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SAMRUK-ENERGY

EXECUTIVE SUMMARY

RAMBOLL ENVIRON

SAMRUK-ENERGY
EXECUTIVE SUMMARY

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1. INTRODUCTION

The EBRD is considering a multicurrency loan to JSC “Samruk-Energy” (hereinafter designated as Samruk Energy), a state owned power utility, to support the company in the privatisation process as part of Samruk-Kazyna Transformation and Privatization strategy. The loan proceeds will be used towards balance sheet restructuring.

Ramboll Environ was requested by the European Bank for Reconstruction and Development to undertake an Environmental and Social Due Diligence assessment of Samruk-Energy.

The E&S Assessment relates to a requirement to critically review the current environmental and social risks of the Samruk-Energy operations and assets/facilities and the Company’s management capacity to manage and mitigate these risks. The E&S Assessment has been carried out in accordance with:

- Applicable local, national and regional regulatory requirements, including those related with environmental and social impact assessments.
- The EBRD’s Environmental and Social Policy (2014) and its Performance Requirements (“PRs”), including relevant European Union directives (including but not limited to the EU EIA directive).
- Relevant international conventions and protocols relating to environmental and social issues, as transposed into national legislation.

The Project is categorised “B” in accordance with EBRD Environmental and Social Policy (2014). Due to the general corporate finance nature of the proposed project and the Client’s multi-site operations, a corporate environmental and social due diligence of the Client’s current environmental and social management systems, current and future operations and assets/facilities as well as institutional capacity to implement the Bank's Performance Requirements is required.

2. THE COMPANY

Samruk Energy is a multi-sectoral energy holding, a member of JSC SWF Samruk-Kazyna group of companies. Main activities of the Group (19 companies) are generation of power and heat, transmission and distribution of power, coal mining, as well as rehabilitation, expansion and construction of power facilities. Samruk-Energy is the leading power player that has its presence in generation, distribution and retail segments of Kazakh power sector. Samruk-Energy power plants account for 30% of total electricity generation in Kazakhstan. Transmission service in Kazakhstan is provided by national electricity grid operator KEGOC that acts as a natural monopoly, which is not part of the Project.

JSC Samruk-Energy was established on April 18, 2007 by the decision of the General Assembly of its founders to develop and implement a long-term government policy on the modernization of existing generating facilities and commissioning of new ones. The main founders are Kazakhstan State Asset Management Holding Samruk JSC and KazTransGaz JSC. The Company was registered in Almaty, Kazakhstan, on May 10, 2007.

On November 03, 2008, as a result of reorganization due to the merging of JSC Kazakhstan State Asset Management Holding Samruk and JSC Kazyna Sustainable Development Fund, the Company’s shareholder became the JSC National Welfare Fund Samruk-Kazyna, a legal successor of JSC Kazakhstan State Asset Management Holding Samruk.

In May 2010, the Company moved from Almaty to Astana.

The Company's assets include the largest generating companies, including plants of national importance such as Ekibastuz SDPP-1 and SDPP-2, as well as other plants producing thermal and power energy in the Almaty Region and in Aktobe; the main hydraulic power plants of the Republic, parts of Irtysh cascade HPP and HPPs in the country's southern regions (Shardarinsk and Moynak HPP) are represented. The Company's assets also include regional distribution networks and retail companies of the Almaty Region, Mangistau, East Kazakhstan Region, and Kazakhstan's biggest coal producer Bogatyr Komir LLP, which delivers coal to the Group's generating facilities and third parties operating both in Kazakhstan and Russia.

The installed capacity of Samruk-Energy power plants is 6 774 MW in 2015, representing 32% of the total installed capacity of power plants of the Republic of Kazakhstan. Electricity and heat generation by Samruk Energy and in the Republic of Kazakhstan is given in Tables 1 and 2 below.

Table 1. Comparison of electricity generation by Samruk-Energy and in the Republic of Kazakhstan for 2008 - 2015

Electricity generation, mln kWh								
	2008	2009	2010	2011	2012	2013	2014	2015
JSC Samruk-Energy	10807.0	11628	12686	13397	17418	28587	28216	22318
Republic of Kazakhstan	80074	78434	82296	86203	90248	91973	93918	90797
The share of JSC Samruk-Energy in the general balance of the Republic of Kazakhstan, %	13.5	14.8	15.4	15.5	19.3	31.1	30.0	24.6

Electricity generation is 22,318.1 million kWh, which is 25% of the total electricity production across the RK for 2015.

Sale of heat by power plants amounted to 6,913.2 thousand Gcal. in 2015.

Table 2. Heat generation by Samruk-Energy for 2008 - 2015

Heat generation, thousand Gcal								
	2008	2009	2010	2011	2012	2013	2014	2015
JSC Samruk-Energy	114.5	7616	7460	7756	7471	6792	7561	6913

Distribution and sales companies are the largest regional electricity network companies that specialize in electric power transmission for the population, the industrial and agricultural enterprises located in its activity zone. The companies owns transmission lines and transformer sub-stations.

The length of 0,4 - 220 kV PTL is around 70,000 km of which length of overhead PTL is 63 535 km. and cable PTL is 5,749 km. The company owns 220 kV and below substations, including 575 substations (35 KV and above) with total capacity 11,200 MVA and 13,861 substation (6-10/04 kV) with total capacity 3,792.2 MVA. The volume of power transmission in 2014 reached 12,344 million kWh (see Table 3 for further details).

Table 3. Electricity transmission volume, million kWh

Company	2012	2013	2014
AZhC JSC[1]	5,917	5,818	6,235
VK REK JSC[2]	–	3,443	3,391
MDPGC JSC [3]	2,478	2,598	2,718
Total	**8,395**	**11,859**	**12,344**

Key markets for products (wholesale and retail electricity markets, local thermal power markets) and services of Samruk-Energy subsidiaries and affiliates by the RK UES zones:

- Northern zone - Akmola, Aktobe, East Kazakhstan, Karaganda, Kostanay, Pavlodar, North Kazakhstan regions and Astana city
- Southern zone - Almaty, Zhambyl, Kyzylorda, South Kazakhstan regions and Almaty city
- Western zone - Mangistau region

Bogatyr Komir is the biggest coal mining enterprise in Kazakhstan ((Samruk-Energy and RUSAL account for 50% each): the company's share in coal mining in the country reaches 35.3% (2014). The volume of the coal produced in 2015 amounted to 34.4 million tons. Bogatyr Komir supplies coal on market terms for generating facilities of the Group and third parties, situated both in Kazakhstan and in Russia.

Table 4. Comparison of coal production by Samruk-Energy and in the Republic of Kazakhstan for 2008 - 2015

Coal production, million tons								
	2008	2009	2010	2011	2012	2013	2014	2015
JSC Samruk-Energy	46.1	34.7	38.9	40.6	44	41.7	38	34.4
Republic of Kazakhstan	104.9	94.3	105.3	110	114.3	112.8	107.6	107.2
The share of JSC Samruk-Energy in the general balance of coal production of the Republic of Kazakhstan, %	43.9	36.8	36.9	36.9	38.5	37.0	35.3	32.1

