

****FINAL REPORT****

**NATIONAL ENERGY STATISTICS ACTION PLAN FOR
THE REPUBLIC OF KAZAKHSTAN**

Produced with the support of the INOGATE Programme

**“INOGATE Technical Secretariat and Integrated Programme in support of the
Baku Initiative and the Eastern Partnership Energy Objectives”**

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1. INTRODUCTION

A unified approach to activities related to energy statistics is needed for various reasons – it helps policy makers in the decision making process, reduces administrative workload when collecting and supplying data, reduces efforts of organisations in explaining differences between different datasets, helps general public to understand the energy situation in their own country, as well as in other countries. Detailed, complete, timely and reliable statistics are essential to monitor the energy situation both at the country level and at the regional level.

At the beginning of 2012, the EU launched a technical assistance project, which addresses, among other areas, energy statistics in the countries in the INOGATE area (Belarus, Moldova, Ukraine, Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Turkmenistan, Uzbekistan, and Tajikistan).

The assistance in the field of energy statistics will be implemented during the following 2,5 years through the ITS project (*INOGATE Technical Secretariat and Integrated Programme in support of the Baku Initiative and the Eastern Partnership Energy Objectives*) and its specific Component D: *Support to statistical cooperation*.

The main aim of the ITS project and Component D is to assist the Partner Countries (PCs) in developing their institutional frameworks for energy statistics, in order to harmonise them with international standards, and to improve the methodologies applied in the data collection and compilation of energy statistics, energy balances, energy prices and energy (efficiency) indicators.

One of the main activities of the ITS project is the development of Energy Statistics Action Plans (ESAP) and their adoption by the Partner Countries (PCs). ESAPs will be used as a guideline for implementing certain activities under the project, as well as for monitoring their success. The Energy Statistics Action Plans consist of the following main segments:

- evaluation of the current status of energy statistics and energy balances and creation of the Energy Statistics Country Profile;
- assessment of the required measures and activities needed to streamline the efforts towards the alignment of energy statistics with the rules and procedures applicable in the relevant international organisations (IEA) and in the EU (EUROSTAT);
- selection of country specific measures and activities to be supported by the ITS project through the technical assistance aimed to increase transfer of know-how and skills and the creation and strengthening of the institutions involved in energy statistics system organisation. In addition to the above mentioned, the ITS project will implement several horizontal activities involving several INOGATE countries (workshops, conferences, study tours, networking) which will complement the country specific activities and be synchronised with them.

The Energy Statistics Action Plans refer mostly to the ITS project period, but the ITS experts have also included suggestions for the period after the project closure.

The Energy Statistics Action Plans envisage an active participation of the PCs' relevant institutions in implementing the activities proposed by the ITS project, as well as in monitoring the success of the project.

2. CONCEPT AND METHODOLOGY

In order to develop the Energy Statistics Action Plan in each PC, the ITS experts responsible for the implementation of *Component D: Support to statistical cooperation*, have developed and applied a uniform methodology based on the principles of equality of all the PCs and on the optimum usage of the resources needed for the implementation of specific activities. This means that the ITS experts have tried to shape the implementation of the activities in the following 2,5 years in such a manner that it provides maximum achievable results.

The methodology comprises the following steps and tasks:

- to assess the institutional framework (legal regulation and institutional organisation) for energy statistics;
- to review reporting systems and the energy data collected from the sources that were made available by National Statistical Institutes (NSIs) and other responsible institutions in the PCs, as well as from other relevant available sources, such as the publications of the IEA, the UNSD, and from sources of official energy statistics; and to check and verify findings from other sources (including other departments of NSIs, ministries, agencies and/or other entities involved in monitoring and forecasting energy data);
- to evaluate uniform surveys prepared and submitted by the ITS experts to each PC, to identify gaps in data collection and in the applied procedures and methodologies compared to IEA requirements, to develop benchmarks for specific segments of the energy statistics system and to identify specific groups and the level of development;
- to propose concepts and methodologies for the establishment of a reporting/surveying systems, compilation, aggregation and dissemination of the energy data in accordance with the assessment of each PC's actual capacity, in order to enable the synchronization and harmonisation of time schedules for specific activities in other PCs;
- to create Energy Statistics Action Plans proposals for each PC, referring to the period of the following 2,5 years of duration of the ITS project and based on a uniform list of specific tasks and applicable measures that are required to overcome an identified gap in all the PCs – both in advanced countries and in those lagging behind the process;
- to estimate the technical, financial and human resources needed to overcome gaps and missing statistics and to set priorities for further actions and activities supported by the ITS project.

The main areas of cooperation between ITS project and PCs will be the implementation of the specific activities, which fall into the scope of the following key actions:

- Legal and institutional framework strengthening,

- Development of a reporting system based on international (IEA/EUROSTAT) standards,
- Energy balances compilation and submission of the questionnaires to the IEA,
- Development of a reporting system for monthly energy statistics,
- Development of a reporting system on energy prices,
- Development of a reporting system on energy and energy efficiency indicators.

