectors, will have one to two representatives involved in the training with a target of 9 to 12 key people participating.

Overall, over 430 industrial stakeholders are targeted to receive training. The baseline level of knowledge will first be measured, so that the increase in capacity can be determined.

Output 2.2: Support for the development of project assessment approaches for the Facility and capacity development of participating banks

Support for the development of investment proposals will be provided through capacity development of local participating banks. Support for audits and investment proposals going to KAZSEFF+ will be provided for an initial round of projects. GEF support for technical assistance, in particular, will be targeted towards verification and tracking of energy savings and emissions reductions associated with KAZSEFF+.

Activity 2.2.1: Prepare training and support materials for participating banks

ResET will emphasize training and capacity development of the participating banks to ensure that they successfully mainstream sustainable energy lending within their institutions and promote a streamlined project assessment process under KAZSEFF+ (Component 3). Development of training and support materials will focus on:

- Key elements of the new funding initiative, KAZSEFF+;

- Technical eligibility criteria and operational protocols as well as risk assessment in order to enable identification and assessment of sub-project eligibility;
- Comprehensive guidelines on how to process applications and monitor projects implementation;
- Raising awareness on energy efficiency sub-projects among bank officers in terms of technical definitions, expected performances, investment costs, typical profitability, implementation planning and control; and,
- Delivery of a “Train-the-Trainer” programme to build the participating banks’ own in-house training capacity in developing opportunities for supporting sustainable energy investments. These banks shall be requested to make this training programme available via their intranet systems.

Activity 2.2.2: Provide a series of tailored training sessions for participating banks

Within each participating bank, staff in corporate and SME lending will be targeted. The workshops (seminars) for these banks are proposed to take place in Almaty or Astana only. Since the training to banks includes a train-the-trainers scheme, it is expected that one day is insufficient for the information exchange required. Thus a two-day workshop is proposed entailing at least two participating banks (those that already participate in KAZSEFF+ actively), and another one or two Banks that showed initial interest for KAZSEFF+. An estimated number of participants per bank is a minimum 4 persons (a banks’ engineer and bankers responsible for industrial projects), leading to workshops of at least 15 persons. The baseline level of knowledge will first be measured, so that the increase in capacity can be determined.

Activity 2.2.3: Provide support to energy audits and investment proposals for KAZSEFF+

As part of the KAZSEFF+ process, a detailed assessment and documentation of energy efficiency projects is required. To ensure that the process has been sufficiently developed to take into account the GHG emissions requirements for KAZSEFF+, support will be provided for energy efficiency assessment; technical and financial appraisal; environmental assessment; and assistance with the loan application process. This information provides the basic technical and financial input required to determine whether a project is eligible for KAZSEFF+.

Activity 2.2.4: Provide support to verification and tracking of energy savings and emissions reductions associated with KAZSEFF+

This activity provides technical assistance for the verification step of KAZSEFF+ (Component 3, Activity 3.1.1). Based on the establishment and operation of KAZSEFF+, the experiences with financing and implementing energy efficiency technology and processes in industry will be monitored and verified by an independent verification consultant. In particular, GEF technical assistance funding will be used to verify the successful implementation of KAZSEFF+ sub-projects and assess their associated energy savings and emissions reductions. Overall savings and global environmental benefits will be compiled and used as part of the dissemination process (Output 2.3).

Output 2.3: Establishing and disseminating best practices and case studies

Activity 2.3.1 Promote ResET and KAZSEFF+ through development of a visibility strategy, associated communications tools and outreach activities

Tailored awareness activities to support the new Facility are necessary to promote the visibility of the facility and its benefits among all interested stakeholders. Two main tasks include: the implementation of a visibility strategy for the programme and the implementation of communication activities. The following specific communication messages will be the basis for all promotion activities:

- Communicate the importance of ResET in achieving overall targets for energy efficiency and contribute towards energy sector reform and short and long-term political and economic implications for the country;
- Strengthen the understanding of the objectives of ResET and key areas of reform and policy to be addressed by the programme;

- Disseminate information on the progress and achievements of ResET and projects supported; and
- Increase the visibility of Europe-Kazakhstan cooperation in the area of energy.

The Visibility Strategy will detail the main messages to be communicated, the target groups and specific messages to be communicated to each and the communication tools to be used. To create sustainable results the involvement and assignment of tasks to local experts will be sought.

Communication tools to be developed include: a dedicated web site (within KAZSEFF+); and, printed material such as a leaflet ready to be disseminated at events and other meeting opportunities. Outreach activities will include a series of information sessions of half-day duration will be organised for key stakeholders both for national and international audiences, and media activities to serve as information multipliers for ResET.

Activity 2.3.2 Identify lessons and best practices, create case studies

Once sufficient projects have been developed and implemented, the experiences gained through the project will be examined to identify best practices and create case studies. Based on lessons, best practices and case studies, a further promotional campaign will be rolled out to leverage the demonstration effect of these projects. The campaign will build on the initial visibility campaign and provide more in-depth communications with a broader range of stakeholders. This project component will work closely with industry associations to ensure the effective dissemination of results. Promotion of practices and case studies will be through the tools developed under activity 2.3.1.

COMPONENT 3: LEVERING INVESTMENTS IN MORE EFFICIENT EQUIPMENT AND PRACTICES

This investment component will leverage financing to improve energy resource efficiency with a view to moving the market towards more frequent use of highly efficient equipment and processes. As previously noted, the definition of “highly efficient equipment and processes” under ResET refers specifically to a refined list of best available technologies (BAT) that meet high standards of energy efficiency and are therefore considered eligible for financing under KAZSEFF+. The ResET Programme will coordinate with the KAZSEFF+ facility to lend to enterprises adopting these BAT, thereby leveraging additional financing for industrial enterprises that opt for highly-efficient equipment and processes. The technical assistance for this investment component is provided under Component 2 as described above.

GEF funding of \$6,000,000 is requested as investment incentives to support EBRD’s investment of up to \$40,000,000 to be financed under KAZSEFF+.

Outcome 3. Financing is leveraged to improve resource efficiency, moving the market towards more frequent use of highly efficient equipment and processes

Output 3.1: KAZSEFF+ lending to enterprises adopting highly efficient equipment and processes

The Programme will be structured as a continuation of KAZSEFF, modified to mainstream climate change mitigation considerations. KAZSEFF is part of a wider initiative of EBRD focusing on enhancing energy efficiency and renewable energy investments in its Countries of Operation, entailing credit lines or guarantees to local banks for on-lending to medium and small enterprises, as well as a supplementary grant scheme in some of the cases.

Under ResET, the structure of financing is expected to be the same as KAZSEFF, with a component of commercial loans up to 40 million USD to be managed by EBRD and a component of 6 million USD investment incentives from the GEF, providing incentives to the energy efficiency investments up to 15% of the loan amount, on average (see Figure 6 below). This enhanced facility, termed “KAZSEFF+”, will benefit from the operational procedures of KAZSEFF. An outline of the key features of KAZSEFF+ is provided in Annex G.

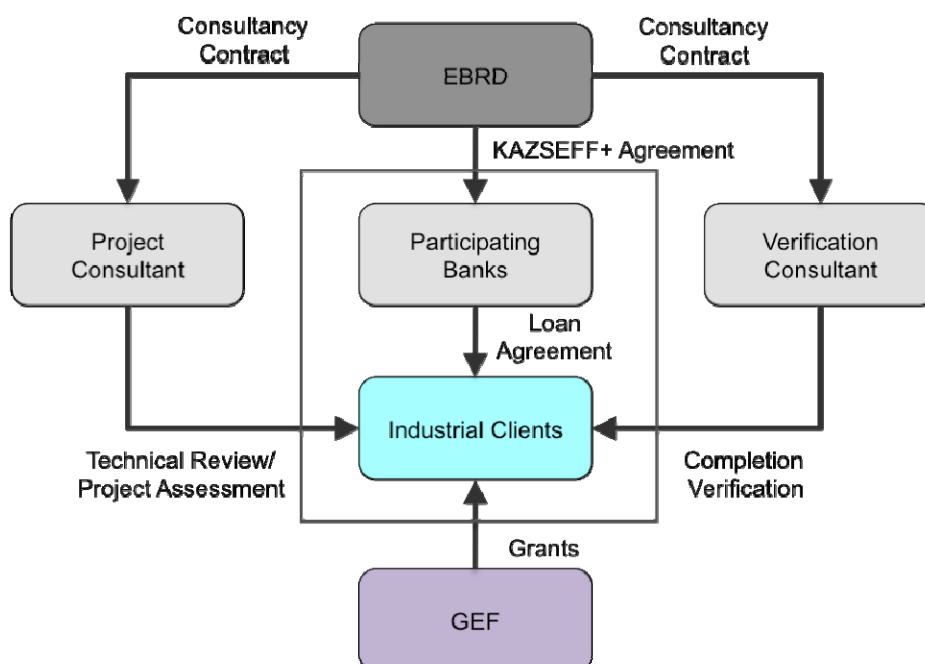


Figure 2. KAZSEFF+: facility structure and relationship with GEF

KAZSEFF+ will incorporate a grant element devised to make incentive payments to investors with the purpose of promoting BAT in industrial energy efficiency in Kazakhstan and increasing energy efficiency investments. This incentive approach was chosen after examining other potential financing structures during the project's preparatory phase, including pure grants (without investment loans); guarantee scheme; concessional loan; and incentive grant (with investment loans):

- The option of using the GEF funding as a grant (without investment loans) is considered to be the least cost-effective and grants alone do not stimulate private sector finance, which key to transforming the market in Kazakhstan.
- The use of part of the GEF funding for loan guarantee was also examined. Partial-risk loan guarantee programs supported by international financial institutions have shown some success in recent years in jump-starting energy efficiency financing programs through local financial institutions. However, EBRD considers that loan guarantee programs are not a broad panacea that can solve all the difficulties faced in efforts to expand EE investments. EBRD is experienced with guarantee schemes and, while good in certain situations (making banks more comfortable with risks) a guarantee scheme was employed in Kazakhstan yet did not yield desired outcome.
- The EBRD's approach is not to dictate the conditions under which banks on-lend. Therefore, if the EBRD were to engage in concessional loan activity, then the EBRD could not guarantee that the benefit would be passed along to the end user. This project seeks to develop a private sector initiative, which requires that both customers and banks see the benefits of using loans for investments that will be profitable.

A sensitivity analysis of the grant versus loan interest rate subsidy options was carried out. The option of using the GEF funds as an incentive grant to reduce the overall investment was more attractive for the prospective client as compared the option of subsidizing the loan interest rate. The market has now changed sufficiently that local banks are engaged and, as such, the instrument to be used in ResET has been selected to work most effectively in the current market.

The incentive grant is the practice usually implemented in other Facilities, in which the incentive payments to sub-borrowers is paid directly from the fund to the sub-borrowers upon validation, ensuring that sub-projects have been successfully implemented before the payments are being made. This use of an incentive grant remains a good option for niche markets to overcome the initially reluctances of various parties to be engaged in energy efficiency projects. The amount of the performance grant has been determined based on EBRD's experience in Kazakhstan

and in other countries and is considered what is needed to get both the interest and cooperation of clients/banks and, therefore, allow for the demonstration to occur in the market. The current market rate is currently at 12% per annum and maturity of 5 years for USD denominated loans. Under the ResET Program with 15% capital grants, the end effect of the applied concessionality on the same loan can be calculated as reduction of interest rate by 180 basis points.

Activity 3.1.1 Establish and operate a finance facility for industrial energy efficiency in Kazakhstan

A finance facility in the form of a credit line to local banks in Kazakhstan will be established. Called KAZSEFF+, this facility developed by EBRD will provide loans to participating banks for on-lending to privately owned enterprises to implement eligible investments in energy efficiency.