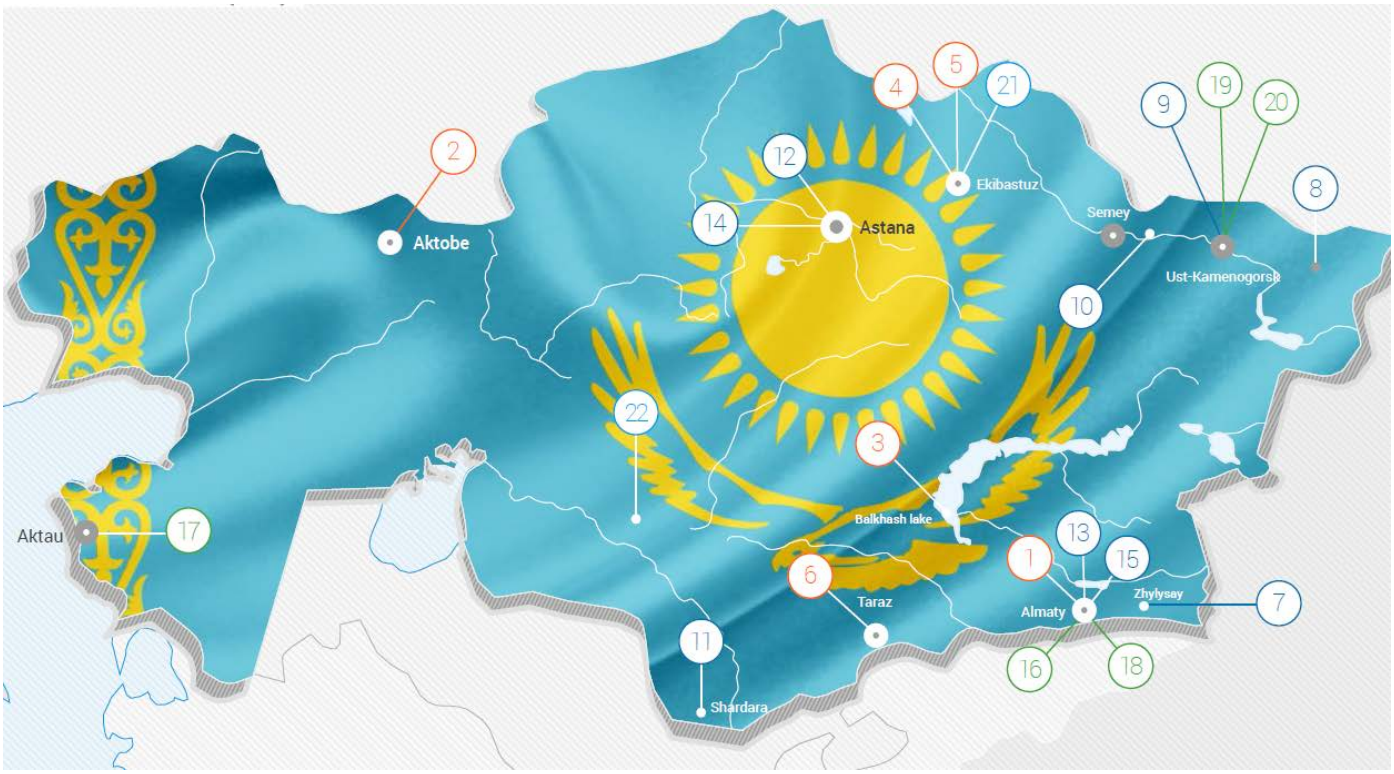
Location of Samruk Energy assets is shown at Figure 1, further details are provided in Tables below this Figure.

[1] Alatau Zharyk Company JSC

[2] East-Kazakhstan Regional Energy Company JSC

[3] Mangistau Distribution Power Grid Company JSC

Figure 1. Location of Samruk-Energy assets



Generating Companies

#	Company	Installed electric capacity, MW	Installed thermal capacity, Gcal/h	Electricity generation, million kWh	Heat release, thousand Gcal
1.	Almaty Power Plants JSC	1,238.9	3,814	5,085.6	5,031.1
2.	Aktobe TPP JSC	88 MW	878	667.1	1,795.4
3.	Balkhash TPP JSC	A two-block module with capacity of 1,320 MW is planned by the Project in order to cover the power deficit in South of RK. Terms of implementation: 2010-2020.			
4.	Ekibastuz SDPP-1 named after Bulat Nurzhanov LLP	4,000		10,728	
5.	Plant Ekibastuz SDPP-2 JSC	1,000	513,5	3,210	81,7
6.	Zhambyl SDPP-1 named after T. I. Baturov JSC	1,230	19	1,176.1 (is not part of the holding starting from 15/05/2015)	5.32 (is not part of the holding starting from 15/05/2015)`

Hydro power plants and renewable sources of energy

#	Company	Installed electric capacity, MW	Electricity generation, million kWh.
7.	Moynak HPP JSC	300.	576.6
8.	Bukhtarma HPP JSC	675	2,710
9.	Ust-Kamenogorsk HPP JSC	331,2	1 533,76
10.	Shulbinsk HPP JSC	702.	1,621.9
11.	Shardarinsk HPP JSC	100	565.1
12.	Samruk-Green Energy LLP	2 MW	0,443
13.	Energia Semirechya LLP Energia Semirechya LLP	joint venture that was established to construct a wind farm with a capacity of 60 MW to 300 MW in the Shelek corridor of the Enbekshikazakh District in the Almaty Region.	
14.	First Wind Power Plant LLP	First Wind Power Plant LLP is directly implementing the construction project of WF in Ereymentau, with a capacity of 45 MW (stage 1).	
15.	Kazhydrotechenergo LLP	Work is being carried out to build four hydro power plants on the Shelek River and the big Almaty Channel with a total capacity of 60 MW.	

Distribution and sales companies

	Company	Transmission lines with a total length, km	Volume of power transmission in 2014, million kWh
16.	Alatau Zharyk Company JSC	29,225	6,235
17.	Mangistau Distribution Power Grid Company JSC	6,170	2,718
18.	AlmatyEnergoSbyt LLP		5,946
19.	East-Kazakhstan Regional Energy Company JSC	34,557	3,391
20.	Shygysenergotrade LLP		2,659

Mining and Service Companies

21. Bogatyr Komir LLP At present, the designed capacity of Bogatyr Komir strip mine is 42 million tons of coal a year.

22. Tegis Munay LLP Tegis Munay LLP is mainly involved with organizing geological exploration.

3. EU AND NATIONAL ENVIRONMENTAL STANDARDS

European Union

Directive 2001/80/EC – Large Combustion Plant Directive (LCPD

The LCP directive (2001/80/EC) applies to combustion plants with a rated thermal input equal to or greater than 50 MW, irrespective of the type of fuel used (solid, liquid or gaseous). The LCP Directive is being replaced by the Industrial Emissions Directive (IED), and will be repealed with effect from 1 January 2016.

Directive on industrial emissions (IED)

The Directive on industrial emissions 2010/75/EU (IED) was adopted on 24 November 2010. It entered into force on 6 January 2011 and had to be transposed into national legislation of Member States by 7 January 2013. The IED replaces the IPPC Directive (2008/1/EY) and several sectorial directives or parts of them as of 7 January 2014, with the exemption of the LCP Directive, which will be repealed with effect from 1 January 2016.

In earlier regulation - LCP and IPPC – BAT was a general principle, often widely ignored. Emission limits were set in the LCP Directive.

Industrial emissions directive (IED) strengthens the BAT approach:

- BAT is a legal requirement;
- Derogations allowed but following a specific procedure;
- Emission limits must not exceed limits defined as BAT;
- BAT is a moving target.

In Europe, the IED covers also the requirements for monitoring emissions. BAT is obligatory, and the reference technologies are updated periodically.

Best Available Technology (BAT) approach

The legislative basis for BAT implementation in EU is based mainly on Directive 2008/1/EC of the European Parliament and of the Council of 15 January 2008 concerning integrated pollution prevention and control and on Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control).

The details of what this means are given in the BAT reference document (BREF). The BREF for combustion plants came into effect in 2006, and is currently under renewal. The Commission organises and coordinates the exchange of information through the involvement of the European IPPC Bureau (“EIPPCB”) (within DG Joint Research Centre) and DG Environment.

Public hearing

Article 24 of the Industrial Emission Directive (IED) contains requirements on the access to information and public participation in the permit procedure. The public has a right have access to:

- Permit applications in order to give opinions;
- Permits;
- Results of the monitoring of releases;
- The European Pollutant Release and Transfer Register (E-PRTR).

The public concerned shall be given early and effective opportunities to participate in the granting of a permit for new installations and a permit for any substantial change as well as the granting or updating of a permit for an installation where less strict emission limit values than achievable by the use of BAT are proposed, and the updating of a permit or permit conditions for an installation where the pollution is significant.

Kazakhstan Environmental Legislation

The environmental regulatory system in Kazakhstan is comprehensive, yet presents certain complexity to be exercised. The overall framework is set up by means of Environmental Code.

The Environmental Code, which was adopted January 9, 2007, establishes basic regulatory framework and covers the general and specific areas of environmental management.

Generally, it could be stated that the Environmental Code is close to international standards of environmental regulation. However, the Code does not provide detailed procedures, the state bodies' structure, and contains very few specific parameters. The standards are issued in other subordinate regulatory legal acts (by-laws).

Sanitary and Epidemiological Requirements (January 2012)

The Sanitary Rules set out requirements for the design, construction, re-construction and operation of production facilities, which constitute sources of impact on the environment and human health. These requirements contain the section for sanitary rules designed for production of electricity and heat from combustion of fossil fuels, and include description of relevant technical design needs for power plants and boiler units.

There is two other general guiding documents which serve as context: 'On approval of the Rules for setting the environment quality targets' (2015) and 'On approval of the list of pollutants and types of wastes, for which the emission standards apply' (2015). These elements add on the Eco Code in terms of providing general pre-requisites to regulatory system.

The backbone legislation which regulates emission of air pollution in Kazakhstan is defined in the *Technical Regulation No. 1232, 2007*, with important amendments made in 2010, and applies to boiler units of thermal power plants ("TPPs") running on all types of fuel.