This Energy Statistics Action Plan is based on the common efforts between the ITS expert team and the Kazakhstan's representatives and its aim is to define the sequence of needed actions and to set the priority actions, which will provide the maximum and the most efficient contribution to the progress towards harmonisation of the Kazakhstan energy statistics with international standards.

The ITS expert team had developed the draft proposals for ESAPs, which had later been sent to the relevant institutions in the Partner Countries in order to receive their feedback and opinion on the proposed activities, as well as their suggestions for the further ESAP improvements. Suggested comments from PCs were additionally discussed and were integrated into the final Energy Statistics Action Plan.

3. ENERGY STATISTICS COUNTRY PROFILE

3.1. Legal and institutional framework

According to the *Law on the State Statistics of the Republic of Kazakhstan* (March 19, 2010), the state statistics in the Republic of Kazakhstan is based on the principles of professional independence and autonomy. The other principles of the state statistics are: consistency and comparability of official statistics with international standards and methodologies; equal access to official statistical information; confidentiality of primary statistics data, and others. The *State statistics policy* was adopted with aim to develop, and improve state statistics.

The State statistics bodies (authorised body, public authorities and National Bank of the Republic of Kazakhstan) conduct official statistical observations in accordance with the *Plan of the statistical work* approved by the Government of the Republic of Kazakhstan.

The Agency of the Republic of Kazakhstan on Statistics (ARKS) is the agency authorised by the Law for following competences:

- develops and implements state policy in the field of state statistics;
- develops and adopts regulations in the field of statistics within its competence;
- develops statistical methodology in accordance with international standards in statistics;
- approves statistical methodology for national statistical surveys;
- organises and conducts national statistical surveys in accordance with the plan of statistical works;

- develops programs for national censuses and ensures its implementation;
- approves statistical forms for national and departmental statistical surveys, instructions for completing them, and the procedure of their approval;
- develops and approves the procedure of submission of primary statistical data by respondents;
- provides respondents with statistical forms for submission of primary statistical data and instructions for their completion;
- receives primary statistical data from respondents on a free of charge basis;
- receives necessary primary statistical data from households about their incomes and expenses free of charge;
- in the case distortions, mistakes and errors in statistical information are detected the Statistical Agency will require that additional information is provided by respondents in order to confirm the reliability of primary statistical data;
- whenever distortions of primary statistical data made by respondents are detected, Statistical Agency will require that rectifications are made by respondents in statistical forms containing primary statistical data;
- uses administrative data exclusively for the production of statistical information and for updating the statistical registers;
- provides state statistical agencies with statistical classifiers by placing them on the internet resources of authorised agency;
- ensures accumulation, maintenance and updating of informational statistical databases on the socio – economic situation of the Republic and its regions;
- organises research and development in the field of state statistics;
- ensures the quality of statistical information, Statistical Agency will check the compliance of statistical activities of state statistical agencies with statistical methodology which was approved by the authorised body for departmental statistical observations and will request documents (information) necessary for such examination;
- gives explanations on matters within the competence of the authorised body;
- in order to improve national statistics Statistical Agency will establish consultative and advisory bodies with the regulations to be approved by the head of the authorised body;
- exercises state monitoring over state statistics, except for inspections, in order to check its compliance with laws and regulations of the Republic of Kazakhstan as well as with resolutions of the Government of the Republic of Kazakhstan in the field of state statistics.

The Law defines rights and obligation of the respondents. The respondents need to submit valid primary statistical data in accordance with the schedule of submission and methodology prescribed.

In carrying out statistical activities, The Agency of the Republic of Kazakhstan on Statistics uses the statistical registers: statistical business register, statistical population register, agricultural register, and register on housing stock.

The state statistics bodies provide the users with equal access to high-quality official statistics information and statistical methodology on the official websites of the state statistics authority. The dissemination of statistical information is provided in compliance with the provisions of the legislation of the Republic of Kazakhstan.

At the moment, the Agency is working on the implementation of the Action plan for the development of energy statistics 2011 – 2015, which was approved by the Order of the Chairperson of the Agency of the Republic of Kazakhstan on Statistics.

The Division of Statistics of Mutual Trade and Commodity Markets of the Department of Service Statistics of the ARKS bears responsibility for the compilation of fuel and energy balance. Two people are responsible for the compilation of fuel and energy balance. The source of financing of energy statistics activities is the state budget.

Agency of the Republic of Kazakhstan on Statistics, together with the Ministry of Industry and New Technologies of the Republic of Kazakhstan, the Ministry of Environmental Protection of the Republic of Kazakhstan and other stakeholders from the public sector implements activities to expand energy efficiency indicators and to ensure their comparability on an international level.

3.2. Capacities and capabilities in energy statistics systems

The Kazakhstan's statistical system includes central office in Astana and 16 regional (municipal) departments for statistics.

3.3. Energy profile of the Republic of Kazakhstan¹

PRODUCTION

Kazakhstan has the largest recoverable crude oil reserves and its production amounts about two thirds of total crude oil currently being produced in the region. Kazakhstan oil export is the base of the country economy; the GDP growth amounted over 7 percent during the last few years.

¹ Figures provided by the Agency of the Republic of Kazakhstan on Statistics.