As noted above, KAZSEFF+ will incorporate a grant element devised to make incentive payments to investors with the purpose of promoting BAT in industrial energy efficiency in Kazakhstan and increasing energy efficiency investments. To be administered only after project completion, as is the practice usually implemented in similar facilities, the incentive payments to the sub-borrowers are paid from KAZSEFF+ to the sub-borrowers upon verification (by an independent verification consultant through Activity 2.2.4) thereby ensuring that the sub-projects have been successfully implemented before the payments are being made. Completion for each sub-project is determined on basis of construction work being 100% completed with underlying assets commissioned and hence operating, yielding the benefits of energy efficiency. Those that fall short of 100% implementation receive no incentive grant at all.

The programme will be supported with technical assistance (described under Component 2) provided through by a specialized project implementation team that will provide support with the launch and implementation of the sustainable energy finance facility. This project implementation team will work together with the participating banks to assess the eligibility of the potential borrowers' loan applications. The participating banks then take lending decisions that, if positive, result in loans at commercial rates.

Prioritization of companies will be made through a combination of considerations including the timing of request to participate. EBRD will be looking for those companies and sectors with the highest potential, and will encourage various industry sectors to participate. However, the creditworthiness of companies is a significant criterion as banks must be willing to finance. The participating companies selected will be those that are the most creditworthy as banks will be willing to lend to those companies first and they will be serviced the fastest.

A summary of the KAZSEFF+ project description is provided in Annex G, including:

- The eligibility criteria for any proposed Energy Project and/or Sub-borrower;
- Eligible industrial energy efficiency sub-projects comprising equipment, systems and processes;
- The conditions with respect to the entitlement to, and payment of, sub-borrowers' investment incentive; and
- The procedures for verification of the sub-projects (see schematic of KAZSEFF+ provided in Annex G).

The EBRD's investment of 40 million USD in KAZSEFF+, including provision of technical assistance funds, is considered largely incremental. Under the baseline (business-as-usual), EBRD would continue to provide a credit line through KAZSEFF that would generate some resource efficiency benefits associated with investments of approximately 5M USD; however, under KAZSEFF+ a full 40M USD investments meeting the minimum criteria of 4 kWh per USD invested is anticipated. (Refer to section B.2.3 below and Annex F for additional details.)

B.2.3 Global environmental benefits

System boundary

The boundary of the proposed project is the national territory of Kazakhstan and specifically, the industrial sector. These sectors will include construction material, machine building, metallurgy, chemical, textile, food and pharmaceutical, with technologies being those eligible under KAZSEFF+.

Baseline

The baseline scenario, without this GEF project, will involve limited opportunities for efficiency improvements in industry associated with awareness and capacity barriers, regulatory barriers, and the lack of financing for highly efficient technologies and approaches. While EBRD would continue to provide part of its KAZSEFF credit line to the industrial sector, which would generate some resource efficiency benefits, experience to date is that companies lack the awareness, incentive and funding to adopt best available technologies (BAT), which could substantially increase GHG savings while upgrading their facilities. Therefore, under a business-as-usual scenario, in the next phase of KAZSEFF there would not be an explicit focus on climate change mitigation and, further, it is very likely that the investment would go towards renewable energy or other eligible sub-projects.

As such, for the baseline of this project (based on the KAZSEFF experience) we would anticipate approximately only 5M USD of KAZSEFF funding would be provided meeting a minimum criteria of 4 kWh per USD investment. The anticipated savings under the baseline are therefore approximately 15,500 tCO_{2eq}/year or 155,000 tCO_{2eq} over 10 years (energy savings under the baseline of 19,900 MWh/year). Note that the autonomous improvements in energy efficiency that would take place without the GEF project and without the EBRD's baseline project are not included in this analysis. These changes would be present in both the baseline and GEF alternative so do not affect overall emissions impact of the project.

GEF Alternative

In terms of direct impacts, the need for energy efficiency improvements in the industrial sector in Kazakhstan is significant. The GEF alternative scenario can be defined as all projects that are undertaken through KAZSEFF+. Under *the alternative scenario*, GEF support (along with co-financing) is expected to remove many of the existing barriers and reduce the impact of others, thereby transforming the market for energy efficiency related to the industrial sector.

Direct Emission Reductions

The direct emission reductions of the project are the difference between the GEF alternative and the baseline emissions (i.e., corrected for the energy efficiency investments that would have happened in the industrial sector anyway).

Part of the outputs of the project will be the following investments: lending to enterprises adopting highly efficient technologies and practices. These investments will result in direct greenhouse gas emission reductions during the project's implementation phase. As a result of these activities during the project implementation period, direct greenhouse gas emission reductions totaling 1.25 million tonnes of CO_{2eq} will be achieved over the useful lifetime of the investments of 10 year; and correcting for the energy-efficient investments that would have happened every year under KAZSEFF, 1.09 million tonnes of CO_{2eq} is anticipated to be achieved over the useful lifetime of the investments of 10 years. In the non-GEF case, these energy needs would be satisfied by: electricity with an emission factor is 1.506 tCO_{2eq}/MWh⁹ and coal and fuel oil with 0.3 tCO_{2eq}/MWh assumed.

Indirect Emissions Reductions

In terms of indirect impacts, the legislation and capacity development put in place will have a real and marked effect on the awareness of and potential for energy efficiency improvements and this will undoubtedly result in growth in the market for such investments.

Using the GEF bottom-up methodology, indirect emission reductions attributable to the project are 2.18 million tonnes of CO_{2eq}. This figure assumes a replication factor of 2.

⁹ Electricity Emissions Factors Review, November 2009, EBRD, prepared by MWH.

Using the GEF top-down methodology, indirect emission reductions attributable to the project are 2.8 million tonnes of CO_{2eq}. This figure assumes that total technological and economic potential for GHG emission reductions in this area over 10 years is 14 million tonnes of CO_{2eq}, and a project causality factor of 20 percent.

Details of the calculations are provided in Annex F.

B.3. Describe the socioeconomic benefits to be delivered by the Project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits (GEF Trust Fund/NPIF) or adaptation benefits (LDCF/SCCF). As a background information, read [Mainstreaming Gender at the GEF.](#)¹⁰:

Key socioeconomic benefits that will result from the project include resource savings in the form of reduced energy and water consumption. Efficient water use is both a social issue at the local level and a political issue at the regional level, and its importance will only increase over time as long-term scenarios consistently indicate increased aridity in arid and semi-arid regions of Kazakhstan as the result of climate change¹⁰.

Furthermore, the associated economic benefits of reduced resource use will make participating industries more competitive, and can thus support job creation. Job creation is particularly important for women in Kazakhstan, who hold nearly a third of jobs in industry and nearly 40% of jobs in processing industries, but who are also more likely to lose their jobs during cutbacks and to then remain unemployed¹¹.

While the above socioeconomic benefits will not be actively monitored and evaluated by EBRD, they will be included as part of EBRD's qualitative reporting as appropriate.

B.4 Indicate risks, including climate change risks that might prevent the project objectives from being achieved, and if possible, propose measures that address these risks to be further developed during the project design:

Risk	Rating	Mitigation approach
Political risk (i.e., low government commitment to energy efficiency in industry)	Low	The government has taken significant steps to provide a policy and regulatory framework for energy efficiency in the form of new legislation, and continues to do so. The government is actively seeking EBRD support for this legislative agenda, and substantial support has already been put in place. The draft <i>Law on energy savings and energy efficiency</i> has been presented to Parliament.
Technology risk	Low	The technologies to be used are all available and proven. The barriers to market entry lie elsewhere.
Financial risk	Moderate	This risk will be mitigated by conditionalities of the EBRD loans and by thorough transaction support as a component of project implementation. A risk management strategy for EBRD has been prepared as part of project development.
Climate risk	Low	Modernized facilities will be better able to withstand extreme weather, reduced water use will respond to increasing long-term aridity in certain regions, improved management will allow for the increased diversification of the resource supply chain, and lower-carbon production will make enterprises less vulnerable to the potential impacts of stricter government regulation and consumer preferences for lower-carbon products over time.
Implementation Risk	Low	EBRD has conducted an extensive survey of lessons learned from its own portfolio in Kazakhstan as a part of its country strategy exercise and on industrial sector lending in other countries in the broader region. Implementation risk will be mitigated by close cooperation with in-country partners in participating enterprises and in key ministries. A thorough stakeholder consultation process has been conducted during the project design stage.

¹⁰ Second National Communication of Kazakhstan to the UNFCCC, 2009

¹¹ 2006 Country Gender Assessment conducted by the Asian Development Bank

Sustainability

The project's market transformation strategy is based on the removal of multiple barriers to the accelerated adoption of EE investments by industry in Kazakhstan, including financial and market, regulatory, and awareness and knowledge barriers. Sustainability of results will be achieved by the inclusion of relevant standards in the energy efficiency legislation that is currently under preparation in the Kazakh government, and on which EBRD is advising; and by creating a supply of resource-efficient technologies in Kazakhstan by establishing a market for them and encouraging supplier entry. As barriers are removed through the ResET project, equipment suppliers will enter the market and competitive market conditions will be created. Through ResET, the capacity of banks and local experts will be enhanced allowing them to be increasingly able to deal with industrial EE projects. The expected outcome is that banks will be able to recognize the business case for sustainable lending and - once the regulatory environment, awareness, knowledge, suppliers and a competitive market are in place - there will be no need for grants as normal commercial lending will be accessed.

Moreover, after the GEF funding ends, the EBRD intends to continue to provide its Sustainable Energy Financing Facility (SEFF) credit line to industries through local banks in Kazakhstan under market terms.

Given the above, the risk is low that there will be no sustainable funding for industrial EE projects once the GEF project funding ends.

B.5. Identify key stakeholders involved in the project including the private sector, civil society organizations, local and indigenous communities, and their respective roles, as applicable:

During project design, a full stakeholder consultation was undertaken including site visits. The Ministry of Industry and New Technologies (MINT) is a key project stakeholder, as it is responsible for overseeing the new Law on Energy Efficiency. This Ministry will also oversee the secondary legislation, technical regulations and sectoral initiatives that are expected to address industrial sector energy efficiency. The following table details key stakeholders, including their general roles and complementarities within the project.

Table 5. Key Stakeholders, their roles and anticipated interaction with the Project

Key Stakeholders	Role	Interaction with ResET
MINT (Ministry of Industry and New Technologies)	Ministry responsible for energy and industrial issues and associated legislation	MINT is considered the most relevant and important governmental "partner" in the project. MINT has a dual role as counterpart (development of institutional framework) and recipient (through capacity development). MINT has committed to co-financing the project as detailed in the cofinancing letter to the GEF. MINT's contribution will include drafting the required sub-laws, which will allow for the implementation of energy efficiency projects, and promoting the ResET project. MINT personnel are to be trained under the proposed technical assistance elements of the project.
MoE (Ministry of Environment Protection)	Ministry responsible for environmental projects, Kyoto protocol, GHG emissions trading scheme	MoE represents an external influence factor to the program in the areas of environmental compliance and carbon mitigation issues. MoE is responsible for the creation of the internal GHG trading market that is expected to affect the implementation of the project as it is intended to promote energy efficiency and renewable energy investments by industry. MoE personnel will be involved in the project's training to ensure that they are able to deal with increased energy efficiency measures introduced by industry, including assessing environmental issues of prospective investments.
"Atameken Union", National Economic	The official economic chamber with over 150	The Economic Chamber has an implicit promoter role as it is expected to provide organizational support for the

Chamber of Kazakhstan	associations in its network	dissemination actions and to liaise with specific industrial chambers in every oblast.
Association of Mining and Metallurgy Enterprises of Kazakhstan	The official association for all mining and metallurgical industries	This Association will have both recipient and promoter roles in the program. It is considered a key player as it includes all industries involved in the sector. Personnel from the Association will participate in the project's training so that it may better support and promote the program from within the association thereby giving the program a wider audience and otherwise marketing the program.
Association of Textile and Leather Enterprises of Kazakhstan	The official association for all textile and leather enterprises	Similarly to the Association of Mining, it is considered an important player as it includes all industries involved in its sector. Personnel from the association will participate in the training to ensure that it is able to both support and promote the program from within the association.
Department of Electricity and Heat, Agency for the Regulation of Natural Monopolies (AREM)	The regulator of energy for Kazakhstan	AREM is an external influence to the program, particularly to the existing regulatory framework (energy pricing). AREM drafts the tariff system (gradually evolving to a progressive tariff band scheme) in close partnership with MINT, MoE and the Ministry of Economy. AREM oversees a metering system roll out (currently a demonstration on a regional scale) in anticipation of the tariff system.