The Methodology for designing the air pollution standards for combined heat and power plants and boiler units (2014) is the guidance, which is used by combined heat and power plants to prepare applications for environmental pollution permits, and by the environment protection authority to issue the permits to CHPs.

Best Available Technology (BAT) approach

In general, Kazakhstan's legislation provides for the possibility and even obligations to implement the best available technology (BAT). In particular, the Environmental Code and corresponding regulation includes the concept, principles and regulatory frameworks for the application of BAT. However, there is a lack of quality enforcement of BAT policy and therefore it explains the lack of implementation of the integrated environment permissions use and other environmental activities.

The Resolution of the Government of the Republic of Kazakhstan on March 12, 2008 № 245 On approving the list of best available technology is was abandoned by the Government Regulation N 196 dated April 3, 2015. The corresponding Order of the Ministry of Energy (MoE) has been issued in November 2014 after the process of restructuring and creation of MoE Therefore, in November 2014, the regulation 245 was replaced by the MoE Order 155. The content of the approved order absolutely resembles the resolution 245.

Monitoring system

According to Environmental legislation of Kazakhstan, there are 3 types of environmental control:

- Environmental Inspection,
- Industrial environmental inspections, and
- Public environmental control.

Environmental Industrial Monitoring is a part of Industrial Environmental Control, which is performed for the purpose of obtaining actual data within established intervals.

Public hearing

Following the basic principles of the Aarhus Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters Environmental legislation of Kazakhstan provides public hearings policy. Thus, according to Environmental Code of the RK (as of May 2016) public hearings are mandatory for:

1) Projects, the implementation of which may directly affect the environment and public health;

2) Activity plans for environmental protection developed for facilities of categories I and II in order to obtain emission permits.

4. ENVIRONMENTAL PERFORMANCE AND MANAGEMENT

Based on the result of the assessment performed, it can be concluded that the EHS management system at Samruk-Energy is functioning to an adequate extent and it is in compliance with the current regulatory requirements of the Republic of Kazakhstan. Supervisory authorities generally positively evaluate Samruk-Energy's efforts in the area of environmental protection.

The following positive findings of the audit should be noted:

Environmental management:

- Environmental planning and reporting is performed according to the regulatory requirements;
- Samruk-Energy submits statistical reports in a timely manner and to the required format;
- Samruk-Energy has an environmental policy. The site managers are well aware of environmental issues/problems of the individual power plants and always keep in mind environmental benefits when introducing technical innovations;
- Samruk-Energy has appropriate insurance agreements covering risk of damage to the environment and public health;
- Payments for environmental pollution and use of natural resources are performed duly.

Availability of required environmental permits/licenses:

- All Samruk-Energy plants hold valid permits on emission into the environment;
- All Samruk-Energy plants hold all the required documents on land allocation for the industrial needs of its main operations;
- All the permits and contracts related to water supply and water discharge are available at all the Samruk-Energy plants visited;
- All Samruk-Energy plants have a permit for the discharge of polluting substances into the surface water bodies;
- The Samruk-Energy plants has a permits for water use for technological needs from surface sources and wastewater discharge;
- A document specifying waste generation and disposal limits has been developed by all sites.

Environmental performance:

- Set norms for pollutants emissions into atmospheric air are not exceeded for all set parameters;

- Environmental monitoring is carried out by Samruk-Energy plants according to a programme agreed with sanitary and environmental authorities in the following aspects:
    - atmospheric air monitoring, process wastewater and water body monitoring;
- Actual emissions of pollutants into the atmosphere do not exceed the approved values; and
- Use, storage, recording, management and handling of hazardous materials are mainly in compliance with the applicable legal and regulatory requirements.

Health Safety performance:

- The facility has developed and implemented regulatory programs and relevant operational procedures on safety.
- Employees are regularly trained in operational safety and OHS issues and records are maintained.
- Reporting and investigation of accidents and incidents is performed in accordance with Kazakhstan regulatory requirements, and appropriate measures are taken to eliminate causes resulting in accidents and incidents.
- Employee medical monitoring is conducted at the local medical centres (under an agreement for medical services).
- Fire protection requirements are implemented.

Environmental and Social Assessment of Samruk-Energy and its subsidiaries did not identify any violations of the Republic of Kazakhstan legislation.

Items or issues that are not regulatory requirements but are related to general environmental management or potential future regulatory requirements, and recommendations for improvement in relation to such issues, are presented as Best Management Practices (BMPs).

An Environmental and Social Action Plan (ESAP) has been developed during the site assessment. It obliges the Company to integrate existing management systems into Integrated Management System compliant with ISO 14001, ISO 50001 and OHSAS 18001 international standards, and implement general environmental, health and safety improvements.

EBRD requires that Projects apply a systematic approach to environmental and social risk management to achieve good international practice related to sustainable development. To this end, the Bank has defined specific Performance Requirements (PRs) to provide guidance in the development of Projects. The key elements of EBRD policy and procedure in relation to environmental and social risk management are outlined below.

The EBRD is committed to promoting “environmentally sound and sustainable development” in the full range of its investment and technical cooperation activities pursuant to its constituent treaty, the Agreement establishing the EBRD. Bank-financed projects are expected to meet good

international practice related to sustainable development. To help clients and/or their projects achieve this, the Bank has defined specific PRs for key areas of environmental and social issues and impacts as listed below:

PR 1: Assessment and Management of Environmental and Social Impacts and Issues

PR 2: Labour and Working Conditions

PR 3: Resource Efficiency and Pollution Prevention and Control

PR 4: Health and Safety

PR 5: Land Acquisition, Involuntary Resettlement and Economic Displacement

PR 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources

PR 7: Indigenous Peoples

PR 8: Cultural Heritage

PR 9: Financial Intermediaries

PR 10: Information Disclosure and Stakeholder Engagement.

PR 1 through 8 and 10 include the requirements for direct investment operations; PR 9 is for financial intermediary operations. Each PR defines, in its objectives, the desired outcomes, followed by specific requirements for clients to help them achieve these outcomes. Compliance with relevant national laws is an integral part of all PRs.

While all Performance Requirements are applicable to Samruk Energy, its activities will have impacts, which must be managed in a manner consistent with the following Performance Standards: PR1 – PR7, PR8 and PR10.

No conversion of habitats, or issues related to Indigenous Peoples are present as part of this investment (there are no known indigenous people occupying any of the sites, which are located in a highly modified habitat setting). According to information provided by Samruk-Energy, present and planned activities of the Company and its subsidiaries are located in areas of no archaeological or cultural interest (PR8), and areas not related to the specially protected natural areas or habitats of red book species (PR6). The Company also informed that currently the are no issues related with the resettlement of people and land acquisition.

Therefore, PR 5 “Land Acquisition, Involuntary Resettlement and Economic Displacement”, PR 6 “Biodiversity Conservation and Sustainable Management of Living Natural Resources”, P& 7 “Indigenous Peoples” and PR 8 “Cultural Heritage” are not considered to be directly applicable to this project.

Thus, with respect to PR5, PR6 and PR8, review of the existing environmental impact assessment documents does not indicate any land, which can be considered significant for the maintenance of biodiversity or cultural heritage. Continuous assessment of potential, additional Performance

Requirements will be part of the company's responsibilities through PR1 and where identified, EBRD must be promptly informed and appropriate mitigation agreed. This will also be a priority for EBRD's supervision of the investment. JSC Samruk-Energy is committed to demonstrate its compliance to PR requirements for all stages of the project.

The following have been identified with regard of compliance with EBRD Performance Requirements (PR):

PR 1: Assessment and Management of Environmental and Social Impacts and Issues.

Environmental and social assessment

The JSC Samruk-Energy complies with local laws and regulations and has necessary operational licenses and environmental permits from the Kazakhstan regulatory authorities.

The Company should develop a procedure of independent impact assessment (EIA) on environment, biodiversity and local communities as well as cultural heritage for all new investments that should be compliant with EBRD requirements. This will include appropriate biodiversity assessments for birds and bats (min 1 year data for each wind farm) and aquatic surveys (fish, etc.). Design mitigation measures should be developed for each Project.

For any new project that will fall under the EU EIA Directive or National legislation, a full EIA in line with international best practice should be developed. This EIA may consist of a local EIA plus supplementary information on environmental and social issues required by EBRD.

For all projects where an EIA is required (or EU EIA Directive would apply) a Non-Technical Summary (NTS) and Stakeholder Engagement Plan (SEP) should be published on internet and disclosed locally.

EBRD management should approve any category A Projects.