According to the energy balance for 2009, Kazakhstan produces 143,636 ktoe and the largest share belongs to crude oil - 44 percent. Coal is presented with the share of 30 percent, natural gas with 6 percent, while biofuels and hydro energy together amounted less than 1 percent.

IMPORTS AND EXPORTS

In 2009, the total primary energy supply (TPES) amounted to 55,968 ktoe. Kazakhstan imports 9,933 ktoe, 61 percent of total belongs to crude oil, 16 percent to oil products, 18 percent to natural gas and 1 percent to coal.

ENERGY TRANSFORMATION

Kazakhstan has 937 power plants, including 22 hydro power plants. The total installed generation capacities amount 17 GW, 50 percent of which are from power plants and 44 percent are from hydro power plants. About 50 percent of country's power generation comes from power plants.

ENERGY CONSUMPTION

The total final energy consumption (TFC) in Kazakhstan amounts to 21,635 ktoe. In the TFC, the largest share belongs to oil products, followed by electricity, coal, heat and natural gas. Manufacturing industry consumes 72 percent, transport sector 6 percent, while other sectors 22 percent of TFC.

3.4. Review of available methodologies applied in the process of collecting, elaborating and processing of energy statistics data

The Agency of the Republic of Kazakhstan on Statistics (ARKS) applies specific methodological concepts for energy data collection.

The ARKS publishes on the official website the list of all forms for the State statistical observations which are applied in 2012 and which includes the forms for the reporting on energy data. Each form on the list is defined with the number of form, code, index, list of the respondents, frequency and the date of submission. The forms, which are relevant for energy statistics, are the following:

- Annual report on the power stations and boiler houses operation (6-TP)

The form 6-TP is submitted by all legal entities and (or) their structural or separate subdivisions with main or secondary types of activity "Power generation, transmission and distribution of electricity", "Steam supply and air conditioning systems" according to the General Classification of Economic Activities codes (35.1, 35.3).

- Annual report on the production, distribution and consumption of electricity (24-energy)

This form is submitted by all legal entities and (or) their structural or separate subdivisions with main or secondary type of activity "Power generation, transmission and distribution of electricity" according to the General Classification of Economic Activities code (35.1), as

well as all legal entities and (or) their structural subdivisions which consumed electricity during the process of industrial activity (05-33, 35.2-39).

- Energy balance annual report (1-TEB)

This annual report is submitted by all legal entities and their subdivision regardless of the type of economic activity, both suppliers and consumers of fuels and energy.

According to the catalogues from the business registry 43,383 respondents submitted filled form 1-TEB (annual) to ARKS for the year 2011.

- Annual report of an enterprise on manufacture and shipment of production (goods, services) (1-P)

This annual report is submitted by legal entities and (or) their structural or separate subdivisions with main or secondary type of activity "Industry" (05-33, 35-39).

Except the State statistical observation, energy data is collected through Departmental statistical observations, which include the following reports:

The ARKS receives data on export and import from the Custom Control Committee of the Ministry of the Finance of the Republic of Kazakhstan. ARKS also forms national statistical report 1-TS "Report on Mutual Trade of Goods with the Customs Union member-states".

3.5. Energy balances compilation and their submission to the IEA

The need for timely and reliable annual energy balance for the Republic of Kazakhstan was determined in the ARKS's *Strategic Plan for 2009-2011*, within the framework of the *State Program on Forced Industrial-Innovative Development of Kazakhstan for 2010-2014* and the *Strategy of Industrial and Innovation Development of Kazakhstan for 2003 – 2015*.

The ARKS compiles fuel and energy balance according to the *Methodological Recommendations for Production of Fuel and Energy Balance of the Republic of Kazakhstan* of 28 March 2000.

In 2004, *Guidelines for the development of the fuel and energy balance on the basis of the full program and expanded scheme* were prepared.

The Methodological Recommendations were developed on the basis of the long-term national practice, which compiles with requirements set by international organisations. The applied concept allows comparisons of the regional and aggregated national fuel and energy balances.

The main purpose of the fuel and energy balance (FEB) of the Republic of Kazakhstan is to assess the changes in the production and consumption of fuel and energy, as well as to identify future trends of changes in FEB in the country and compare them with trends in the country's regions.

The FEB of the Republic of Kazakhstan is a complex balance, which presents the overall country energy chain and integrates energy flows for 31 different energy forms.

The main standard form of FEB is presented as aggregate balance consisting of four main groups of energy forms: solid fuel, liquid fuel, gaseous fuel and thermal energy and electricity.

The first group (solid fuels) includes types of energy forms such as coal with subgroups – Karaganda, Ekibastuz and other coal, lignite.

The second group (liquid fuels) includes oil, gas condensate, petrol, kerosene, gas-oils, furnace fuel, slow diesel fuel, marine diesel and furnace oil.

The third group (gaseous fuels) consists of natural gas, propane and liquefied butane.

The fourth group includes thermal energy and electricity.