B.6. Explain how cost-effectiveness is reflected in the project design:

The project approach is deemed to be the most cost-effective and most likely to lead to sustainable results, because the combination of technical assistance and investment funds from the GEF will leverage substantial investment from both EBRD and the enterprises that will undertake resource efficiency improvements.

The cost-effectiveness of the 6,000,000 USD incentive grant from the GEF, considered over a 10-year lifetime of the investments where direct greenhouse gas emission reductions of approximately 1.09 million tonnes of CO₂e will be achieved, equates to a cost per tonne of emissions reduced for the GEF of 5.50 USD.

The cost-effectiveness considered against the entire project funding from the GEF (7,090,000 USD) equates to a cost per tonne of emissions reduced for the GEF of 6.50 USD per tonne CO₂e. When including the entire project amount (52,086,000 USD) including cofinancing it is 47.78 USD per tonne CO₂e.

B.7. Outline the coordination with other related initiatives:

EBRD will coordinate internally with its initiatives in Kazakhstan that currently work to promote energy efficiency in key sectors. Co-ordination will include drawing on the technical capabilities of the consultants in providing energy audits, co-financing with local banks participating in KAZSEFF+, and working on pipeline generation.

It will also draw upon findings from industrial energy efficiency initiatives it is implementing in other countries in the region, such as the EBRD-UNIDO industrial efficiency project in the Russian Federation and other ResET programmes in the EBRD pipeline. EBRD will also cooperate with other donors supporting work in industrial enterprises in Kazakhstan, such as the proposed Asian Development Bank facility for Small and Medium Enterprises, even though this is not expected to focus on energy efficiency, and co-ordinate closely with the IFC's proposed Clean Technology Fund credit line to prevent overlap.

Finally, EBRD will participate in any country-level coordination exercises that are undertaken by the government regarding GEF-funded projects. To support the Government's plans to modernize the industry at present a number of Government departments are working on the concept of industrial modernization and implementation plans. Key initiatives already established are:

- *FIIR programme:* The National Program for Accelerated Industrial and Innovation Development of the Republic of Kazakhstan for the period from 2010 to 2014 State program (FIIR) was established by the

MINT as an authorized state body, responsible for implementing whereas the Kazakhstan Institute for Industry Development (KIDI) is the institution appointed as the operator of this programme. The objectives of FIRR are: accelerate economic diversification and promotion of long-term economic competitiveness; and coordinate efforts of public and private sectors and rational distribution of governmental resources.

One of the main targets of the programme is to reduce energy intensity of industry in order to achieve competitiveness of Kazakhstan's economy. MINT also invited as international experts World Bank, the OECD, Fraunhofer, DENA (Deutsche Energie Agentur) and UNIDO to assist in the development of the modernization programme by using their experience, competence and knowledge. To support the State programme the following sub-Programmes were developed or are under development: "The exporter-2020", "Performance (Productivity) 2020", "Investor-2020" and the "Road Map of Business-2020 "and "Kazakhstan's industrialization Map 2010-2014". According to the Map it is planned to implement 101 large-scale out of a total of 469 projects all around the Kazakhstan till 2014.

- *Modernization programme:* According to Kazakhstan Institute for Industry Development (KIDI), the World Bank is currently working on recommendations for policy modernization, in the assessment of financial needs, schedule, timing and possible funding sources (for example, the state budget, development institutions, the private sector - foreign or local investors - through direct financing or financing by obtaining loans). As a practical step that precedes the development of the modernization programme, MINT organized a technology audit of selected companies to be carried out by KIDI.
- *Facilities:* Another facility that addresses the public sector is the UNDP/GEF project of 'Removing barriers to energy efficiency in municipal heat and hot water supply'. Its projects are of small budget (1,000's of USD) and are grants from GEF, and it addresses mainly building projects.

Through the Project Implementation Unit (PIU, described in Part III), the Project will maintain regular communication with the GEF Focal Point in Kazakhstan. The PIU will also maintain communication with other ongoing relevant projects in Kazakhstan, including:

- The Clean Technology Fund (CTF) investments in Kazakhstan;
- The ADB's Multi-tranche Financing Facility for the Republic of Kazakhstan focused on small and medium enterprise investments; and
- Other relevant projects both ongoing and planned.

C. GEF AGENCY INFORMATION:

C.1 Confirm the co-financing amount the GEF agency brings to the project:

EBRD confirms it intends to provide co-financing for the project as follows:

- USD 40,000,000 (hard loan);
- EBRD (own bilateral funds – EU Central Asia Investment Facility): USD 3,346,000 million (grant);
- EBRD (Global Green Growth Institute): USD 150,000; and
- EBRD (own budget): USD 1,000,000 (in kind contribution).

C.2 How does the project fit into the GEF agency's program (reflected in documents such as UNDAF, CAS, etc.) and staff capacity in the country to follow up project implementation:

EBRD signed a *Sustainable Energy Action Plan (SEAP)* with the Government of Kazakhstan in 2008. In the current EBRD Country Strategy for Kazakhstan, which was approved by its Board of Directors in January 2010, the SEAP is endorsed as a strategic direction for EBRD activities. During the current program period, the EBRD will work to help redress energy imbalances and shortages through investment, conditional on clean technology, and emphasizing sustainable energy, as envisioned by the SEAP. In addition, the provision of support to industries is one of the four EBRD strategic priorities in Kazakhstan under its current Country Strategy.

EBRD has signed 129 projects in Kazakhstan since 1991 with a net business volume of €2,837 million. Staff in the EBRD office in Almaty have directly relevant experience in resource efficiency and carbon mitigation projects, coordination with the banking and enterprise sectors, and policy support to government. A total of 15 EBRD professional staff, among them an energy efficiency specialist and industrial bankers, are present in offices in Almaty and Astana.

KAZSEFF is a USD 75 million Credit Line (CL) developed by the EBRD for industrial and commercial enterprises in Kazakhstan that wish to invest in energy efficiency or renewable energy projects. Credits are disbursed through the local banks, up to a maximum of USD 7 million per sub-borrower, to help companies implement projects that include a substantial energy efficiency component. Sub-loans may cover up to 100% of the total investment cost, excluding VAT. The current financial crisis hit Kazakhstan relatively hard and has restricted the prioritisation of energy efficiency investments. The project shall re-focus the attention of banks and companies on such investments.

EBRD has a proven track record in this area and can encourage higher energy productivity by setting efficiency standards for appliances and equipment in its financing criteria, by raising corporate and regulatory standards for energy efficiency, and collaborating with energy intermediaries (such as Energy Service Companies) and technology providers. Further more, EBRD has a proven track record in leveraging financing for resource efficiency improvements in the industrial sector and has demonstrated energy auditing experience in Kazakhstan.

PART III: INSTITUTIONAL COORDINATION AND SUPPORT

A. INSTITUTIONAL ARRANGEMENT:

The project will be executed by the EBRD through its offices in Kazakhstan and throughout the region, and through its London office. The EBRD as a leading development bank in the region is well placed to address financing barriers in this project. The Bank has long-term experience in working with public bodies in the region, and significant regional experience in municipal finance and the construction sector.

EBRD has mainstreamed energy efficiency activities across all investment operations. Energy efficiency is the cornerstone of the EBRD's second Sustainable Energy Initiative¹², launched in 2009. Priorities include supporting industrial energy efficiency, sustainable energy efficiency financing, and power sector energy efficiency. As reflected in the EBRD's Country Strategy for Kazakhstan¹³, EBRD supports activities in the industrial sector throughout the country and emphasizes support to projects with energy efficiency improvements. EBRD has focused its financial sector projects on financing energy efficiency and sustainable energy measures, including through KAZSEFF.

B. PROJECT IMPLEMENTATION ARRANGEMENT:

IMPLEMENTING AGENCY – The Implementing Agency for the project will be the EBRD.

PROJECT IMPLEMENTATION UNIT – The overall support model will be based on a central Project Implementation Unit (PIU) providing support to the participating cities and providing key capacity development services. The Unit will be a small, dedicated team of experts located in Astana. The team will be led by a team leader, acting as first point of contact for the EBRD and other project stakeholders. The PIU will be composed of experts with a track record of implementing relevant energy efficiency projects with awareness of the current state and expected future development of energy

¹² <http://www.ebrd.com/downloads/research/factsheets/sei2.pdf>

¹³ EBRD "Strategy for Kazakhstan", as approved by the Board of Directors at its Meeting on 26 January 2010. Accessible online at: <http://www.ebrd.com/downloads/country/strategy/kazakhstan.pdf>

efficiency in industry in Kazakhstan.

The PIU will maintain a schedule of meetings with relevant stakeholders, especially with MINT as the executing partner for ResET. The PIU will be tasked with communicating project plans and progress to the GEF Operational Focal Point and to other GEF project offices.

MANAGEMENT TEAM – The management team for this project will consist of EBRD staff based in London and Kazakhstan. The management team will liaise with the national team as well as with the GEF Secretariat. GEF project funding will not be used to cover EBRD staff costs.

NATIONAL TEAM – EBRD has a large-scale national team with specialised staff in Almaty and Astana, supported up by a team of over 20 bankers in London in the Municipal and Environment Infrastructure Team as well as 34 specialists in the Energy Efficiency and Climate Change Team.

OTHER EXECUTING PARTNER - In March 2010, several ministries were reorganised; some of them were dissolved and their functions transferred to other agencies, and new ones emerged. In particular, the Ministry of Industry and Trade (MIT) of Kazakhstan was reorganised into the Ministry of Industry and New Technologies (MINT). The MINT is now responsible for administration (management) of energy saving and energy efficiency. The Committee of State Energy Monitoring & Control within MINT carries out administrative, controlling and supervisory functions in the energy sector. The Committee is the sole shareholder of the JSC Kazakhenergoexpertiza whose mission is to carry out energy assessments and audit and ensure safety in operation of energy-related installations.

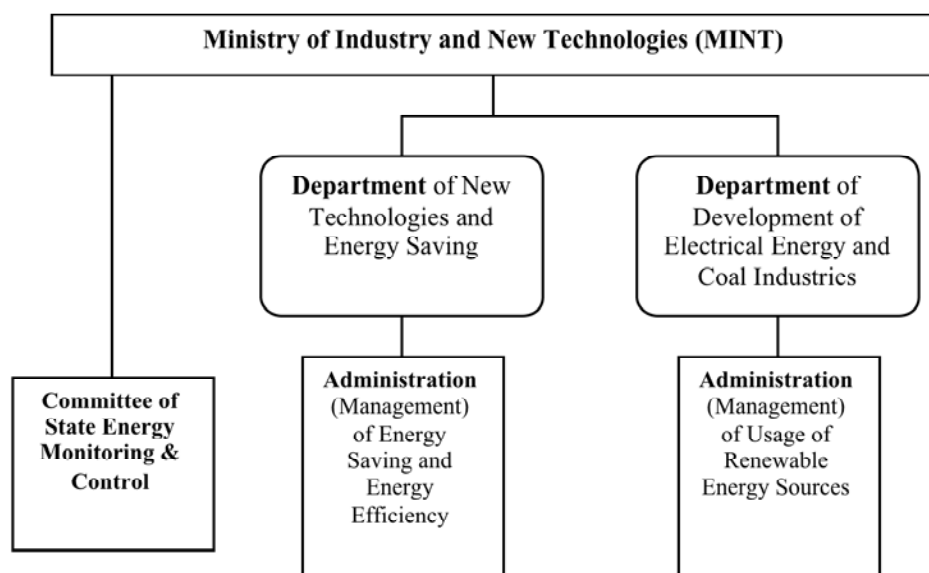


Figure 7. Structure of Ministry of Industry and New Technologies (MINT)

PART IV: EXPLAIN THE ALIGNMENT OF PROJECT DESIGN WITH THE ORIGINAL PIF

There have been no significant changes to the project at the indicator, scope and objective levels. However, adjustments were made during project preparations that clarify some of the project's outputs and to reflect information gained during the project's design stage. The changes to the original PIF design are detailed in Table 6 below.