Samruk-Energy adopted a Risk management policy and Rules for identification and assessment of Samruk-Energy risks, which indicates general rules for evaluation and research of potential risks. The document includes the definition of impacts, which occur in case if risks are not properly managed. The risk register, including scenarios for potential risks to the Company activities, has to be developed by a responsible business unit (Department of risk management and internal control) of the holding on an annual basis.

The risk register includes:

- Description of the risk
- Assessment of the risk
- Risk management measures
- Risk assessment after implementation of management measures

This process of risk evaluation presented above is similar to standard procedure of impact assessment, which includes impact description, assessment, development of mitigation measures and their implementation as part of management plans, followed by residual impact assessment.

Therefore, the process of risk assessment presented by the holding may be considered as the means to assess potential social and environmental impacts.

The holding's risk evaluation system defines several categories of risks. In relation to potential social impacts, the holding's risk evaluation and management system identifies the following categories of risks:

- risk of damage to reputation
- risks of Company group's human resources
- accidents caused damage to the health and lives of workers in the performance of official duties
- social risks (no further explanation of this notion is provided)
- fraud/corrupt practices on the part of staff and third parties
- procurement process risks
- safety at work and during the execution of official duties

Overall, the risk assessment system does not involve local communities. It is also not clear what kind of risks are implied by 'risk of damage to reputation' and wether such risks involve miscommunication with media, NGOs, local communities, customers and other interested parties. As indicated in the Risk management policy, external risk factors (i.e. the factors arising outside the operating activities of the Company) have to be evaluated, too.

Accounting for the stakeholder map developed by the holding, local communities are the company's stakeholders and, therefore, their interests and relevant risks to their livelihoods and activities should be taken into account. However, neither the Policy nor the Rules clarify whether the process of identification, assessment and management of risks is applicable to activities of local communities.

In its Strategy of corporate social responsibility, the holding claims adherence to the principles related to identification, analysis and assessment of social impacts and risks. These principles include, *inter alia*, definition of social responsibility involves understanding of consequences of the carried-out activity for certain social groups and persons, for social progress of society, efforts of Company on smoothing and compensations of negative consequences for employees and local population during mass release of workers, delocalization and closing of productions, reduction of workplaces, reorganization, etc.

Environmental and Social Management Systems

Due to the scale of operational activity to date, JSC Samruk-Energy has operated a formalized, scalable system where responsible personnel can obtain the instruction they need to implement the requirements of the environmental and social management systems (ESMS) in a consistent manner.

JSC Samruk-Energy must develop and implement an integrated environmental, health and safety management system (IMS) at the corporate level and for the facilities where the IMS is not implemented and attain certification to ISO 14001, OHSAS 18001, SA 8000 and ISO 50001.

Corporate EHS management system should also cover most operations, such as wind farms, solar and small hydro. Additional independent certification or large installations. I also needed.

The following aspects of the ESHS management system will be appropriately assigned, implemented, monitored and reviewed to ensure the desired system outcomes:

- The Company should develop ***Social Investment Programme***. Program should contain information on community development projects, objectives, methodologies, target dates and Key Performance Indicators (KPI) for each plant. Prioritise the most vulnerable and affected communities in CSR projects. The Programme shall integrate Company efforts taken to date in the field of Corporate Social Responsibility (CSR), stakeholder engagement actions, and relevant Company policies and strategies.

- The Company should ensure that relevant risks to and impacts on communities' livelihoods are identified and assessed. Namely, impacts on access to socially significant institutions (hospitals, schools, markets, etc.), communities' health and safety, real estate development projects, agricultural activities, recreation activities, housing of local residents, and importance of the Company activities to local residents well-being, etc. should be assessed

- The Company commits to engage with EBRD for EIA studies for projects that are located within an existing or potentially protected area. A mechanism should be developed of identification of sensitive areas in accordance to the Banks PR's. If a site is located in a potentially sensitive area, such as National Parks, the scope of the EIA should be agreed with the EBRD.

Supply chain management

Samruk-Energy should include in tendering documents the requirement for contractors to develop procedures/method statements for the project to manage the EHSS issues including but not limited to the below, adopting international best practice in line with the Kazakhstan legislation and the EBRD PRs:

- EBRD's PRs
- EHSS procedures
- Labour, working and worker accommodation conditions
- Community safety and security
- Supply chain sustainability
- Grievance mechanism

Samruk-Energy should undertake these actions in accordance with the timetable presented in the Environmental and Social Action Plan (ESAP) attached to this report.

Communication with interested parties

The holding adopted measures to account for opinion of internal and external stakeholders. Samruk-Energy developed the map of stakeholders at the corporate level. The stakeholder map is arranged for each affiliate of the holding.

The holding has developed a grievance mechanism for its employees. The mechanism is substantiated by the Alleged breach notification policy, Personnel policy, Anti-corruption policy and Provisions on the ombudsman (see section on PR 2 for more details). Although suggestion boxes are available on the holding's sites (as was indicated during the visit of CHPP-1 and CHPP-2 in Almaty), the notion of suggestions is not identified or regulated in corporate documents.

A universal grievance format is not approved by the holding. Complaints and suggestions are formulated by the applicants themselves. Timeframes for consideration of grievances by authorised parties and decision-making process after the investigation is complete is not defined by corporate policies.

The procedure for external stakeholders' communication, although present and functioning, is deemed unreasonably complex (see the section on PR 10 for more details).

Development and implementation of an overarching Social Policy, relevant strategies of corporate development and relevant policies

The holding does not have an overarching social policy, which would define general principles of social impact assessment and management, and social objectives, although the attempt to define such policy is made in the corporate Annual report. On the other hand, the holding possesses several policies, strategies and other documents that include necessary information on social issues and their management principles. Such documents include:

- Strategy of corporate social responsibility
- Risk management policy
- Rules for identification and assessment of Samruk-Energy risks
- Personnel policy
- Provisions on ombudsman
- Occupational health and safety policy
- Alleged breach notification policy

Ramboll Environ recommends the holding to adopt an overaching Social policy, which would encompass general provisions of the documents identified above, deliberately provide means for social impact assessment and reference relevant documents related to social management system.

Existing social management plans

The holding currently is implementing the plan of measures on realization of Strategy of corporate social responsibility. The plan is outlined for the period of 2012-2022 and includes:

- Measures' description
- List of responsible departments
- Data of performance
- Form of completion

Key topics for the actions of the plan are:

- Observance of requirements of the legislation of the Republic of Kazakhstan, effective interaction with interested parties
- Assistance/providing of realization of programs in social sphere
- Effective investments into production development
- Ensuring ecological stability
- Safety on production, labor and health of employees protection
- Effective regulation of the social and labor relations on the basis of the principle of social partnership
- Development of personnel potential

Project monitoring and reporting

Samruk-Energy conducts periodic inspections/audits and prepares periodic reports to evaluate compliance with environmental permit requirements and with the procedures. Additional requirements outlined in the ESAP should be also included into monitoring program. Samruk-Energy observes the monitoring requirements outlined in the environmental permits, including specific aspects related to emissions and discharges, impacts on ambient air quality, and implements an appropriate internal and EHS audit program, reporting the results to site managers, and corporate senior management.

In relation to social impact assessment, social responsibility, personnel management, health and safety issues and other relevant social issues the holding prepares regular reports on a number of topics, including:

- Report on the progress made to comply with the requirements and principles of the UN Global Compact (annually)
- Reports on evaluation of compliance with the principles Corporate Governance Code (annually)
- Report about activities of the Board of directors (annually)
- Risk management reports and the report on implementation of Action plan for key risks management
- Corporate social responsibility report (annually)
- Annual report of Samruk-Energy

PR 2: Labour and Working Conditions.

At the moment of assessment the Samruk-Energy has 22,650 full time employees of which 6,189 are female employees (27%) and 16,461 (73%) are male employees. As reported by the holding, the share of ethnic minorities in the company is 44.6% as of December 2015. At the company and its affiliates, 2,587 persons are employed on a temporary basis.

Management of worker relationships and Human resources policies:

The holding claims to base all its actions in the field of human resources and workers' relationships on requirements of national legislation. In particular, the following principles of the Labour Code (as indicated in Article 4 of the Code) of the Republic of Kazakhstan are observed by the Company and its affiliates:

1. Inadmissibility of restrictions on human and civil rights in the sphere of labour
2. Freedom of labour
3. Prohibition of discrimination, forced labour and the worst forms of child labour
4. Guaranteed right to working conditions meeting the safety and hygiene requirements
5. Priority of the life and health of the employee over the results of production activities
6. Guaranteed right to a fair remuneration for labour not below the minimum wage
7. Guaranteed right to rest
8. Equality of the rights and opportunities of employees
9. Guaranteed right of association of employees and of employers for the purpose of protecting their rights and interests
10. Social partnership
11. State regulation of labour protection and labour safety

The Company reported that all contracts are developed in line with the principles listed above.