The main structure of the FEB prepared according to the national methodology includes the following components:

- Resources:
 - Generation
 - Import
 - Balance at the beginning of the year
- Distribution:
 - Consumption in the Republic including:
 - conversion into other energy forms
 - consumption as raw material and as material for non-fuel needs
 - directly as a fuel and energy
 - Exports
 - Losses
 - Balance at the end of the year.

The national format of FEB can be converted to the format, which is compliant with the international standards based on the UNSD's *International Recommendations for Energy Statistics*.

The ARKS publishes energy balances on the official website in the form of statistical bulletin. The last published bulletin *Fuel and Energy Balance of the Republic of Kazakhstan 2007 – 2011* contains 183 pages and is available free of charge. In addition to fuel and energy balance for the Republic of Kazakhstan, the bulletin also contains regional fuel and energy balances, review which shows energy consumption in Kazakhstan and world energy statistics.

The ARKS does not submit five annual energy questionnaires (IEA/EUROSTAT/UNECE) to IEA, it submits only fuel and energy balances in the national format.

The ARKS points out that the main users of the energy statistics are: Governmental bodies (Ministry of Industry and New Technologies of the RK, Ministry of the Environmental Protection of the RK, Ministry of Oil and Gas of the RK); various departments inside ARKS for

the international comparisons; energy companies for its own researches (KazMunaiGas) and others.

3.6. Reporting on monthly energy statistics

The ARKS publishes monthly energy statistics. The data are published in the form of statistical bulletin, which contains balances of the energy resources and use of energy products.

Energy statistics data are generated on a monthly basis in the bulletin “Resources and the use of certain types of products (goods) and raw materials in the Republic of Kazakhstan (http://www.stat.kz/publishing/Pages/torg_13.aspx).

3.7. Reporting on energy prices

The Division of Consumer Prices Statistics of the Price Statistics Department of the ARKS is responsible for the prices of electricity and energy products.

3.8. Energy and energy indicators reporting

In 2009 the *Methodological Recommendations for the calculation of indicators to measure energy efficiency* were approved. These *Methodological guidelines* resulted from numerous initiatives in Kazakhstan the aim of which was to reduce energy intensity and improve energy efficiency. These two issues are the primary objectives of the integrated ecology and energy policies of the Republic of Kazakhstan. The methodology for the compilation of energy efficiency indicators is based on the results from annual fuel and energy balance. The Guideline recommends the calculation of the following energy efficiency indicators:

- Gross Fuel and Energy Resources

The basis for calculating the gross FER (Fuel and Energy Resources) is the annual Fuel and Energy Balances (FEB). The first step in developing this indicator includes designing table for each type of FER according to the Standard Classification of Economic Activity. Then, the received data are aggregated in the relevant groups, sections and types of economic activities. At the second stage, these figures are converted into tons of oil equivalent units and grouped according to the FEB classification.

- GDP Energy Intensity

GDP energy intensity is a summary indicator that describes the level of FER consumption per unit of GDP. The GDP energy intensity indicator is identified as a correlation between the volume of gross FER consumption for all production and non-production purposes in tonnes of oil equivalent.

- GDP Carbon Intensity

Total emissions (GHG inventory) (V_{CO_2}) are calculated on the basis of the fuel and energy balance. Total emissions represent a sum of figures for consumption of each type of fuel multiplied by the ratio of gas emissions (CO₂) when the fuel is burnt. The administrative body responsible for GHG inventory is the Ministry of Environmental Protection of the Republic of Kazakhstan; it coordinates and monitors this activity. By the request of the Ministry, The Kazakh Research and Development Institute of Ecology and Climate manages the GHG inventory in Kazakhstan since 2000.

- Energy Consumption per Capita

Energy consumption per capita is one of vital parameters that describe energy efficiency of the national economy; it is a relation between the quantity of energy consumed over a certain period (a year) and the population. The energy is calculated in oil equivalent and includes all types of consumed energy.

The Ministry of Industry and New Technologies of the Republic of Kazakhstan is responsible for the development and implementation of policy in the area of energy efficiency in Kazakhstan.

4. ENERGY STATISTICS ACTION PLAN 2012 - 2015

The Energy Statistics Action Plan for the Republic of Kazakhstan is presented in the following paragraphs as a sequence of integrated horizontal and vertical activities planned for the period 2012 – 2015. All proposed vertical activities are specified in such a manner that they reflect Kazakhstan's demands for timely and reliable energy statistics data. The activities that are suggested and planned to be supported by the ITS project, through the particular Technical assistances (ITS TA), are specially highlighted. A list and a short explanation of all applicable ITS Technical assistances can be found in Annex 2.

In addition to the vertical activities mentioned above, the main stakeholders in energy statistics will be invited to actively participate in other ITS project activities common for all the Partner Countries (PCs), such as workshops, conferences, study tours, networking and others (horizontal activities), that complement the ITS technical assistances.

It is important to mention that Kazakhstan and its responsible stakeholders are expected to ensure the availability of appropriate staff, to support their active participation in the implementation of this Action Plan, and thereby ensure the sustainability of the initiated processes.

The main goal of all these activities is to increase capacity building in the PCs and to establish a reliable and timely energy statistics system available to the growing number of energy statistics users.