Table 6: Alignment of project design with the original PIF

As described in the PIF	How this is incorporated into the Request for CEO Endorsement
Component 1: Strengthening national capacity to promote industrial resource efficiency	The intent of this Component is largely unchanged. The Output and activities related to voluntary/labelling scheme for efficient industrial equipment has been included in this component as it is closely related to the regulatory work to be supported.
Expected Outcomes: *Legal and regulatory framework supports best practice in industrial energy efficiency	This outcome remains largely unchanged, while additional clarifications, detail and targets have been provided.

*Government officials have the capacity to oversee industrial energy efficiency policies	
Expected Outputs: *Key sub-laws of the Law on Energy Efficiency drafted and enacted *Training provided to government officials on industrial energy efficiency policy	The Outputs remains largely unchanged. Clarifications have been added based on extensive work undertaken during project preparation. This now includes an output on voluntary certification/ labelling previously included under Component 2 at the PIF stage. It has been included here as the work required is closely related to the regulatory work to be supported under Component 1. The newly-named Output 1.3 has been also been expanded to examine the harmonization of standards in addition to voluntary certification/labelling schemes for efficient industrial equipment.
Component 2: Strengthening the capacity of industrial enterprises to improve resource efficiency	The intent of this Component is largely unchanged.
Expected Outcomes: * Industrial managers are able to identify opportunities and equipment for resource efficiency * Industrial managers can identify efficient equipment in a straightforward manner	
Expected Outputs: *Training in resource management systems provided to managers of industrial enterprises *Partial support for audits and investment proposals provided to selected enterprises *Voluntary certification / labelling scheme for efficient industrial equipment prepared for manufacturers	Output on training (now Output 2.1) has been expanded to include industrial associations as a recipient of tailored training sessions. Output on support to enterprises (now Output 2.2) has been expanded to include capacity development of participating banks and support for the development of project assessment approaches for the Facility. Activities under Output 2.2 also include support to energy audits and investment proposals for KAZSEFF+. GEF funding will support the verification and tracking energy savings and emissions reductions associated with KAZSEFF+/ResET. The expected output on voluntary certification/labelling (from the PIF) has been included under Component 1 as noted above. Output 2.3 (previously as under Output 3) is now included under Component 2, to ensure alignment with all other TA activities to support the investment component. The activities previously under Component 3 include establishing and disseminating best practices and case studies (are now included a part of Component 2).
Component 3: Leveraging Investments in more efficient equipment and practices	The intent of this Component is largely unchanged.
Expected Outcome 3: Financing is leveraged to improve resource efficiency, moving the market towards more frequent use of highly efficient equipment and processes.	This component is largely unchanged and has been informed by significant preparatory work during the project design phase.
Expected Outputs: *ResET fund established to lend to enterprises adopting highly-efficient technologies and practices *Loans disbursed to industrial enterprises *Additional financing leveraged by programme	This component has reformulated to reflect the design of the financing mechanisms to be used under ResET. KAZSEFF+ includes the GEF-financed incentive component. All technical assistance associated with Component 3 is provided under Component 2.

PART V: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)


A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT(S) ON BEHALF OF THE GOVERNMENT(S):): (Please attach the [Operational Focal Point endorsement letter\(s\)](#) with this template. For SGP, use this [OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Mrs. Eldana Sadvokassova	Vice-Minister	MINISTRY OF ENVIRONMENT PROTECTION	09/06/2010

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B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for CEO endorsement/approval of project.

Agency Coordinator, Agency Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Ms. Marta Simonetti- Whitford		12/12/11	Mr. Peter Hobson	+44-20- 7338- 6737	hobsonp@ebrd.com

ANNEX A: PROJECT RESULTS FRAMEWORK

Project Strategy	Objectively Verifiable Indicators	Sources of Verification	Assumptions
Impact			
<p>Project Goal: Reduction of greenhouse gas emissions by industry in Kazakhstan</p> <p>Project Objective: Reduce energy consumption and associated GHG emissions by facilitating the adoption of more efficient technologies and processes in industries in Kazakhstan.</p>	<p>1.09 million tonnes CO_{2eq} directly saved over a 10-year lifetime of the investments and 2.18 to 2.8 million tonnes CO_{2eq} indirectly saved</p> <p>Volume of investment mobilized for energy efficiency over the project lifetime: up to 40 million USD from EBRD with additional leveraged from sponsors and partner banks</p> <p>Complete achievement of all the steps in facilitating the implementation of energy efficiency laws related to industry</p>	<p>Mid-term and final evaluations</p> <p>Reporting from KAZSEFF+, verification of savings</p>	<p>Implementation of project activities will foster energy savings and lower CO_{2eq} emissions</p>
Outcomes			
<p>Outcome 1: Legal and regulatory framework supports best practice in industrial energy efficiency</p> <p>Outcome 2: Industrial managers are able to identify opportunities and equipment for resource efficiency</p> <p>Outcome 3: Financing is leveraged to improve resource efficiency, moving the market towards more frequent use of highly efficient equipment and processes</p>	<p>Appropriate policy, legal and regulatory frameworks adopted and enforced</p> <p>Indicators for comparing the attained level of energy saving and the planned minimal level</p> <p>Financing mechanism established and operational</p>	<p>New or revised legal framework available</p> <p>Compilations of reported project data</p> <p>Project monitoring reports prepared under EBRD</p>	<p>Continued strong relationships between EBRD, MINT and other key project stakeholders</p> <p>Continued interest and support from industry to carry out energy efficiency improvements</p> <p>Prices for energy inputs do not dramatically fall</p> <p>Stable macro economic and political climate</p>

Outputs	Objectively Verifiable Indicators	Means/Sources of Verification	Assumptions
Component 1: Strengthening national capacity to promote industrial resource efficiency			
<p>Output 1.1: Key sub-laws of the Law on Energy Efficiency drafted and enacted</p> <p>Output 1.2: Training provided to government officials on industrial energy efficiency policy</p> <p>Output 1.3: Harmonization of standards and certification/labelling scheme for efficient industrial equipment prepared for manufacturers</p>	<ul style="list-style-type: none"> ▪ Recommendations on the legal framework for EPC provided ▪ Capacity development tools and materials developed ▪ Training provided to government to increase understanding of energy efficiency improvements, policy and emissions reductions (target # = 15) ▪ Knowledge of energy efficiency policy increased among government officials (target # = 15) ▪ Scoping and development of certification/labelling scheme for efficient industrial equipment 	<p>Reports and/or recommendations on the development of the secondary legal framework for industrial energy efficiency</p> <p>New or revised legal framework available</p> <p>Surveys of target audiences' awareness and knowledge levels (initial and after awareness initiatives)</p> <p>Awareness materials and reporting on distribution of these materials</p> <p>Reporting on training provided by the project consultants and others</p> <p>Surveys of target audiences' capacity levels (initial and after capacity development initiatives)</p>	<p>Continued interest and support from the relevant ministries or agencies to adopt the revised the legal framework</p> <p>Continues interest of industry in industrial energy efficiency</p>
Component 2: Strengthening the capacity of industrial enterprises to improve resource efficiency			
<p>Output 2.1: Training in resource management systems provided to managers of industrial enterprises</p> <p>Output 2.2: Support for the development of project assessment approaches for the Facility and capacity development of participating banks</p> <p>Output 2.3: Establishing and disseminating best practices and case studies</p>	<ul style="list-style-type: none"> ▪ Capacity development tools and materials developed ▪ Training provided to industry to increase understanding of energy efficiency improvements, policy and emissions reductions (target # = 420) ▪ Training provided to industry and participating banks to increase understanding of energy efficiency improvements, policy and emissions reductions (target # = 15 bank officers; 20 trainees of train – the-trainer events) ▪ Awareness of energy efficiency technology and 	<p>Awareness materials and reporting on distribution of these materials</p> <p>Reporting on training provided by the project consultants and others</p> <p>Surveys of target audiences' capacity levels (initial and after capacity development initiatives)</p> <p>Surveys of target audiences' awareness levels (initial and after awareness initiatives)</p>	<p>Continued interest of industry and participating banks in industrial energy efficiency</p>

Outputs	Objectively Verifiable Indicators	Means/Sources of Verification	Assumptions
	<p>processes increased among additional industries</p> <ul style="list-style-type: none"> ▪ Information on replicable best practices and case studies distributed to at least 200 companies 	Enhanced awareness materials reflecting GEF project experiences and reporting on distribution of these materials	
Component 3: Investments in more efficient equipment and processes			
Output 3.1: KAZSEFF+ lending to enterprises adopting highly efficient equipment and processes	<ul style="list-style-type: none"> ▪ Procedures, guidelines and other materials prepared ▪ KAZSEFF+ established (40 million) and operating ▪ Work with at least 10 to 30 applicant companies (depending on individual project sizes) to assist them in applying for KAZSEFF+ during GEF project lifetime; at least 6 to 20 projects (depending on individual project sizes) successful during GEF project lifetime 	<p>EBRD's quarterly reporting</p> <p>Model contracts, procedures and guidelines</p> <p>Financial reporting by EBRD</p>	<p>Macroeconomic conditions are such that investment in energy efficiency continues to be attractive. The prices for energy inputs do not dramatically fall.</p> <p>The energy efficiency measures identified are implemented successfully resulting in significant savings.</p>

TABLE A.1. INDICATIVE MONITORING AND EVALUATION PLAN

<i>Type of M&E activity</i>	<i>Responsible Parties</i>	<i>Budget US\$*</i>	<i>Time frame</i>
Inception Workshop (IW)	<ul style="list-style-type: none"> • Project consultants • EBRD 	None	Within first two months of project start up
Inception Reports	<ul style="list-style-type: none"> • Project consultants • EBRD 	None	Immediately following IW
Measurement of Means of Verification for Project Progress and Performance	<ul style="list-style-type: none"> • Oversight by Project consultants and EBRD 	To be determined as part of the Annual Work Plan's preparation. Indicative cost \$30,000	Start, annually and end of project. Verification of sub-projects under KAZSEFF+.
Quarterly project progress reports	<ul style="list-style-type: none"> • Project consultants 	\$10,000 (average \$2,000 per year)	Every three months
Technical reports	<ul style="list-style-type: none"> • Project consultants as appropriate 	None	To be determined by EBRD
Mid-term Review and External Evaluation	<ul style="list-style-type: none"> • EBRD • External consultants 	\$25,000	At the mid-point of project
Terminal Project Evaluation and Report	<ul style="list-style-type: none"> • EBRD • External consultants 	\$25,000	At the end of project implementation
Lessons learned	<ul style="list-style-type: none"> • Project consultants • EBRD 	\$10,000 (average \$2,000 per year)	Yearly
Visits to field sites (EBRD staff travel costs not covered by GEF project budgets)	<ul style="list-style-type: none"> • EBRD • Government representatives 	None	Yearly
TOTAL INDICATIVE COST <i>Excluding project team staff time and EBRD staff and travel expenses</i>		US\$ 100,000	