Samruk-Energy developed a Personnel management policy, which aims at personnel planning, implementation of an integrated human resources management system and creation of the system the regulatory, administrative, methodic documents and principles of work with the personnel.

In general, the Personnel management policy is built upon the principles above. It should be emphasized that the Company guarantees mutual respect, coordination of actions and responsibility of the parties in the relationships between the employees and the management of the Company, focus on the best international experience and technologies and the continuity of knowledge and experience, the focus on the development and training of the employees.

The Company established the position of ombudsman, which is regulated by the Provisions on the ombudsman. The holding states that the ombudsman is an independent person who is entitled to promote the implementation, compliance and clarification of corporate business ethics principles and to identify violations of the republic of Kazakhstan and internal regulatory documents of the holding.

Ombudsman collects information on violations of the Code of Business Ethics and of the laws of the Republic of Kazakhstan. He or she holds consultations with holding's workers and initiates the process of disputes' resolution. Ombudsman is in charge of keeping the records of complaints of employees of holding's companies.

All consuiltations between an ombudsman and employees can remain anonymous if the employee wishes so.

Ramboll Environ auditors visited the affiliate of Samruk-Energo in Almaty (AlES) and two of its enterprises (CHPP-1 and CHPP-2) and collected necessary information on labour and working conditions. According to the information provided by the HR department, the affiliate complies with all corporate policies and regulations. The holding cooperates its activities with Energiya labour union, which has 16 subsideries, including the one at AlES enterprises. AlES employs retired workers of its enterprises as tutors to ensure that their experience is inherited by young personnel and to support them with work extra opportunities.

It should be noted that during the site visit it was identified that no praying rooms are available at AlES sites. According to the anecdotic information received at the site, such rooms were prohibited in 2015, which contradicts the holding's commitment of respect for human rights (including religious convictions) stated in the corporate Annual report. Also, no rooms for rest were present at AlES enterprises.

No retrenchment activities are planned for Samruk-Energy.

Child labour / forced labour

The Strategy of corporate social responsibility states that Samruk-Energy does not allow any forms of child labour. As of 2015, the Company fully complied with the requirement that prohibits employment of the persons under the age of 18 at the enterprises with potentially harmful or hazardous labour conditions. This was confirmed by the AlES representatives during the site visit.

The Strategy of corporate social responsibility also includes the commitment to ensure that no form of forced labour is used at the holding's sites. Compliance with this requirement was confirmed by AlES HR department during the site visit.

To implement the EBRD requirements JSC Samruk-Energy should:

- Develop an integrated grievance mechanism that would incorporate all existing procedures of placing complaints and propositions by both internal and external parties. The mechanism shall be accessible to all external and internal parties, (including NGOs, local communities, all workers employed by the Company and its contractors, etc.), confidential where necessary, allow for the tracking of grievances, include a timely and transparent feedback process. Information on the grievance procedure should be disseminated among local external and internal at all Company sites and other publicly available venues (including corporate website and media when necessary).

- Ensure that contractor workers' rights are not jeopardized, that they are treated equally with the Company workers, and that they have access to same facilities (e.g. canteens and rooms for rest) as the Company workers.

- Ensure that Company's Ombudsman should collect grievances from and reviews observance of the rights of contractors' workers.

- Conduct regular internal employee standards audits for contractors' and subcontractors' employees at all sites to ensure compliance with the Kazakhstan Labour Law, EBRD requirements and ILO Principles.

- Arrangements should be in place for construction workers so that they should have access to welfare facilities such as drinking water, toilets and dining facilities prior to the construction of laydown area and more semi-permanent facilities. It is recommended to use the Guidance note by IFC and the EBRD for accommodation camps.

- As part of any due diligence associated with the acquisition of new assets or Companies (both generating and distribution) undertake and environmental and social due diligence

(ESDD) and develop an Environmental and Social Action Plan (ESAP) to ensure compliance with National, Corporate and best practice (EU) environmental standards within reasonable timeframes.

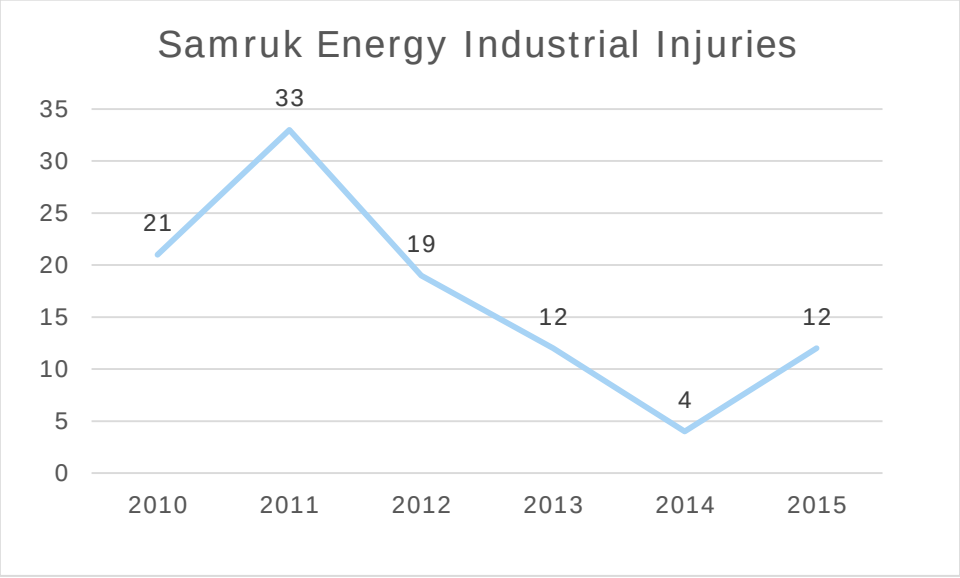
Occupational Health and Safety (OHS)

The OHS management system of the Company have:

- a policy and principles focusing on safety first;
- procedures for identification of all potential hazards to workers;
- appointment of a responsible person to manage OHS;
- training/qualification and personal protection equipment (PPE) requirements;
- emergency response procedures; and
- standard performance indicators.

The Company has procedures for recording, investigation and reporting of OHS incidents.

The company implements a set of measures to reduce the number of occupational accidents and therefore the last 5 years there has been a tendency to reduce industrial injuries.



In respect of occupational health and safety (OHS), the specific Samruk-Energy safety management system is compliant with both Kazakhstan regulations and is aligned with the OHSAS 18001 standard.

The Samruk-Energy is providing EHSS training to its staff as a part of on boarding and periodical training program. The staff to be employed is subject to medical testing and analysis specific to the job where he/she will be employed. The health tests are done annually according to legislation in force.

As was reported by the AlES representatives during the site visit in Almaty, the on-site clinic personnel undertakes pre-shift and annual medical check-up, epidemiological monitoring, monitoring of professional diseases and keeps medical records. Vaccination is provided to the workers annually by a medical clinic contracted by AlES. The contractors are obliged to provide the Company with special qualification certificate demonstrating admission to work in line with national occupational health and safety regulations.

Internal grievance mechanism

The holding has developed a grievance mechanism for internal communication with its employees. The mechanism is substantiated by the Alleged breach notification policy, Personnel policy, Anti-corruption policy and Provisions on the ombudsman. The employee may place her/his complaint or suggestion via the following means of communication:

- E-mail to trust@samruk-energy.kz
- Written letter to a relevent holding's department
- Trust telephone line
- Personal and confidential meetings with an ombudsman
- Blog of the chairman of the Board of directors of the Company

Each department of the holding and its affiliates have a mitigation committee, the commissions on industrial disputes resolution and mediators to remedy conflicts related to the labour issues. Ombudsman takes active part in the process of conflict resolution. The internal grievance log is held by HR departments of the holding.

Although suggestion boxes are available on the holding's sites (CHPP-1 and CHPP-2 in Almaty), the notion of suggestions is not identified or regulated in corporate documents.

A universal grievance format is not approved by the holding. Complaints and suggestions are formulated by the applicants.

Timeframes for consideration of grievances by authorised parties and decision-making process after the investigation is complete is not defined by corporate policies.

Supply chain

As was reported by personnel at AlES responsible for supply chain management, the company does not conduct any check opf suppliers specifically dedicated to potential for breaches of international labour legislation and the legislation of the Republic of Kazakhstan. On the other hand, the company is able to monitor work ethics and reliability of the suppliers from Kazakhstan in terms of labour relations via special register of reliable suppliers, which the company is only allowed to contract.