Implementation plan and timelines presented in table 5-2, Chapter 5, provides a schedule of the activities to be accomplished until 2015.

The ITS expert team developed a set of indicators for monitoring implementation of ESAPs during the period 2012 – 2015. The indicators are listed in table in Annex 3 and will be

completed at the beginning of the implementation phase and at the end of each project year (2013, 2014). The ARKS and ITS expert team will complete the table jointly.

4.1. Key area 1: Legal and institutional framework strengthening

The legal framework for energy statistics in Kazakhstan defines in detail the responsibilities and tasks of the main state statistical stakeholders and bodies. What is missing in the organisational structure is a firmer institutional organisation, especially the coordination of the statistics-related activities with other governmental bodies, e.g. the responsible Ministries that submit part of the energy statistics to the Agency. This has a multipurpose importance: to avoid duplication of reports that the reporting units are obliged to submit, reduce the costs of data collection and others.

In order to increase the reliability of energy data the situations, as described above must be avoided and firmer institutional arrangement must be achieved.

- **Improvement of the institutional relationship and capacity building on the institutional organisation for energy statistics**

The ITS project foresees the implementation of two specific activities in Kazakhstan that will also be implemented in the other PCs:

- The first activity will support the **organisation of a national meeting** whose aim is to coordinate the distribution of tasks and capacities within the energy statistics system. This activity will support the establishment of coordination mechanisms within the energy statistics system in Kazakhstan, which will ascertain that the allocation of tasks and responsibilities between main stakeholders serves to avoid the duplication of work and is based on minimum costs and efficient use of resources. This activity also involves the facilitation of the development of a **Memorandum of Understanding (MOU)** for cooperation on energy statistics agreed between the Agency of the Republic of Kazakhstan on Statistics (ARKS) and other bodies involved in the energy statistics system.
- The second activity will include the conduction of a **meeting with decision makers, national authorities and energy data suppliers** on the importance of available, reliable, timely and transparent energy statistics. The national meeting will include an awareness campaign on the importance of energy statistics.

In addition to the activities mentioned above, the ARKS and other responsible statistical bodies have a possibility to additionally implement particular activities with the support of the ITS Technical assistance in order to improve the institutional relationship and increase the capacity building of institutional organisation for energy statistics in Kazakhstan (ITS TA-1.3., ITS TA-1.4):

- The activity ITS TA-1.3 will include a brief **revision of the institutional organisation** and the roles of the stakeholders involved in the energy data system. The activity will result in a **proposal for the improvement** of the institutional organisation

(coordination plan, activity plan, involvement of the new stakeholders in the system and others).

- The second ITS TA-1.4 will be implemented through organising a **common meeting with all the stakeholders** involved in energy statistics system (the ARKS, administrative units responsible for submission of particular energy data and other main reporting units) with an aim to educate them about their **roles and obligations in the energy statistics institutional organisation**. This should in turn result with the establishment of permanent communication and discussion about energy data, relationships between relevant stakeholders involved in the collection, compilation, security and dissemination of energy data.

4.2. Key area 2: Development of a reporting system based on international standards

During the bilateral meeting with the ARKS in the inception phase of the project, it was recorded that the ARKS wants to learn about experiences in energy statistics from other countries, especially from EU countries. The ARKS is aware that the quality of energy data influences the reliability of energy balance and energy intensities, which are the main starting points for energy strategy plans and strategies. Also, ARKS expresses its interest for capacity building of the statisticians in energy statistics area in central and local executive offices in Kazakhstan.

Kazakhstan's energy policy includes new targets related to the use of renewable energy sources – renewable energy must participate in energy balance with 5 percent by the year 2024, thus renewable energies will play an important role in the energy statistics and balances compilation in the future. The ITS expert team suggests to ARKS to support capacity building of the staff which work on data collection and compilation at national and regional level. The ITS project will invite ARKS to participate in the common regional activities, which will be organised to increase capacities and capabilities in the Partner Countries in the energy statistics domain. But, in order to solve the specificities in data collecting and processing of the energy system of Kazakhstan, the ITS expert team proposes the implementation of specific activities which will be implemented at national level.

- **Improvement of the methodologies for the collection, compilation, quality control and dissemination of energy statistics**

The ITS experts foresee the implementation of a **specific technical assistance** (ITS TA – 2.2) which would **aim at improving the methodology of collecting, compiling, controlling and disseminating data**. The task of this activity is to revise the existing concept of the energy statistics system and to propose and support the implementation of improved reports. Particularly the ITS expert team would revise the standard form (Form 1S-TEB), which is submitted to all respondents (producers, suppliers, distributors, and consumers) in order to collect data for a annual energy balance. ITS expert team will analyse whether such uniform form for can provide enough information of the required quality on energy supplied and consumed in Kazakhstan.

This ITS TA activity (ITS TA – 2.2.) will result in an improved methodological concept for data collection and in forms adjusted to different types of reporting units (production, transformation, transmission and transportation, supply, distribution, consumption). A particular emphasis will be put on developing the concept of collecting fuel wood and other data on renewable energy supply and consumption. Also, strong emphasis will be put on the improvement of the reporting concept from the industry sector.