* *excluding project team staff time, funded by EBRD.*

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

1. RESPONSES TO COMMENTS FROM COUNCIL AT WORK PROGRAM INCLUSION

Comments from Switzerland¹⁴

Comments and Recommendations	Responses
A comprehensive explanation of the inclusion of the project in the development of the legal and policy framework should be provided in the full project document. In particular, it should be explained how the project is part of the policies and measures already developed and under development (e.g. inter-linkages of measures relevant to the project, incentives for enterprises in the new framework, etc.) (see A.2).	This information is now provided in the discussion of the project baseline (see in particular the discussion of the existing framework in Section B.1.3. and the regulatory needs identified as presented in Section B.1.5.
A comprehensive communication strategy of the government towards the enterprises and other stakeholders (e.g. local banks, industry associations) should be carefully designed. Indeed, one of the main problems identified in the project description is the lack of awareness to adopt best available technologies (B.1).	Agreed. Activity 1.2.2 is specifically designed to strengthen capacity in government to work with other stakeholders. Furthermore, as an executing partner, the government (specifically MINT) will also be in regular contact with the PIU regarding the project's outreach measures for stakeholders in Outputs 2.1 and 2.2.
Key sectors to be included in the project are to be identified. Will the oil and gas sector be included? (B.2)	The oil and gas sector is not explicitly included in the project because of the very different institutional profile of that field and its relatively straightforward access to investment capital.
The strategy and scope (national, regional level?) for “certification / labeling scheme for efficient industrial equipment for manufacturers” is not clear (B.2, component 2).	The strategy for the national level certification and labelling scheme is elaborated under Output 1.3. Standard harmonization will work in parallel with the modernization efforts taken forth by the Kazakh government and would apply to equipment standards (electrical, manufacturing, construction, etc.) for which ISO, CEN/Cenelec have published or developed relevant standards. Activities include assessing national testing and certification facilities, developing national guidelines and requirements for local testing laboratories, and supporting voluntary adoption of ISO 50001.
Entities for leveraging additional funds for industrial enterprises should be clearly described in the full project document and potential funds possibly quantified, if possible referring to similar projects in other countries (B.2, component 3).	The KAZSEFF baseline mechanism and its counterpart funds in the region are now presented in Section B.1.5.
The coordination strategy and division of tasks between the Ministry of Industry and New Technologies and the Ministry of Environment Protection should be addressed in the full project document (B.5)	<p>The Ministry of Environment Protection is responsible for environmental projects, Kyoto protocol, GHG emissions trading scheme. The MoEP represents an external influence factor to the program in the areas of environmental compliance and carbon mitigation issues. MoEP is responsible for the creation of the internal GHG trading market that is expected to affect the implementation of the project as it is intended to promote energy efficiency and renewable energy investments by industry.</p> <p>MoE personnel will be involved in the project’s training to ensure that they are able to deal with increased energy</p>

¹⁴ http://www.thegef.org/gef/sites/thegef.org/files/documents/Council%20Comments%20on%20WP%202010%20_0.pdf

Comments and Recommendations	Responses
	efficiency measures introduced by industry, including assessing environmental issues of prospective investments.
The full stakeholder consultation mentioned in the PIF should be planned early enough in order to include all stakeholders (e.g. industry associations) (B.5).	Stakeholder consultation process has begun under the project design stage. Industry representatives and associations have been brought in, consulted, and will be involved during project implementation.
One is surprised that neither an industrial sector nor a cluster is mentioned or targeted. It seems ambitious for this large country not to focus on given sectors or clusters.	During the project design stage the targeted industrial sectors were confirmed.
The ambition to upgrade the best international technologies and practice seems again only applicable to some specific industries.	The current proposal envisions a broad variety of industries operating in Kazakhstan and also takes into account the economic viability of the industries and the respective enterprises within them.
Switzerland supports its approval by the GEF, and recommends focusing on some specific clusters and/or sectors after studying the best potential of quick application. It could be either a few very large industries or clusters where replicability potential is very high. Only then would it be possible to make a quick transformation, otherwise the effect would be diluted and the impact low.	Replicability has been central to the development of the profile of industries to be included. Because Kazakhstan has a relatively large industrial base with a broad range of productivity (and operating capacity) across branches and within branches, the project approach focuses on providing BAT to enterprises that will be investing in their facilities but may not have considered energy and/or other resource savings. This aspect (i.e., economic solvency and ability to invest) is seen as primary for market development. Limiting the project to a single sub-sector would not translate into a market for BAT across that sub-sector.

2. COMMENTS FROM STAP REVIEW AT PIF

Date of screening: October 18, 2010

Screeners: Lev Neretin

STAP Advisory Response: Based on this PIF screening, STAP's advisory response to the GEF Secretariat and GEF Agency(ies): Minor revision required

Further guidance from STAP	Responses
1. Baseline : The PIF provides very limited and fragmented information about the baseline and no information about priority sectors and technologies/systems for key interventions. EBRD proposes to collect this information during project development and STAP recommends that these data must be sufficient to justify the proposed interventions. The current absence of baseline definition does not allow one to observe the incremental reasoning of the project.	A thorough description of the industrial sector in Kazakhstan is now provided in the discussion of the project baseline as the result of market analysis supported by the GEF PPG. Specific data on the relative capacity, energy intensity, and potential for savings are now provided in Annex F.
2. Criteria for selecting the sectors and technologies: There is a need for criteria for selecting the industrial sectors and technologies for intervention and concessional funding. STAP recommends ranking of industrial sectors and technologies based on their mitigation potential and that the proponents analyze priority sectors based on energy and other resources use (water and chemicals) in systems, rather than analyzing impacts of particular technologies. Support for capacity building and access to finance should follow the recommendations of the "ranking" analysis. This is a particularly important exercise to ensure "a resource efficiency transformation for industries" in Kazakhstan.	See the description of potential by industry and enterprises provided in Annex F. Prioritization of companies will be made through a combination of considerations including the timing of request to participate. EBRD will be looking for those companies and sectors with the highest potential, and will encourage various industry sectors to participate. However, the creditworthiness of companies is a significant criterion as banks must be willing to finance. The participating companies selected will be those that are the most creditworthy as banks will be willing to lend to those companies first and they will be serviced the fastest.
3. Current industrial energy efficiency efforts in Kazakhstan: The	See the discussion of barriers (Section B.1.4) and the Baseline

country seems to already have laws on energy efficiency and the Government is investing in capacity building and regulatory development to promote industrial energy efficiency through the Ministry of Industry and New Technologies (MINT). There is a need to assess the barriers to existing programmes and how these efforts are "additional" to the GEF interventions.	regulatory initiatives under development by MINT, including implementation status (Table 1). Regulatory initiatives under development by MINT requiring external support, and considered incremental, are provided in Table 2.
4. It seems that components 2 and 3 of the project put a major emphasis on promoting use of resource efficient equipment. Capacity building and financial support for promotion of resource and energy management systems is noticed, but is likely to be subordinate to supporting replacement of outdated equipment. STAP recommends assessing the effectiveness of existing energy use systems first before promoting specific technologies. A systems approach to energy use (e.g., compressed air, process heat, pumps, motors etc.) is preferable.	A systems approach is assumed when working with the KAZSEFF enterprises and will be used with KAZSEFF+ enterprises.
5. The use of EU-recommended BREF guidance is commendable and STAP would welcome an explicit recognition of potential impacts of project interventions on both energy conservation and efficiency, and the release of chemicals (including POPs) in addition to potential water savings mentioned in the PIF.	The potential impacts of project interventions on energy conservation and efficiency are provided in Annex F and in the logical framework of this proposal (Annex A). Additional local environmental benefits outside of this scope will be considered and reported qualitatively by EBRD as appropriate.

ANNEX C: CONSULTANTS TO BE HIRED FOR THE PROJECT USING GEF/LDCF/SCCF/NPIF RESOURCES

<i>Position Titles</i>	<i>\$/ Person Week*</i>	<i>Estimated Person Weeks**</i>	<i>Tasks To Be Performed</i>
For Project Management			
Local			
International			
Justification for travel, if any:			
For Technical Assistance			
Local			
Policy and legislation experts	3,000	60	Supporting through policy and legislative advice and capacity building
Technical experts (capacity and training)	2,250	42	Training in industrial EE policy, resource management systems; capacity development of participating banks; developing support materials
Technical experts (due diligence, verification)	2,250	18	Provision of technical due diligence and advice to project developers and companies, management support, audits, verification
Marketing and awareness raising experts	1,500	16	Support the development and dissemination of best practices and case studies
International			
Policy and legislation experts	7,500	52	Institution building, provision of policy and legislation support
Technical experts (capacity and training)	7,500	23	Training developers and technical experts in renewable energy project development
Technical experts (due diligence, verification)	7,500	8	Provision of technical due diligence and advice to project developers and companies, management support, audits, verification
Marketing and awareness raising experts	7,500	4	Support the development and dissemination of best practices and case studies
Justification for travel, if any: International travel and DSAs will be required for all international experts. Local travel will be required to visit projects and support due diligence and verification activities			

* Provide dollar rate per person week. ** Total person weeks needed to carry out the tasks.

ANNEX D: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS

A. EXPLAIN IF THE PPG OBJECTIVE HAS BEEN ACHIEVED THROUGH THE PPG ACTIVITIES UNDERTAKEN.

NO GEF PPG FUNDS WERE USED. PREPARATORY WORK CONDUCTED UNDER THE OVERSIGHT OF EBRD INCLUDED:

1. BASELINE ANALYSIS AND STAKEHOLDER DIALOGUE

INFORMATION FOR THE KAZAKH INDUSTRIAL SECTOR WAS COLLECTED AND REVIEWED IN CONJUNCTION WITH SITE VISITS. A SERIES OF QUESTIONNAIRES WERE ADMINISTERED AND KEY STAKEHOLDERS WERE INTERVIEWED. THE ANALYSIS PERFORMED DURING THIS PHASE RESULTS IN TWO DISCRETE COMPONENTS: A TECHNOLOGY REVIEW AND A POLICY/REGULATORY REVIEW.

THE TECHNOLOGY REVIEW PROVIDED AN OVERVIEW OF THE MAIN INDUSTRIAL SECTORS/CONSUMERS IN KAZAKHSTAN AND THEIR CONSUMPTION BY REGION, AND ASSESSED THE SITUATION IN THE COUNTRY REGARDING BAT. THE EXISTING ENERGY CONSUMING EQUIPMENT WAS EVALUATED AND A MARKET ASSESSMENT MADE, INCLUDING AN EVALUATION OF THE PENETRATION OF BAT TECHNOLOGIES.

THE POLICY/REGULATORY REVIEW CONSOLIDATED UPDATES ON ENERGY EFFICIENCY LEGISLATION AND PROGRAMMES, INCLUDING THEIR SCOPE. THE TARIFF SYSTEM, POTENTIAL ENERGY EFFICIENCY INITIATIVES AND THE LEGISLATIVE BACKGROUND IN THE COUNTRY WERE ANALYZED TO DETERMINE THEIR IMPORTANCE FOR THE SUCCESSFUL IMPLEMENTATION OF THE RESEt PROGRAM AND TO ENSURE THAT THE PROJECT DESIGN TOOK THEM INTO ACCOUNT.

2. DEMONSTRATION PIPELINE DEVELOPMENT

A LIST OF PIPELINE INVESTMENTS AND ELIGIBLE EQUIPMENT THAT COULD BE INCORPORATED INTO RESEt WERE DEVELOPED. THE SELECTED SECTORS AND BAT SHOWING THE HIGHEST POTENTIAL FOR INCLUSION IN THE PROGRAMME WERE OUTLINED. DRAFT ELIGIBILITY CRITERIA FOR THE PROJECTS AS WELL AS RELEVANT EQUIPMENT TO BE USED WITHIN THE PROGRAMME, CORRESPONDING TO ENERGY EFFICIENCY IMPROVEMENTS IN THE SELECTED INDUSTRIAL SECTORS, HAVE BEEN FORMULATED. A LIST OF AVAILABLE EQUIPMENT IN THE MARKET HAS BEEN PROPOSED, AIMING TO FORM A TOOL FOR FURTHER ASSESSMENT AND ELABORATION. THE LIST WAS PREPARED IN ACCORDANCE TO THE FINDINGS OF THE SHORT MARKET SURVEY PERFORMED WITHIN THE CONTEXT OF THE PROJECT. IT COMPRISES MAJOR SUPPLIERS WITH EQUIPMENT COVERING THE DESIRED BATs HOWEVER NOT BEING EXCLUSIVE AS THERE ARE NUMEROUS INTERNATIONAL MANUFACTURERS PRESENT IN THE COUNTRY.