The process of suppliers' assessment of foreign companies regarding their compliance to international and national labour legislation is not carried out as reported by AlES personnel.

Security personnel

No data was provided on the requirements to security personnel of the holding. During the site visit by Ramboll Environ in Almaty, the representatives of relevant departments of AlES refused to provide responses the auditors' questions due to the high level of confidentiality of such information. During the site visit it was understood that the enterprises are guarded by both private forces and stateforces. The nature of the relationship of the two types of security forces and their duties and responsibilities needs to be clarified by the holding.

It is recommended that the holding adopts the policy on security forces practices which ensures the principle of proportionality and the Voluntary Principles on Security and Human Rights in relation to the process of hiring, rules of conduct, training, equipping and monitoring of security staff.

Reporting

The holding discloses information on personnel management and labour relations to public on its website via Annual reports. The data provided in the reports covers a wide range of topics regarding personnel issues including workers' profile, staffing structure, current issues, educational status and opportunities, training provided to workers, career development evaluations, generalized information on remuneration and motivation, etc. Information on human resources is also provide in CSR reports prepared by the affiliates of the holding (e.g., AlES prepares such reports annually as was discovered during the site visit).

PR3: Resource Efficiency and Pollution Prevention and Control

Resource efficiency.

The company is striving to save resources via implementation of various resources-efficient activities. The Company developed of an Energy Saving Programme and conducted energy efficiency audits at each power plant. This is undertaken as part of ISO 50001 implementation.

The Samruk-Energy Group of Companies strives to improve energy efficiency. Priority measures in this process include the improvement and modernization of obsolete electrical equipment, improved efficiency of production, transportation and electricity and heat distribution, and promotion of more efficient practice of heat and electricity consumption among the population.

As a result of measure to reduce energy consumption and enhance energy efficiency, in 2014 the energy savings equalled to 1,764,960 GJ, including:

- Modernization of production process 1,691,200 GJ
- Reconfiguration or change of equipment 73,730 GJ
- Change in personnel's behaviour 30 GJ.

Pollution Prevention and Control

The current operations are in compliance with national requirements. The principal impacts from operations to date include:

Power generating companies:

- Air Emissions;
- Water supply for industrial needs;
- Management of ash produced by burning coal at special landfills;
- Management of hazardous and not hazardous waste;
- Handling of hazardous materials;
- Protection of avifauna (for wind power companies).

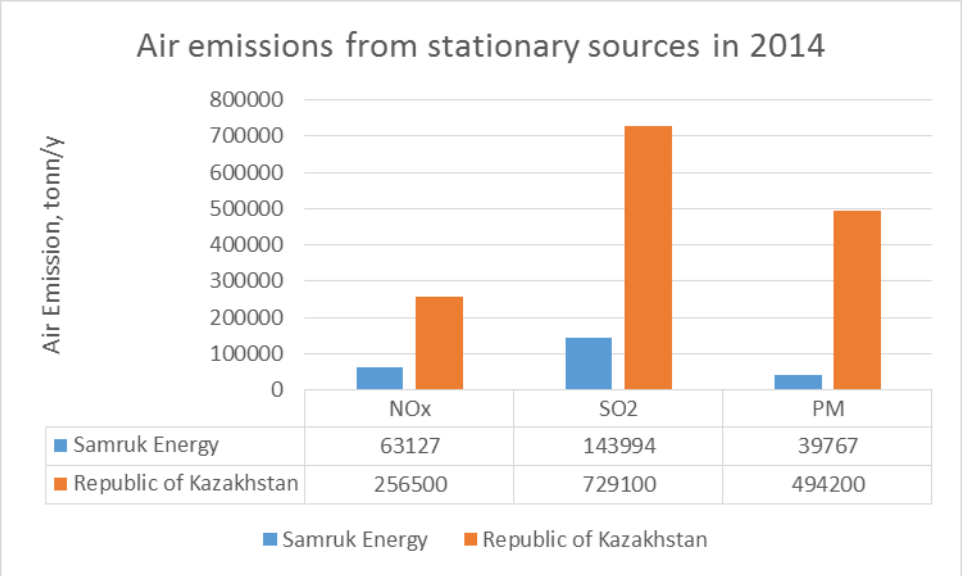
Energy distribution companies:

- Handling of hazardous substances;
- Protection of avifauna from death to overhead power lines.

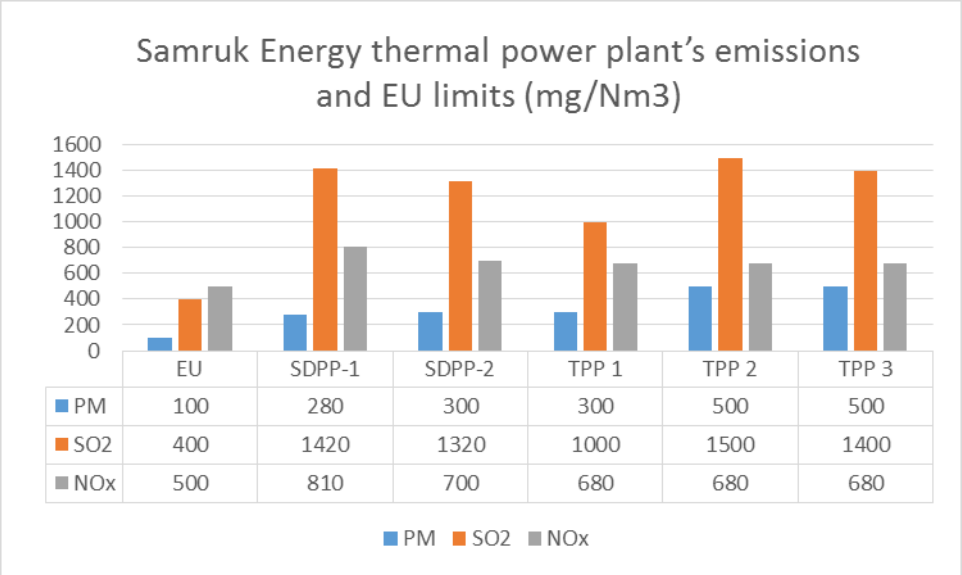
Air Emissions

Air Emissions from stationary sources of JSC Samruk Energy constitute a significant part of total air emission values of the Republic of Kazakhstan. In 2014 the JSC Samruk Energy's share of total RK air emission was:

- NOx 24.6%
- SO2 19.7%
- PM 8.0%



CHP and TPP are major sources of pollutant emissions into the atmosphere. All CHP and TPP comply with emissions standards set in accordance with the Republic of Kazakhstan requirements. However, emissions from CHP and HPP exceed the EU standards by 2 to 5 times. This situation has occurred due to the fact that the main equipment was commissioned about 30 to 50 years ago and does not meet modern requirements despite of the fact that the company regularly conducts modernization of equipment aimed at improving fuel efficiency and reducing



emissions of pollutants.

In order to meet the EBRD requirements and improve the environmental efficiency of CHP and TPP, the Company should:

- Prepare a corporate investment plan for the installation of Continuous Emission Monitoring Systems (CEMS) equipment on across the power generation fleet for each boiler total rated thermal input above 300 MWth. CEMS should include: dust, SOx, NOx

emissions for coal fired boilers and NOx and CO for gas fired boilers (average in 15 minutes or one-hour period);

- The emission standards for new power plants/new units above 300 MW thermal should comply with the Emission Limit Values set out within the EU Industrial Emissions Directive 2010/75/EU (IED). The Company will assess each new project against the EU IED and National standards. A summary of the assessment will be published on line in a Non Technical Summary (NTS).

- The emission standards for existing units as part of plant modernisation should comply with the Emission Limit Values (ELVs) set out within the EU Large Combustion Plant Directive 2001/80/EC (LCPD) for dust and NOx, and National standards if more stringent. SOx reduction will be based on as an as needed basis to meet National Standards and reduce environmental impact. A review will be made of the priority investments by 2018.

- For new projects rated >150MW (gas fired) or >100MWe (coal fired) and >100 MW (renewable) for which a TEO is required, a Non-Technical Summary should be prepared. This NTS should meet the general disclosure requirements of the EBRD PRs. Social / cultural heritage and QHS issues should be addressed.

The Company should ensure that the measures identified in the HSES due diligence report with regard to prevention and minimisation of pollution risk are addressed.

It is important to undertake an internal audit at end of 2016 to assess compliance with the ESAP and findings of the ESDD.

Sanitary Protection Zone (SPZ)

In accordance with the applicable laws of the Republic of Kazakhstan a Sanitary Protection Zone (SPZ) should be established around any enterprise which is a source of environmental pollution. SPZ is a special functional zone separating the power plant from residential areas, population rest areas and other protected areas (natural reserves, etc.). All Samruk-Energy plants were observed to have approved SPZs.