- **Assistance during the organisation and implementation of the surveys on final energy consumption**

As noted during the common meeting in the inception phase of the project the ARKS intends to improve **data on final energy consumption**. The ITS experts suggest that collection of the final energy consumption data should be methodologically prepared for different types of consumers: households, services, agriculture, fishing and others. The main purpose of these surveys will be to increase the reliability of data on the final energy consumption, as well as to prepare the grounds for the development of a methodology for monitoring and verifying energy efficiency indicators.

Surveys on final energy consumption are costly and time-consuming, so the concept of their development should also include a decision on their frequency in the future (e.g. every five years). In addition, the possibility to include questions on energy consumption in other regular annual surveys in the meantime should also be analysed.

The ITS expert team has prepared a proposal for the ARKS to provide assistance in the preparation of the methodology, organisation and implementation of survey on energy consumption in the service sector. The estimated duration of the survey is 6 months, and the preparation of the survey can start in the first half of year 2013. The implementation of the survey in the service sector will be supported by ITS technical assistance, activity **ITS TA – 2.3**, which will also provide assistance during the development of the final energy consumption in service sector.

The survey in the service sector (public and private enterprises) is more complex than the survey in the other sectors and should therefore be prepared carefully. It should be based on firm grounds, in particular, on a comprehensive business register. It is assumed that the ARKS has certain information on business activities and active entrepreneurs at its disposal. The ITS expert team will define the sample size in service sector in the early phase of the implementation; at the moment this number is estimated to about 5500 enterprises. Before deciding about conducting survey in the service sector it will be needed to conduct detailed analysis of the possible overlapping with reporting from services sector.

It is recommended that surveys in other sectors (household, agriculture, construction, transport) should be postponed for the following year, 2014, and prepared on the basis of experiences in the service sector, as well as on experiences of other PCs implementing such activities. If ARKS has sufficient funds to conduct a survey in the household sector next year, than the ITS expert team will consider the possibility of providing the technical assistance for the conducting this kind of research.

- **Adoption of the existing surveys to the research on energy consumption**

A very interesting and rare observation in the Partner Countries is the utilisation of the existing surveys for the purpose of energy data collection. For example, the NSC in the Kyrgyz Republic utilises the regular annual Household budget survey and the Labour survey for the collection of energy data in the household sector. An **ITS TA activity** (ITS TA - 2.4.) is proposed for **analysing the possibility to add one question about energy consumption into the surveys, which ARKS regularly conduct in the household sector (Living Standard Measurement Survey, Household Budget Survey)**. The extension of this survey with only one question on energy consumption could significantly contribute to final energy consumption especially to the estimates of the renewable energy use. **Surveying the household sector is the only method, which can with high probability identify the actual energy consumption and the structure of energy used.**

During the first ITS Technical Assistance mission representatives from ARKS and ITS expert team will discuss in detail about possible options and prepare necessary activities related with organisation and implementation of the survey on energy consumption in household sector.

4.3. Key area 3: Energy balances compilation and submission of the joint annual energy questionnaires to the IEA

In the submitted questionnaire, the ARKS of the Republic of Kazakhstan has expressed the need for assistance in the energy balance compilation and in compilation of five annual energy questionnaires (IEA/EUROSTAT/UNECE).

In order to improve the quality of energy balances in Kazakhstan, the ITS project proposes to provide assistance through the implementation of the following activities:

- **Assistance in the energy balance compilation** (ITS TA – 3.1) based on the international and European standards,
- **Assistance in the adoption and application of a user-friendly, simple software tool** for energy balance compilation (ITS TA-3.2),
- **Assistance in the compilation of the 5 questionnaires (IEA/EUROSTAT/UNECE)** (ITS TA 3.3) and their submission to the IEA and UNSD

The ITS TA activities listed above have the aim to increase the capacity of Kazakhstan's statisticians in the area of the energy balance compilation and to provide assistance in the conversion of the actual energy data to the international standards.

The activity will include a three-day training/workshop with aim to:

- analyse in detail the applied ARKS's methodology for energy balances compilation and adoption of the common conclusion on the needed interventions in the existing methodology which will improve the quality of the energy balances,
- educate statisticians on the application of a simple model for energy balance compilation based on international standards which will remain in the ARKS after project closure,

- improve capacity building for the compilation 5 annual energy questionnaires (IEA/EUROSTAT/UNECE) and their delivery to IEA and UNSD.

The simple software tool will be used to test ARKS's methodology for the conversion of Kazakhstan's fuel and energy balance to international standards (IEA, UNSD). The ITS expert team will prepare a simple excel-based model, which will contain spreadsheets with templates for the compilation of energy balances and will provide a set of instructions about the compilation of particular segments of the energy balances. The model will be adaptable to changes regarding structure and sources of energy data.

The follow-up activities will include communication between the ITS expert team and the ARKS statisticians through email and conference calls providing further clarification and answers on questions from the ARKS.

A two-day working meeting is envisaged seven months after the training on the energy balance compilation with the aim to elaborate improved energy data gathered as a result of the activities implemented under Key area 2 and to include them in the new energy balance.