MAJOR ENTERPRISES THAT COULD BENEFIT FROM THE PROJECT AND/OR PRIORITY SUB SECTORS OF INDUSTRY ARE IDENTIFIED. A LIST OF POSSIBLE PROJECTS WAS RECOMMENDED, AND A LIST OF PROSPECTIVE INVESTMENTS AND EXTERNAL FINANCING NEEDS WERE PREPARED.

3. PROJECT STRATEGY DEVELOPMENT

KEY ELEMENTS NECESSARY FOR THE DEVELOPMENT OF THE PROJECT WERE PREPARED, INCLUDING THE ANALYSIS AND RECOMMENDATIONS IN THE FOLLOWING KEY AREAS:

- REVIEW OF BARRIERS: REVIEW AND RANKING OF PROJECT BARRIERS AND PROPOSALS TO ADDRESS THEM.
- CONSOLIDATION OF ELIGIBILITY: OVERVIEW OF ELIGIBLE TECHNOLOGIES AND SECTORS, DERIVED FROM ANALYSIS PERFORMED UNDER TASKS 1 AND 2.
- FINANCING STRUCTURE: ASSESSMENT OF VIABLE AND APPROPRIATE FINANCING STRUCTURES AND DELIVERY MECHANISMS FOR INDUSTRIAL CLIENTS UNDER THE PROPOSED PROJECT.
- IMPLEMENTATION PROCEDURES: OVERALL PROCEDURES FOR OPERATION OF THE FACILITY.
- TENDERING: DEVELOPMENT OF PROJECT TENDERING METHODOLOGY INCLUDING TENDER DOCUMENTATION.
- TRAINING NEEDS ASSESSMENT: IDENTIFICATION OF TRAINING NEEDS FOR GOVERNMENT COUNTERPARTS AND OTHER ENTITIES (PARTNER BANKS, ENTERPRISE LEADERSHIP, ENERGY MANAGEMENT STAFF).
- CAPACITY BUILDING ACTIONS: PROPOSAL OF TRAINING AND OUTREACH PROGRAMS AND METHODS BASED ON INTERNATIONAL BEST PRACTICES.
- COMMUNICATION/AWARENESS: DEVELOPMENT PROJECT PROMOTION AND DISSEMINATION PLAN.
- MONITORING AND VERIFICATION PROCEDURES: GENERAL FRAMEWORK.

B. DESCRIBE FINDINGS THAT MIGHT AFFECT THE PROJECT DESIGN OR ANY CONCERNS ON PROJECT IMPLEMENTATION, IF ANY:

DURING PROJECT DEVELOPMENT NO FINDINGS WERE MADE THAT MIGHT AFFECT THE PROJECT DESIGN OR CAUSE CONCERN ABOUT PROJECT IMPLEMENTATION.

C. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES AND THEIR IMPLEMENTATION STATUS IN THE TABLE BELOW:

<i>Project Preparation Activities Approved</i>	<i>Implementation Status</i>	<i>GEF/LDCF/SCCF/NPIF Amount (\$)</i>				<i>Cofinancing (\$)</i>
		<i>Amount Approved</i>	<i>Amount Spent To date</i>	<i>Amount Committed</i>	<i>Uncommitted Amount*</i>	
No GEF PPG funds were used. Preparatory work conducted under the oversight of EBRD	(Select)					
	(Select)					
	(Select)					
	(Select)					
	(Select)					
	(Select)					
	(Select)					
	(Select)					
Total		0	0	0	0	0

* Any uncommitted amounts should be returned to the GEF Trust Fund. This is not a physical transfer of money, but achieved through reporting and netting out from disbursement request to Trustee. Please indicate expected date of refund transaction to Trustee.

ANNEX E: CALENDAR OF EXPECTED REFLOWS (if non-grant instrument is used)

Provide a calendar of expected reflows to the GEF/LDCF/SCCF/NPIF Trust Fund or to your Agency (and/or revolving fund that will be set up)

The use of GEF funds under the ResET project is most closely aligned with performance grants as defined in the GEF policy on non-grant instruments (GEF/C.33/12). The objective of the GEF funding is to scale up engagement with the private sector while fostering clean technologies to curtail greenhouse gas emissions at the global level. GEF funds reward innovations in developing countries that have clear global environmental benefits. As such, reflows to the GEF Trust Fund are not expected.

However, if the entire GEF allocation was not required as anticipated under this project's design, funds would be returned to the GEF Trust Fund as appropriate and as agreed with the GEF Secretariat.

Additional Annexes

Annex F: Emissions and Energy Reduction Calculations

The GHG emissions reductions and energy savings anticipated by the project are based in part on:

- A recent in-depth industry review performed by the Kazakhstan Industry Development Institute (KIDI), which included statistical figures obtained from 150 representative industries from various sectors;
- Site visits and discussions with local industries, carried out during the project design stage of the GEF project; and,
- Experience and empirical data from energy efficiency initiatives in the region, similar to those anticipated under ResET, including through other Sustainable Energy Financing Facilities (SEFF) implemented by EBRD both in Kazakhstan and other countries.

Baseline

There is significant unexploited potential for industrial energy efficiency, as clearly evident from the documentation assessed and supported by additional findings obtained through on-site discussions during the project's design stage. Kazakhstan's total primary energy supply divided by gross domestic product (TPES/GDP), an indicator used by the International Energy Agency (IEA), is 1.84 toe thousand 2000 USD and therefore in the same class as Russia (1.65); which several factors higher than in Western Europe (0.17). Another important indicator is the total primary energy supply divided by population (TPES/capita), which is 4.29 toe/capita for Kazakhstan; in comparison this indicator is 4.75 toe/capita for Russia and 3.36 toe/capita for Western Europe. The compound indicators for all NIS are 3.59 toe thousand 2000 USD and 1.65 toe/capita¹⁵.

The high specific energy consumption noted above is attributed to the following for Kazakhstan: high share of energy-intensity sectors in the economy (e.g. mining, metallurgy); almost non-existent energy management in industry; usage of old technologies in production and significant deterioration of basic assets; low efficiency of energy use due to obsolete equipment; long distances for energy transport; and, climate conditions (extreme winter conditions).

While EBRD would continue to provide part of its KAZSEFF credit line to the industrial sector, which would generate some resource efficiency benefits, experience to date is that companies lack the awareness, incentive and funding to adopt best available technologies (BAT), which could substantially increase GHG savings while upgrading their facilities. Therefore, under a business-as-usual scenario, in the next phase of KAZSEFF there would not be an explicit focus on climate change mitigation and, further, it is very likely that that the investment would go towards renewable energy or other eligible sub-projects.

As such, for the baseline of this project (based on the KAZSEFF experience) we would anticipate approximately 5M USD of KAZSEFF funding would be provided meeting a minimum criteria of 4 kWh/y per USD investment. The following specific emission factors used are:

- For electricity the country emission factor is 1.506 tCO₂/MWh¹⁶
- For fuels, a baseline index of 0.3 tCO₂/MWh is assumed, which is approximately the average of coal and fuel oil that are the key fuels used in Kazakh industries for thermal energy production.

For the Kazakh industrial sectors 40% of total energy consumption is from electricity; and 60% from thermal energy. The resulting emissions savings are approximately 15,500 tCO₂e per year or 155,000 tCO₂e over a 10-year lifetime. Note that the autonomous improvements in energy efficiency that would take place without the GEF project and without the EBRD's baseline project are not included in this analysis. These changes would be present in both the baseline and GEF alternative so do not affect overall emissions impact of the project.

¹⁵ Source: http://www.energypartner.kz/index.php?option=com_content&view=article&id=23&Itemid=32&lang=en

¹⁶ Electricity Emissions Factors Review, November 2009, EBRD, prepared by MWH. *Most of the country's power generation comes from coal fired power plants. As a key indicator, emission factor for Kazakhstan (EF_{reduced}) is according to 2009 published information, in the level of 1.506 tCO₂/MWh a figure which is exceptionally high, in fact the highest among all EBRD CoO.*

GEF Alternative

In terms of direct impacts, the need for energy efficiency improvements in the industrial sector in Kazakhstan is significant. Under *the alternative scenario*, GEF support (along with co-financing) is expected to remove many of the existing barriers and reduce the impact of others, thereby transforming the market for energy efficiency related to the industrial sector.

To assess the short-term potential of the industrial sector, and thus the applicability of energy efficiency interventions, the Table F.1 below shows the projected energy consumption by industry in Kazakhstan through 2014. Regarding the electricity sector:

- electric energy losses in the network exceed the level of developed countries by 25-30%;
- the volume of fuel consumption at electric power stations and boiler plants is approximately 38 Mtoe/year; and,
- the potential energy savings in the electricity sector has been estimated to reach 10 Mtoe/ year.

Table F.1 Total primary energy supply allocation forecasts

SN		2008 actual	2009 actual	Mtoe Forecast				
				2010	2011	2012	2013	2014
I	Resources	104.5	94.5	98.2	104.6	109.9	117.7	123.2
1	Extraction	104.2	94.3	98	104.3	109.6	117.4	122.9
2	Import	0.3	0.2	0.2	0.3	0.3	0.3	0.3
II	Distribution, total	104.5	94.5	98.2	104.6	109.9	117.7	123.2
	including:							
II.1	Export	32.9	25	25	26	27	28	29
II.2	Internal consumption	71.6	69.5	73.2	78.6	82.9	89.7	94.2
	including:							
a)	Industrial enterprises	13.1	12.6	13.7	16.2	17	18	19
b)	Housing and population	11.2	11.4	11.5	11.6	12	12.4	12.4
c)	Electric energy industry	47.3	45.5	48	50.8	53.9	59.3	62.8

Source: Kazakhstan Industry Development Institute, KIDI

To determine the potential mix of industries that could participate in ResET, an in-depth industry review was performed by KIDI in 2010 that provides a summary of data obtained from 150 representative industries from various sectors. Energy intensity is indicative, as it is not based on production volume but on turnover, therefore cannot be used as a basis for comparison with international benchmarks. Based on data from KIDI, supplemented by site visits and discussions with local industries, the potential for energy efficiency was determined. It was confirmed that the potential for adoption of modern energy efficiency technologies by industry is high, given the prevalence of outdated technologies and equipment.

Table F.2 Cumulative statistical figures from a review of 150 major industries

Industry	Number of enterprises	Staff	Total output, thous. KZT	Energy consumption in 2009, MWh	Energy intensity, kWh/ thous. KZT	Capacity utilization, %
Machine / Equipment Manufacturing	53	12283	55,523,793	76,484	1.14	48.1
Metallurgy	13	88217	648,095,070	7,193,029	11.1	57.1
Construction materials	24	9,803	37,211,988.4	165,507	4.5	50.8
Wood processing	7	594	911,362.9	1,983	2.2	47
Chemical	7	3,185	36,843,229.3	95,018	2.6	55
Pharmaceutical	6	1,668	9,906,125.9	2,074	0.2	69
Textile industry	26	5,223	10,471,977.7	19,762	1.9	60.5

<i>Industry</i>	<i>Number of enterprises</i>	<i>Staff</i>	<i>Total output, thous. KZT</i>	<i>Energy consumption in 2009, MWh</i>	<i>Energy intensity, kWh/ thous. KZT</i>	<i>Capacity utilization, %</i>
Food industry	7	2,942	19,138,332.8	30,245	1.6	53.4
Agribusiness	7	1,104	5,955,782	19,355	3.3	68
Total:	150	125,019	824,057,663	7,603,457	9.2	56.54

Source: Kazakhstan Industry Development Institute, KIDI

Expenditures of Kazakh enterprises for fuel and energy resources reaches 25-40% of production costs (excluding raw materials), and in some cases up to 50-70%, which is evidence of existence of obsolete industrial equipment and machinery, as well as availability of cheap energy¹⁷. Other studies indicated that total energy costs as a percentage of turnover varies from less than 1% to 15%. Based on the analysis of industrial energy audits performed, the following results have been derived, giving indications of the level of energy efficiency potential:

- Energy saving potential in industry on average reaches 20% of annual consumption;
- This value differs by industrial sector and by specific mode of operation. For example:
 - for small enterprises in the food and textile industry potential of energy saving is not expected to exceed 5-7% (especially in the absence of proper boiler station)
 - in the production sites incorporating electrolysis an average of 10-12% (of the variable portion of electricity consumption)
 - in major chemical and refining industries savings can be 20-22 % (due to significant waste heat)
 - in machine building energy efficiency potential is 25-30% (mainly due to inefficient utilization of production capacity and significant losses in the distribution and use of heat over large areas).
- As a general rule that the lower capacity utilization, the higher (in %) is the potential for energy savings.