There are residential neighbourhoods situated at a distance of 50 – 250 m from the Company border at of HPP-1 of AlES (the holding's subsidiary located in the city of Almaty and visited by the auditors), which is a breach of legislation of the Republic of Kazakhstan. AlES undertakes regular air quality monitoring activities both at the boundary of the CHPP-1 site and within SPZ. The monitoring results demonstrated that none of the parameters measured exceed the performance benchmarks set out in the legislation.

It is recommended to develop the design documentation for SPZ size aimed at its reduction on a basis of calculation of dispersion of air pollutants and of physical impacts on ambient air, and identification of other breaches of Kazakh legislation.

An umbrella approach to the issue of ambient air pollution in SPZ of CHPP-1 is only possible in case of modernization and reconstruction of CHPP-1, including decommissioning of obsolete boilers and boilers with expired service period, and refuse from use of coal as combustible.

Ash-disposal areas

CHPPs and district power stations (GRES), which operate on coal, have ash-removal systems, including ash-disposal areas that aimed at storing the ash combustion waste.

Currently, the ash-removal systems operate in accordance to legal requirements. Holding's affiliate organizations conduct industrial inspections of the condition of ash-slag pipeline and monitor the quality of ground water, surface water, soils and ambient air.

The majority of ash-disposal areas are designed for operations for the next 20-25 years except for the ash-removal system of HPP-2 of AIES in Almaty. According to the specialists' estimations, after commissioning of the 8th cogenerating unit at HPP-2 in 2016, the ash-disposal area will be filled within the next 8-8.5 years due to the increase of the overall ash generation.

It is recommended to develop a design documentation for construction and/or reconstruction of the ash-disposal landfill for CHPP-2 in Almaty.

Safe use and management of hazardous substances and materials

There is no significant use of hazardous materials related to Samruk-Energy operations. Hazardous chemicals include fuel for the boilers and for the backup generators, oil and lubricants for the vehicles and equipment, cleaning solvents.

To improve the existing practice of waste and chemical handling it is recommended to develop waste and chemical management programme including proper handling procedures, segregation, identification of storage areas, labelling, recycling/reuse/disposal. As part of housekeeping improvements, it is recommended to develop a programme for the removal of obsolete equipment and scrap metal from the site

In the course of assessment it was identified, that many of the holding's affiliates and subsidiaries use **asbestos and asbestos-containing materials (ACM)** for, inter alia, thermal insulation of boilers and air pipelines.

The Republic of Kazakhstan environmental, health, and safety regulations do not contain substantive restrictions relating to asbestos-containing building materials, and there are no specific asbestos regulations which require reporting or conducting ACM assessments or surveys. There is no specific permit for activities related to asbestos. Permits required for compliance with environmental legislation (for example, in the waste management area) applicable to industrial facilities in general.

No asbestos surveys were available for review during the assessment and none is legally required. The use of asbestos is not banned in the Republic of Kazakhstan at present. While the undertaking of a survey itself is not expected to be a material issue, the findings and recommended actions have the potential to be material. Costs associated with encapsulation and removal/ replacement can be evaluated on a basis of the findings of the survey.

PCB issues

Certain subsidiaries and affiliates of the Samruk-Energy Group of Companies continue to use equipment that contains polychlorinated biphenyls (hereinafter, PCB).

PCBs are used as dielectric liquids in transformers, capacitors and other electrical equipment. The Republic of Kazakhstan signed the Stockholm Convention on Persistent Organic Pollutant (hereinafter, POP) and should implement the following measures:

- banning exports, imports and production of POP-containing substances in the Republic of Kazakhstan;
- termination of use equipment containing PCBs (i.e. transformers, capacitors, or other recipients containing liquid residues of substances) by 2025;
- taking measures to reduce unintentional emissions of POPs;
- making efforts to develop appropriate strategies aimed at identifying areas contaminated with POPs;
- informing society of the effects of POPs hazards on human health and the environment.

The Company should carry out an inventory of PCB containing equipment and develop a plan for phasing out their use to 2025 and eliminate this equipment to 2028 in environmentally sound way.

Greenhouse gas emissions

Samruk-Energy has not carried out GHG emission assessment for the current and proposed activity and has not carried out GHG monitoring.

Calculation of overall level of GHG emissions from JSC Samruk-Energy facilities operation is assessed to be High (2015 emissions totalled 25,042 thousand tons). Main direct GHG emissions are related to coal, natural gas and other fuel combustion.

Taking into account proposed significant level of GHG emission from activity, Samruk-Energy should develop and implement strategy for manage GHG emission during project implementation.

In line with EBRD requirements the Company should provide an annual report to EBRD with an inventory of greenhouse gas emissions from the Company facilities.

Environmental Monitoring of water bodies

The company operates hydroelectric power plants, which have a relatively small impact on the environment. One of the possible negative impacts are wastewater discharges.

The Company should undertake an environmental monitoring assessment at each current and future HPP location, to verify the biological effectiveness of the wastewater treatment. This should consider factors such as:

- are wastewater able to maintain water quality (temperature, dissolved oxygen, etc.);
- can wastewater support the maintenance of fish populations, particularly the more vulnerable species; and

- do wastewater give the streams the capacity to support spawning, incubation, rearing, and passage of fish?

The company should confirm that the presence and sizing of fish protection grids on the water intakes are appropriate.

BAT requirements

To follow the EU BAT requirements the Company should operate all plants in line with EU BAT requirements. All new plants should implement BAT at the design stage.

All new plants to be constructed in future to be designed in accordance to EU BAT requirements as defined by the Industrial Emission Directive (IED) and in line with the EU EIA Directive.

The Company must undertake an audit of each facility every 5 years.

The Company should provide a BAT Assessment Report for the coal fired plants, inclusive of attained performance, kgCO2/KWh, total CO2 t/yr as well as average monthly SOx , NOx and dust emissions to the end of 2017.

Reporting

The Company should provide the Bank with annual report on key environmental, health, safety and social matters. The EHS report should include:

- company status (e.g. plant ownership) and general information on environmental performance,
- progress against this ESAP (each item)
- information on Greenhouse Gas emission on each plant and the Group
- a summary of any areas of non-compliance with Kazakhstan Environmental Law, or exceedances of the relevant permit levels and any proposed actions
- Fine levies for environmental non performance
- Safety at the Company, inclusive of any accidents and incidents as well as occupational disease at generating assets and distribution companies
- Key Performance Indicators (Generation in MW and KWh, employment; fuel mix; CO2 emissions – total and kgCO2/KWh).

PR4: Health and Safety

Occupational health and safety.

OHS issues are addressed by the Samruk-Energy managers at all levels. Checks of OHS status and identification of outstanding issues are carried out regularly in all departments of the company. The findings are incorporated during development of the OHS action plans. The company has a system of staff training and testing in the sphere of OHS. Fire safety, electrical safety and energy saving are among the training priorities. Fire suppression equipment is in good shape in all facilities visited.

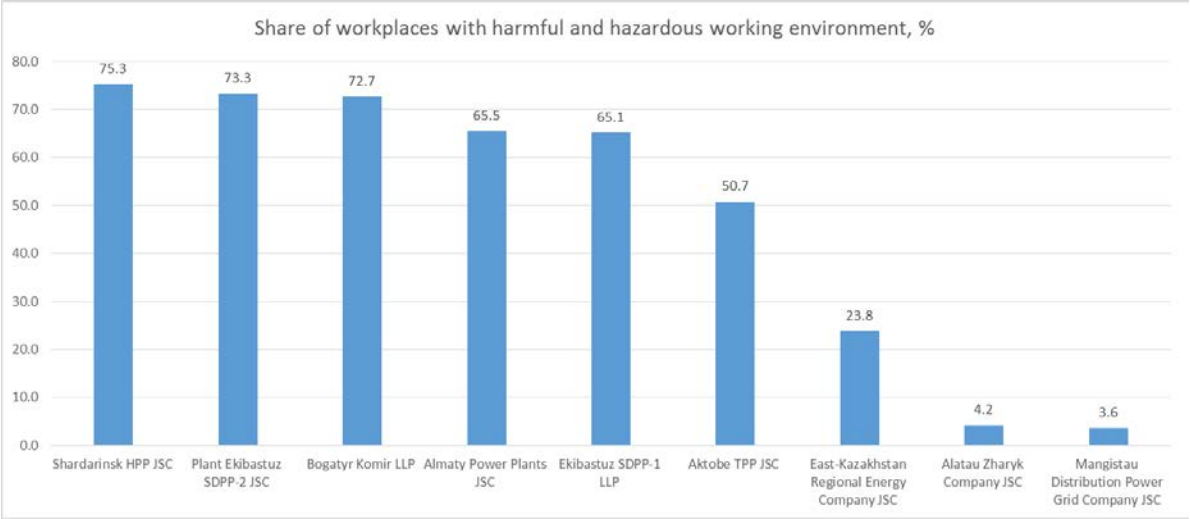
Samruk-Energy should review and align the H&S Plans in line with the EBRD PR4 requirements. Requirements to include (but not be limited to):

- Job- and task-specific hazard and risk analysis and controls for activities.
- Provision of PPE, requirements for use of PPE, and enforcement of PPE use.
- Safety training for all personnel, covering hazards for their jobs.
- Develop an accident investigation program. Record incident statistics, including total work hours, serious injuries, lost time, and near misses, etc.
- Develop a medical monitoring program for employees.
- Ensure implementation of a work permit system covering both workforce and contractors for dangerous tasks such as confined space.
- Establish and implement a “Lock Out Tag Out” system.
- Implement workplace hazard monitoring.
- Place safety signage where necessary. Safety signage should address fire safety, emergency response, noise, PPE, no smoking, traffic control, etc.