The implementation of the first two activities can be realised in the first half of 2013, and the result will be the pilot energy balance for the year 2011. If the availability and reliability of the data will not be satisfactory at the beginning of 2013, this activity will be postponed for the end of 2013, resulting in a compiled energy balance for 2012. The compilation of the five energy questionnaires for 2012 and their submission to the IEA and UNSD is expected by the end of 2013.

The main outcomes of this activity will be:

- increased capacity of the ARKS to compile the energy balances based on the international standards; extended energy balances with data on renewable energies (fuel wood)
- energy balance based on the international standards accessible and available for dissemination free of charge,
- joint annual energy questionnaires (IEA/EUROSTAT/UNECE) compiled and submitted to the IEA and UNSD.

4.4. Key area 4: Development of a reporting system for monthly energy statistics

The Agency of the Republic of Kazakhstan on Statistics has reported in the uniform questionnaire that it collects and publishes monthly data on energy statistics. It is suggested to conduct the initial analysis of the structure of the published energy data and their compliance with the IEA methodology. The development of the appropriate methodology for monthly energy statistics is not a complicated procedure, especially where a system for the collection of such data exists. It is suggested to the ARKS to follow and participate in the common (horizontal) activities (workshops, study tours) where this topic will be discussed and where it will be possible to learn from the examples of good practice. This activity could be implemented during the year 2014. The Action Plan estimates that additional technical assistance in this area will be needed, however this assistance cannot be provided by the ITS project.

4.5. Key area 5: Development of a reporting system on energy prices

In the submitted questionnaire, the AKRS reported that it observe energy prices on a monthly and sectoral basis.

It is necessary to revise the existing methodology and to compare it with methodologies and approaches applied in the IEA and EUROSTAT. As energy prices reporting is not the main priority of Kazakhstan's ESAP, the ITS expert team suggests a more comprehensive analysis of the pricing system in 2013 and then to agree on the adoption of a possible concept for data prices compilation and dissemination.

The ARKS or any other stakeholder responsible for this type of reporting will have the possibility to learn about energy prices reporting from the countries, which can serve as examples of good practice during the common workshops, meetings and from the various communication activities. It is suggested to the ARKS to start on establishment of the energy prices reporting system in the second half of 2014. The Action Plan estimates that additional technical assistance in this area will be needed, however this assistance cannot be provided by the ITS project.

In Kazakhstan, the ANMR (Agency of the Republic of Kazakhstan on Regulation of Natural Monopolies) regulates tariffs of monopolies. In the electricity sector, prices for electricity are determined by the market. According to the Law on Electricity, the electricity market consists of the wholesale and the retail markets. In the gas sector, tariffs for domestic gas supply are set by ANMR, under the Law on Natural Monopolies and the relevant normative legislative acts on natural monopolies. The new Law on Gas will confirm this responsibility.

4.6. Key area 6: Development of a reporting system on energy and energy efficiency indicators

The main energy indicators are related to data other than energy statistics, like national accounts (gross domestic product, value added, population, employed persons, etc.), trade and other statistics. The reliability and accuracy of these indicators depend on the quality and consistency of all input data.

However, the energy efficiency indicators, besides depending on energy consumption, depend on a number of other factors, and require the collection of additional data not available in main statistics. Energy efficiency indicators are mainly based on the data gathered from extensive surveys on energy consumption characteristics, the technology used, building characteristics and other factors in different consumption sectors (industry, transport, households, and services). Besides statistical analysis, the energy efficiency indicators require specific professional skills, like energy modelling and similar analytical skills related to the identification of the end use energy consumption.

In order to support one of the main goals of the *energy policies* and their aims to increase energy efficiency and renewable energy use the ITS expert team plans to provide support in the **development of methodologies for energy efficiency indicators by sectors.**

The ITS experts propose the application of ITS TA activities specific for this component – **ITS TA – 5.1, 5.2 and 5.3** (see annex 2 for further details regarding these activities). These activities shall follow the implementation of energy consumption surveys. The questionnaires in surveys will be designed so as to provide enough information for the development of a methodology for monitoring and verifying energy efficiency indicators.

The main results of the ITS technical support in Key area 6 will be:

- methodology for energy (efficiency) indicators monitoring and evaluation;
- adaption and application of a simple software model for energy indicators compilation;
- training on methodology and software use for the monitoring and verification of energy savings.

It is suggested to the ARKS to initially explore, during 2013, the availability of all the data needed for the calculation of the main energy indicators, and to develop indicators according to international methodologies.

In 2014, following the joint INOGATE and IEA Energy Statistics and Indicators Training in Tbilisi, Georgia (5 – 9 November 2012), the ITS project plans to implement additional regional activities related with this topic such as a study tour and regional workshops (RA 5).

The study tour will include, in addition to a visit to an advanced NSI in energy statistics and energy balances, a provision of a short training/workshop on energy and energy efficiency indicators (RA 5) based on the requests from Partner Countries.