Data from major industries surveyed in Kazakhstan, including the energy consumption of the companies, were used to represent the potential mix of enterprises that could participate in ResET and would represent a total investment of 40 M USD. The selected companies form an estimated mix of investments that ResET could anticipate and was used for the simulation of GHG emissions reduction in the section below.

Table F.3 Breakdown of energy consumption anticipated under ResET

<i>SN</i>	<i>Name</i>	<i>Sector</i>	<i>Energy Utilized kWh/y</i>	<i>Electrical Energy (40%) kWh/y</i>	<i>Thermal Energy (60%) kWh/y</i>
1	JSC "Azia Avto"	Machine building	1,210,029	484,012	726,017
2	JSC "Kemont"	Machine building	46,470,900	18,588,360	27,882,540
3	JSC "Ustkamenogorskii armaturnii zavod"	Machine building	16,771,724	6,708,689	10,063,034
4	JSC «Kazenergokabel»	Machine building	6,027,900	2,411,160	3,616,740
5	JSC "Agromashholding"	Machine building	4,449,918	1,779,967	2,669,951
6	JSC SP "Belkamit"	Machine building	17,781,750	7,112,700	10,669,050
7	JSC "Kentauskii transformatornii zavod"	Machine building	28,370,428	11,348,171	17,022,257
8	LLC "Vostokmashzavod"	Machine building	33,499,725	13,399,890	20,099,835
9	JSC "Ustkamenogorskii kondesatornyi zavod"	Machine building	11,545,922	4,618,369	6,927,553
11	LLC "Kazarmaprom"	Metallurgy	3,049,797	1,219,919	1,829,878
12	LLC "Tarazskii metallurgicheskii zavod"	Metallurgy	9,876,893	3,950,757	5,926,136
13	JSC "Imstalkon"	Construction material	18,095,490	7,238,196	10,857,294
14	LLC "Cementnyi zavod Semei"	Construction material	51,701,400	20,680,560	31,020,840

¹⁷ Kazakhstan Industry Development Institute Information from audits performed

<i>SN</i>	<i>Name</i>	<i>Sector</i>	<i>Energy Utilized kWh/y</i>	<i>Electrical Energy (40%) kWh/y</i>	<i>Thermal Energy (60%) kWh/y</i>
15	JSC "Stroidetal"	Construction material	145,729,547	58,291,819	87,437,728
16	JSC "Kostanaiskie mineraly"	Construction material	33,365,040	13,346,016	20,019,024
17	LLC "Almati Beton"	Construction material	110,345,445	44,138,178	66,207,267
18	JSC "AZNT"	Chemical	61,654,425	24,661,770	36,992,655
19	JSC "AZHS"	Chemical	63,480,821	25,392,329	38,088,493
20	JSC "Kondensat"	Chemical	86,648,298	34,659,319	51,988,979
21	LLC "Karagandarezinotekhnika"	Chemical	7,464,965	2,985,986	4,478,979
22	JSC "Melanj"	Textile	13,650,000	5,460,000	8,190,000
23	JSC "Uteks"	Textile	2,269,800	907,920	1,361,880
24	JSC "Bayan-Sulu"	Food	11,300,324	4,520,130	6,780,194
25	LLC "Vita Industry"	Food	18,392,292	7,356,917	11,035,375
26	JSC "Jelaevskii kombinat hleboproduktov"	Food	16,339,019	6,535,607	9,803,411
27	JSC "Kostanaiskii melkombinat"	Food	14,288,657	5,715,463	8,573,194
28	JSC "Himfarm"	Pharmaceutical	5,707,764	2,283,106	3,424,658
	TOTAL		839,488,272	335,795,309	503,692,963

In the cases of data omission, a multiplying factor was applied to estimate the annual energy consumption from the company turnover¹⁸. The energy intensity of the industries is on average 5kWh/1000Tenge (all industries accounted meaning manufacturing, mining, metallurgy, chemical, textile, food, pharmaceutical etc¹⁹). This value is then converted to 5 kWh/4.74 EURO (balance of 30/08/2011 1KZT=0.00474EUR) thus giving us a multiplying factor of 1.05. As an outcome the total selected industries appear to account for annual energy utilization of approximately 840 GWh.

The breakdown of energy use by electrical and thermal energy has been performed on the basis of experiences in industrial audits, as well as the breakdown of the total energy consumed in the Kazakh industrial sectors namely: 40% of total energy consumption accounting to electricity; and 60% accounting to thermal energy.

As noted above, to calculate the consequent GHG savings, specific emission factors used are:

- For electricity the country emission factor is 1.506 tCO₂/MWh²⁰
- For fuels, a baseline index of 0.3 tCO₂/MWh is assumed, which is approximately the average of coal and fuel oil that are the key fuels used in Kazakh industries for thermal energy production²¹.

Table F.4 GHG emissions from selected industries

		<i>Electrical</i>	<i>Thermal</i>
Energy Consumption	MWh/y	335,795	503,692
Emission factor	tCO ₂ /MWh	1.506	0.300
GHG emissions	tCO₂/y	505,708	151,108

¹⁸ This factor has been derived by the NEEG report for EBRD, "Market Study on Demand for Energy Saving Investments in Kazakhstan and Kyrgyzstan", 2005, p.63.

¹⁹ For metallurgy this index is higher, however the share of this sector in the total sample is minor, therefore a uniform index is applied.

²⁰ Electricity Emissions Factors Review, November 2009, EBRD, prepared by MWH. *Most of the country's power generation comes from coal fired power plants. As a key indicator, emission factor for Kazakhstan (EF_{reduced}) is according to 2009 published information, in the level of 1.506 tCO₂/MWh a figure which is exceptionally high, in fact the highest among all EBRD CoO.*

²¹ Covenant of Mayors, Technical Annex to the SEAP template, Instructions Document, The Emission Factors.

The total emissions for the industry mix anticipated under ResET are estimated to be about 650,000 tons CO₂/year. Based on the levels of energy efficiency potential by industry sector as derived from the industrial energy audits performed, the estimated annual energy and GHG emissions reductions would be as noted in Table F.5. Overall, the amount of energy savings corresponds to a specific value of 4 kWh saved/USD investment, which is comparable to similar indicators applied as benchmarks in other Credit Line Facilities and SEFFs.

Table F.5 GHG emissions and energy saving from selected industries

<i>Sector</i>	<i>Estimated Investment (USD)*</i>	<i>Energy Efficiency Potential</i>	<i>Energy Saved (MWh/year)</i>	<i>Total Emissions per Year (tCO₂/year)**</i>	<i>Total Savings (tCO₂eq/year)**</i>
Machine building	12,500,000	0.30	50,000	130,000	39,000
Metallurgy	400,000	0.12	2,000	10,000	1,000
Construction material	13,500,000	0.15	54,000	281,000	42,000
Chemical	12,100,000	0.22	48,000	172,000	38,000
Textile	300,000	0.07	1,000	12,000	1,000
Food	1,100,000	0.07	4,000	47,000	3,000
Pharmaceutical	100,000	0.07	-	4,000	-
Total	40,000,000		159,000	656,000	125,000

**rounded to nearest 100,000; ** rounded to nearest 1,000*

The estimated direct GHG emission savings from the implementation of the programme are expected to be approximately 125,000 tons CO₂ per year. Correcting for the baseline energy-efficient investments (that would possibly happen every year if KAZSEFF were to continue without GEF, or approximately 15,500 tCO₂e per year), approximately 109,000 tons CO₂ per year of direct incremental emissions reductions are anticipated. These investments would have at least a 10-year lifetime, yielding total emissions reductions attributable to the project of approximately 1.09 million tons of CO₂eq. Note that the autonomous improvements in energy efficiency that would take place without the GEF project and without the EBRD's baseline project are not included in this analysis. These changes would be present in both the baseline and GEF alternative so do not affect overall emissions impact of the project.

Indirect emissions reductions

This project is intended to have a demonstration effect, encouraging energy efficiency initiatives within industry beyond those directly involved in the project. In addition, capacity development and the facility operationalized will stimulate energy efficiency investments by industry with several outputs leading to indirect emissions reduction associated with such measures.

Bottom-up

Based on the demonstration effects, capacity development and the facility developed under the project, and further supported by knowledge of the situation within Kazakhstan, a replication factor of 2 is considered appropriate²². Therefore, based on this replication factor and the direct impact of the project, indirect emissions reduction of approximately 2.18 million tonnes CO₂eq is expected using bottom-up methodology.

Top-down

Top-down emissions reduction methodology is based on the potential nation-wide implementation of energy efficiency measures in industry and examines the total economic and technical market potential for CO₂ emission reductions associated. It is expected that there will be significant top-down emissions reduction given the development of the regulatory framework and enhanced industry awareness. Based on the draft Law a target of 10% energy savings

²² Manual for Calculating GHG Benefits of GEF Projects: Energy Efficiency and Renewable Energy Projects, GEF/C.33/Inf.18 April 16, 2008. http://www.thegef.org/gef/sites/thegef.org/files/documents/C.33.Inf_.18%20Climate%20Manual.pdf

(compared with 2008 levels) is expected through 2016. Given country-wide energy consumption data (excluding the power sector), a savings of about 8 thousand GWh and ca. 7 M tonnes of CO_{2eq} is expected within that timeframe.

It is expected that GEF contributions in the 10-year post-project influence period will be modest, therefore a Level 2 GEF causality factor of 20% reflecting substantial indirect reductions is used. Therefore, the total top-down indirect emission reduction is expected to approximately 2.8 million tonnes of CO_{2eq} over a 10-year period.

Annex G. Summary of KAZSEFF+ project description

1. Introduction

KAZSEFF⁺ involves the establishment of a finance facility in the form of a credit line to local banks in Kazakhstan. EBRD will provide loans to Participating Banks (“PBs”) for on-lending to privately owned enterprises to implement eligible investments in energy efficiency and/or renewable energy.

The programme will be supported with Technical Assistance (“TA”) provided by a specialized and dedicated consultancy called the “Project Consultant” or “PC” who will be contracted by EBRD to provide support with the launch and implementation of a successful sustainable energy finance facility. Technical assistance will be offered to Participating Banks (“PBs”) and Sub-borrowers free of charge. For more details on the characteristics and benefits of the TA component see relevant section.

In addition to TA component, Facility will incorporate a grant element that will be devised to make incentive payments to investors with the purpose of penetrating the Best Available Technologies (BAT) in Industrial Energy Efficiency in Kazakhstan and increasing energy efficiency investments.

This Policy Statement sets forth (i) examples of eligibility criteria for any proposed Energy Project and/or Sub-borrower and (ii) the conditions with respect to the sub-borrower investment incentives. The procedures for verification of the Energy Projects are also provided.

2. Eligibility Criteria

- The maximum Sub-loan amount or aggregate amount of Sub-loans with the same Sub-borrower is USD 7 million (or the equivalent thereof in other currencies). Sub-loans exceeding this amount will be considered on a case-by-case basis and financed only following approval from EBRD.
- Sub-loans may cover up to 100% of the total investment cost, excluding VAT, unless the investment will lead to a more than doubling of production capacity.