Hazardous Working Environment

Subsidiaries of Samruk-Energy conduct regular assessment of working conditions, including measurement of noise, vibration, workplace air dust level, illumination, air temperature, etc.

The results of evaluation of working conditions demonstrated that a number of workplaces’ conditions do not comply with hygienic standards, ranging from 50 to 75% of the total number of workplaces for the majority of generating companies.



It is recommended to develop a corporate action plan to improve working conditions at the Company’s facilities and to introduce an integrated management system of key performance indicators in order to record the improvement of working conditions in the subsidiaries.

Emergency Response

The Company should review and update the current emergency response plans in consultation with responsible authorities and communities to cover at least fire, flood response, spills, severe injuries or fatalities, or other events that could reasonably be expected to occur within the lifetime of the projects in line with the EBRD requirements. Trainings and drilling exercises should be conducted on regular basis.

Fire Safety

The Company should perform regularly monitor the firefighting system/equipment as necessary, including fire extinguishers in offices and operation areas. Provide relevant training to personnel and prepare/post relevant instructions.

Community health and safety

The Company must introduce a policy on observance of human rights by security forces, including clear identification of use of force requirements. It is recommended that the policy is set out in compliance with Voluntary Principles on Security and Human Rights.

PR 5: Land Acquisition, Involuntary Resettlement and Economic Displacement

As reported earlier, no current plans for land acquisition and any resettlement or displacement activities are reported by the Company. On the other hand, during the site visit it was identified that some activities and actions of the holding may affect local communities' mobility, access to businesses and social infrastructure and other amenities. Besides, some assets of AlES (e.g. ash-disposal areas) are located in close proximity to houses, farms, recreation zones and country houses. Moreover, it was indicated by the AlES staff that land acquisition and compensation disputes took place several years ago when the ash-disposal areas was planned to be extended (the plans were cancelled eventually). Due to these observations it is deemed necessary to consider the issues of potential land acquisition, resettlement and economic displacement carefully.

The information presented above demonstrates the necessity for the Company to develop a land acquisition and compensation framework for the purchase of land for new projects.

The objectives of the framework should describe how to:

- avoid or minimise resettlement, economic displacement
- consider feasible alternative project designs
- mitigate adverse social and economic impacts from land acquisition
- provide compensation for loss of assets at replacement cost
- improve or, at a minimum, restore the livelihood and standards of living
- provide instructions for identification of cut-off date in order to prevent speculative construction of housing and other buildings.

The Company will undertake a full social review of expropriation plans relating to the construction of new Projects and associated facilities.

PR 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources

Current and future activities of the Company and its affiliates are not or will not be taken in the specially protected areas or in the areas inhabited by critically endangered species included into the Red Book.

The Company will undertake pre-construction ecological surveys and develop site mitigation / protection plans, for new projects in the locations where the EIA has identified that protected species are present.

In line with EU and EBRD requirements the Company will undertake location specific terrestrial ecological habitats and birds and bats surveys for all new windfarm locations, to assess resident species risk, migratory and general bird related risks, and ensure adequate mitigation is featured as part of the project designs.

Any new wind farm located near a sensitive bird habitat or bird migratory route requires prior approval of EBRD, and may need to include a radar, independent monitoring specialist and an active wind turbine management plan including shut down system.

The Company will maintain a post construction monitoring system for hydro and wind farms to asses post construction impacts and as necessary develop mitigation measure to limit such impacts. These can be through active turbine management or flow management. The Company will review operational activity to assess the possibility to limit impacts and seek the best solution to reduce any potential impact. The Company may also take into account compensation measures as a way to offset the impact.

The Company will maintain a minimal water flow on all new hydro project and major extensions for all to ensure that not net biodiversity loss and no negative impact on downstream water users. The envisaged actions addresses to both new hydro projects and major extensions to such projects. The Company will develop a procedure to allow monitoring of existing hydro plants to ensure compliance and limit of biodiversity impacts as practically possible

PR 8 – Cultural Heritage

The EIA process for each new project should consider the range of cultural heritage considerations within the EBRD standards. These will include a review of historical use and archaeological issues.

The Company should develop and implement a ‘chance find’ procedure to be used during all construction activity, to aid in managing archaeological finds.

PR10: Information Disclosure and Stakeholder Engagement

Overall, Samruk-Energy takes sufficient efforts to engage with all stakeholders in an efficient manner. The holding intends to follow the best practices of information disclosure and while doing so prepares an Annual report on its website available in English and Russian. The report provides information on the Company profile, performance results, management practices, sustainable development indicators (including environmental, social and economic factors), external audit data and financial statements.

The stakeholder map is developed by the holding and includes:

- Shareholders
- Subsidiaries and affiliates
- Employees
- Government authorities
- Consumers
- Banks and financial institutions
- Other affiliates
- Competitors
- Society, including the media
- Suppliers
- Partners

The methods of engagement with society involve provision the information on the corporate website, disclosure of non-financial reports (as indicated above), press releases, organization of corporate events and press conferences. The Company considers the following issues as significant to society as a stakeholder:

- Contribution to socio-economic development of regions of operations;
- Efficiency of mineral use;
- Environmental protection.

AlES affiliate of the holding developed a separate Register of complaints on environmental issues received from local communities in February 2016.

As reported by media liaison officer of AlES, local communities and other external stakeholders use the blog of the head of the Company and social networks (e.g. Instagram) as a major means of complaint-placing. Traditional media (TV and newspapers) are also used by local public to deliver their complaints to AlES.

Ramboll Environ recommends the Company to establish a transparent mechanism for grievance placement by external stakeholders, including local communities, in order to avoid resentment from residents and businesses living and located in close proximity to the holding's assets, and of various non-governmental organizations that might have an interest in the Company development projects. It is also recommended to conduct a thorough research of local communities and other stakeholders in case of major development projects in order to avoid miscommunication. Stakeholder map should contain a detailed description of each group; local vulnerable groups and NGOs should be paid additional attention to.

It is recommended to ensure availability of all disclosed documentation in both Kazakh and Russian. The same recommendation should be applied to complaints' and suggestions' boxes located at the holding's enterprises.

The Company should develop a Stakeholder Engagement Plan in order to optimize its relationship and communication practices with external stakeholders.

5. CONCLUSIONS & RECOMMENDATIONS

Ramboll Environ found that the environmental and health and safety issues at the site are well managed with good awareness of Environmental Health and Safety (EHS) issues and the overall housekeeping practices are good both inside and outside the buildings. Site and EHS managers are well informed about the relevant EHS requirements and showed a pro-active approach towards compliance with regulatory issues. All senior officials of the enterprise, who were interviewed during the assessment, have an extensive experience of managing power plants and demonstrated good knowledge of environmental problems and social issues of the enterprises.

Site management exhibited a high level of awareness and knowledge concerning EHS issues and regulations; the site relationships with the local authorities are reported to be co-operative and constructive.

Overall, the Company demonstrated great capacity to meet the requirements of Environmental and Social Policy of EBRD. The Company developed and implements numerous policies, standards and action plans on a number of societal and ecological issues as demanded by EBRD standards. Existing organizational structure and responsible personnel available at Samruk-Energy allows reaching full compliance with EBRD requirements when additional measures recommended by Ramboll Environ are put in place and certain actions are incorporated into corporate practice of the holding and all its business units. In general, only minor restructuring and/or rearrangement of staff duties is required from the Company to able to report full compliance with the EBRD policy.