2.1. Eligible Sub-borrowers

- Sub-borrowers must be private enterprises, firms, businesses, sole proprietors or other private legal entities formed under the laws of the Republic of Kazakhstan and operating in the Republic of Kazakhstan. Sub-borrowers may not be majority-owned or controlled by the Republic of Kazakhstan, or by any other political, governmental or administrative body, agency or sub-division thereof.
- Sub-borrowers must be commercially viable and meet the PB’s credit criteria and be approved in accordance with the PB’s credit appraisal procedures.
- Sub-borrowers may not be companies engaged in production, marketing, distribution (or similar activity) of tobacco products, hard liquor, alcohol (other than breweries, wineries and other companies manufacturing low/medium alcohol beverages), gambling, arms, or activities listed on the Environmental Exclusion and Referral List of the EBRD.
- Sub-borrowers must be either in compliance with national environmental and health and safety legislation, or agree to address any areas of non-compliance (with such agreement to be reflected in the relevant Sub-loan Agreement).

2.2. Eligible Sub-projects

Eligible Sub-projects shall enhance the sustainable use of energy in a financially viable manner and may consist of:

- The purchase and installation of items included on the List of Eligible Materials and Equipment, up to a maximum Sub-loan amount or aggregate amount of Sub-loans with the same Sub-borrower of USD 300,000 (or the equivalent thereof in other currencies).
- Energy efficiency and modernisation Sub-projects that result in a minimum Internal Rate of Return (IRR) – calculated only from the financial value of the prospective energy savings – that exceeds 10%. An indicative benchmark for this criterion is that each USD invested should result in annual energy savings equivalent to at least 4 kWh.
- Renewable energy Sub-projects that result in a positive Net Present Value (NPV) – calculated over a ten-year period, using a discount rate of 8%. An indicative benchmark for this criterion is that each USD invested should result in annual renewable energy production equivalent to at least 4 kWh.

2.2.1. List of Eligible Materials and Equipment

The List of Eligible Measures and Equipment (LEME) – to be established by the PC – shall include equipment, appliances and/or materials that exceed specific technical specifications and can therefore be expected to achieve a minimum energy saving [of 20%] when compared to market norms. The LEME shall be populated based on the applicability of technologies in Kazakhstan and shall include items that are considered to be the Best Available Technologies (BAT). The LEME will be publicly accessible via an Interactive online LEME database application (on the KAZSEFF website) including technology search and supplier registration functions and will be reviewed periodically to include new entrants.

The Sub-loan amount or aggregate amount of Sub-loans with the same Sub-borrower, for the purchase and installation of items included on the LEME, shall not exceed USD 300,000 (or the equivalent thereof in other currencies).

2.2.2. Energy efficiency and modernisation Sub-projects

Energy efficiency and modernisation Sub-projects may comprise equipment, systems and processes which enable a reduction in primary energy consumption and/or final consumption of electricity and/or fuels (either of fossil or renewable origin) and/or other forms of energy (which can be ultimately related to the use of electricity and/or fuels) for: (i) the production of goods and/or provision of energy services auxiliary to the production of goods; (ii) the provision of services directly related to private enterprises. All sectors of private enterprise are eligible to be financed – subject to exclusion under the EBRD’s Environment Exclusion and Referral List.

The Project Consultant (“PC”) is available upon request from the PB – as part of the technical assistance support available to the PB and Sub-borrowers – to originate or enhance Sub-projects and/or confirm Sub-project eligibility under KAZSEFF. This support (‘confirm’, ‘enhance’ or ‘originate’) is available without charge (upon receipt of a waiver letter from the Sub-borrower) and will result in an Energy Assessment containing a correspondingly appropriate level of detail on Sub-project recommendations and prospective energy savings.

- The minimum Internal Rate of Return (IRR) for all energy efficiency and modernisation Sub-projects – calculated only from the financial value of the potential energy savings²³ – must exceed 10%.
- Notwithstanding any provision herein to the contrary, any energy efficiency or modernisation Sub-project where post-investment production capacity exceeds twice the pre-investment production capacity, will be considered capacity expansion rather than sustainable energy use. However, to support the sustainable energy use aspects of such Sub-projects, Sub-loans may cover a proportional amount up to:

²³ The financial value of benefits that are not energy-related (such as increased sales revenue from increased production volume) shall not be taken into account when assessing energy project eligibility. Where the proposed energy project also results in increased production volume, the potential energy savings shall be calculated per unit of production, multiplied by the new production volume.

$$\frac{2 \times \text{'pre-investment production capacity'}}{\text{'post-investment production capacity'}} \times \text{'total eligible investment cost'}$$

2.2.3. Renewable energy Sub-projects

Renewable energy Sub-projects may comprise equipment, systems and processes utilising renewable energy resources for generation of electricity and/or heat and/or cooling and/or any other form of energy replacing fossil fuel resources. Renewable energy resources comprise water, wind, sun, biomass, biofuels, biogas and geothermal resources.

The Project Consultant ("PC") is available upon request from the PB – as part of the technical assistance support available to the PB and Sub-borrowers – to originate or enhance Sub-projects and/or confirm Sub-project eligibility under KazSEFF. This support ('confirm', 'enhance' or 'originate') is available free-of-charge (upon receipt of a waiver letter from the Sub-borrower) and will result in an Energy Assessment containing a correspondingly appropriate level of detail on Sub-project recommendations and prospective renewable energy production.

- Notwithstanding any provision herein to the contrary, any small hydro power and run-of-river hydro Sub-projects must further meet the environmental eligibility criteria.
- The financial viability of all renewable energy Sub-projects shall result in a positive Net Present Value²⁴ (calculated over a ten-year period, using a discount rate of 8%)

3. Sub-borrower investment incentives

KAZSEFF encourages the implementation of Sub-projects that provide enhanced solutions or that make use of higher performance equipment and materials than might otherwise be deployed. Such enhanced specification tends to require a greater up-front investment, but delivers superior economical and environmental benefits over the Sub-project lifetime.

Therefore, where the availability of donor-funds allows, Sub-projects that use 'best available techniques' or are assessed to have a prospective reduction in energy intensity of $\geq 20\%$, may be eligible for an investment incentive grant (upon independent verification of Sub-project completion and confirmation that the Sub-project is operationally on-track to achieve the expected energy savings), as follows:

- A grant of 10% of the Sub-loan amount, excluding any VAT (up to a maximum grant amount of USD 30,000) upon the independent verification of operational LEME items that are considered 'best available' (BAT).
- Sub-projects not meeting these enhanced specifications, including renewable energy Sub-projects, do not qualify for Sub-borrower investment incentives.
- LEME items may qualify for a grant of 15% upon independent verification, if they have previously been assessed as a Sub-project by the Project Consultant, resulting in an Energy Assessment that confirms a prospective reduction in energy intensity of $\geq 20\%$.

4. Completion verification of the sub-project

²⁴ Net Present Value (NPV) is a standard method for the financial appraisal of long-term projects. NPV is a profitability indicator, used to illustrate the added-value of an investment project. The rationale for the application of this criterion is to avoid promoting projects that are not financially viable.

To ensure that the objectives of the KAZSEFF+ are met, EBRD will require that a Verification Consultant check and confirm that sub-borrower has successfully implemented the sub-project in accordance with the objectives of the KAZSEFF+. Verification must be performed within 6 months of the disbursement of the sub-loan to sub-borrower. Successful verification will initiate the payment of the incentive grants. Absent manifest error or fraud, the decision regarding the implementation and completion of any Sub-project shall be final and binding on the Participating Bank and the relevant Sub-borrower.

Completion of Energy Efficiency Sub-projects will be verified by the Consultant, who will conduct a site visit, desk-based verification of the invoices and commissioning certificates of each Sub-project. To validate completion of a Sub-project, the Sub-borrower must provide to the PB a Sub-borrower Completion Fee Request together with supporting invoices from installers/suppliers to Sub-borrowers that must contain at least the following indications: date, name, address, registration of the installers/suppliers; technical specifications and details (including price) of the equipment installed; site where such equipment has been installed; name, and address of the relevant Sub-borrower, certification of completion, account designated to receive incentive, and status of payment. The Consultant may require from time to time that additional information shall be included in such invoices.

After the commissioning of the equipment the Completion Report is filled out and checked by the Consultant to be assessed that everything was done according the Loan Application. A template for project Completion Report will be provided by EBRD.

A schematic of the overall loan and grant procedure according to this concept is shown below in Figure 8.

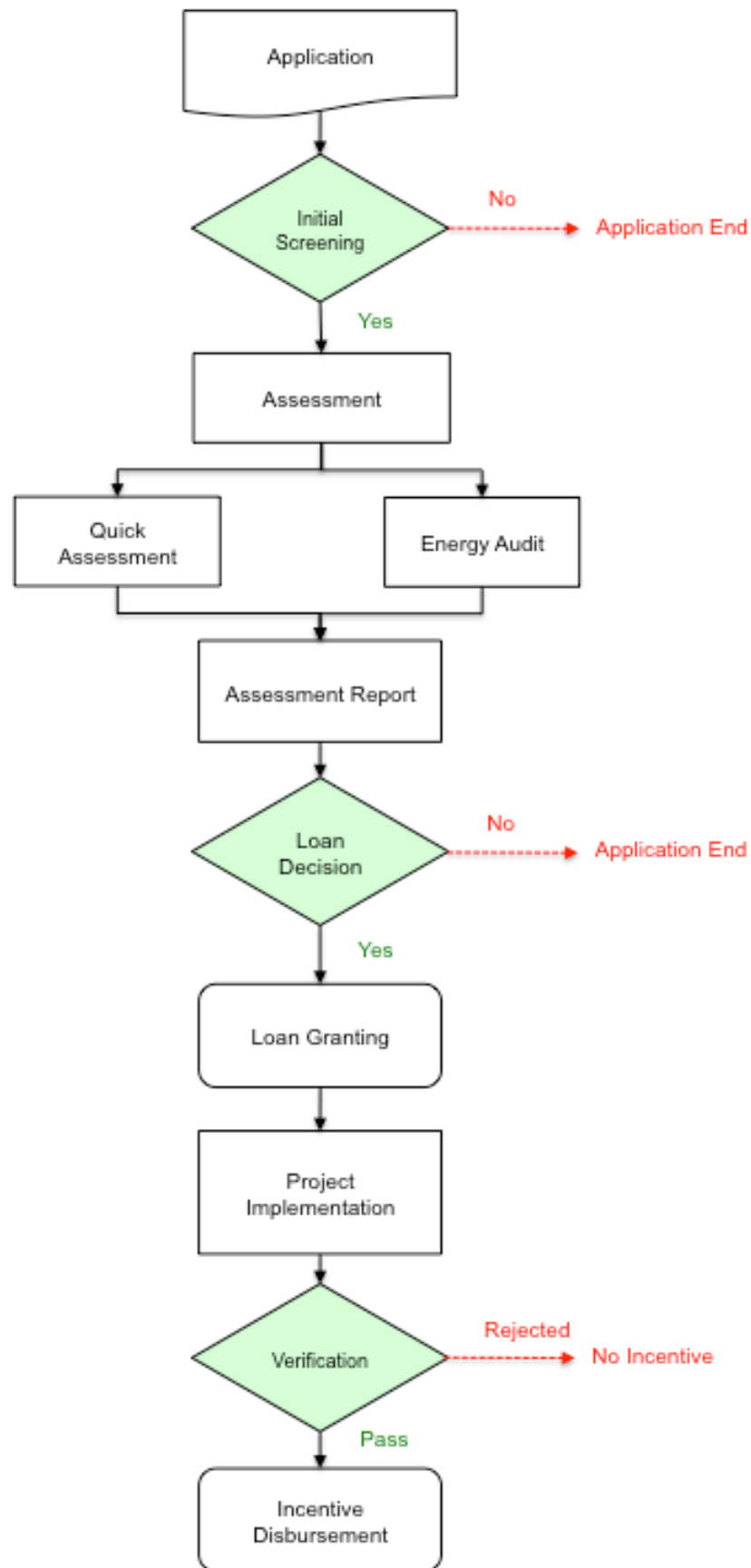


Figure 8. KAZSEFF+ project cycle, with incentive disbursement after project completion