Also, in 2013 and 2014, during the international conference: *Achievement of the Energy Statistics Action Plans* and workshop (RA 6) the ARKS will be able to observe the progress and improvement of the energy efficiency indicators in some Partner Countries, which are more advanced in such analyses.

The ITS project will disseminate project results on the official web page and during the implementation together with various other communication activities planned in the framework of the INOGATE project.

5. NEEDED RESOURCES FOR THE ACTION PLAN IMPLEMENTATION AND SUPPORT FROM THE ITS PROJECT

In order to achieve target goals described in the previous chapter, the Agency of the Republic of Kazakhstan on Statistics and the other main stakeholders in energy statistics should have certain resources at their disposal to implement the proposed activities.

In this Action Plan, resources are expressed in terms of:

- total needed expert **Technical assistance (TA)** for overall activities envisaged under this Action Plan (man/days),

- **ITS Technical assistance** at country level - **ITS TA** (man/days) and **ITS Regional assistance -ITS RA**, as support to the implementation of the selected activities;
- the engagement of the **local experts (ITS - LE)** for the implementation of the specific tasks within particular activities (man/days),
- needed availability of the existing **human capacities (HC)** within energy statistics system in the Partner Country (Kazakhstan), which will have to actively participate in the implementation of the Action Plan (man/days),
- estimation of the needs for **new additional staff (NS)** in Partner Country in the field of energy statistics (man/year) in case where such staff does exist or where existing capacities are not sufficient to implement targeted actions.

The estimation of all resources needed for the implementation of the Kazakhstan's Action Plan is presented in the Table 5-1.

Total **Technical assistance (TA)** is based on the estimates of the needed professional consultation services, expressed in man/day units. These services include on-site trainings, small workshops, personal education, etc. **Technical assistance from ITS project (ITS TA)** is assistance to the selected activities, which maximally contribute to the energy statistics progress.

Engagement of **local experts** within ITS project (**ITS LE**) is envisaged mostly in cases where implementation of the surveys on energy consumption is planned. The implementation of energy surveys strongly depends on the existence of certain prerequisites such as supporting Programs in NSIs, available human resources, and others. If the Partner Country can ensure budget for the conduction of the surveys, ITS project will provide technical assistance for the methodologies development and implementation of the surveys. The Action Plan foresees the conduction of survey in service sector in the Republic of Kazakhstan.

In order to ensure the implementation of the activities defined in the Action Plan, the PCs need to ensure the appropriate staff or **human capacities (HC)**, which will actively participate in the implementation of the activities. In cases where such staff does not exist, the Action Plan estimates the needs for the employment of **new staff (NS)**, which are expressed in man units. In the case of Kazakhstan, the ITS project estimates that the employment of new personnel is not needed.

The total technical assistance in Kazakhstan is estimated to 89 man/days, and the ITS project support can provide 61 man/days or 69 percent of the total assistance needed. Kazakhstan is requested to put at disposal, its experts in energy statistics in the total amount of 178 man/days. There is no need for additional employment in ARKS for the energy statistics activities.

The breakdown of the resources by key areas is presented in table 5-2, while a more detailed presentation of the implementation schedule of certain activities (horizontal and vertical activities), including breakdown of resources, is shown in table 5-3.

Table 5-1: Resources for the Kazakhstan's Energy Statistics Action Plan 2012 – 2015 implementation

Years	2012			2013			2014				
	total	3	4	1	2	3	4	1	2	3	4
Technical assistance (TA):											
Total technical assistance, man/days	89	0	0	0	30	13	22	9	0	9	6
ITS TA, man/day	61	0	0	0	23	8	16	9	0	0	5
ITS LE, man/day	18	0	0	0	8	5	5	0	0	0	0
Human capacities (HC) in Project country											
Total, man/day	178	0	0	0	61	26	55	9	0	9	18

Table 5-2: Specification of the resources for Kazakhstan's Energy Statistics Action Plan 2012 – 2015 implementation

Years	2012			2013			2014				
	total	3	4	1	2	3	4	1	2	3	4
TA 1. Development/improvement of Legal and Institutional Framework including:											
TA, man/day	4	0	0	0	4	0	0	0	0	0	0
ITS TA, man/day	4	0	0	0	4	0	0	0	0	0	0
ITS LE, man/day	0	0	0	0	0	0	0	0	0	0	0
HC, man/day	8	0	0	0	8	0	0	0	0	0	0
TA 2. Improvement of the data collection, compilation, management and analysing in line with EU and international standards											
TA, man/day	47	0	0	0	23	13	11	0	0	0	0
ITS TA, man/day	30	0	0	0	16	8	6	0	0	0	0
ITS LE, man/day	18	0	0	0	8	5	5	0	0	0	0
HC, man/day	141	0	0	0	69	39	33	0	0	0	0
Surveys on energy consumption, thous. €											
<i>Industry - 0 units</i>	0										
<i>Transport - 0 units</i>	0										
<i>Households - 0 units</i>	0										
<i>Service - 0 units</i>	0										
<i>Others (agriculture, construction...) - 0 units</i>	0										
TA 3. Energy and commodity balance compilation in line with EUROSTAT/IEA/UNECE methodologies											
TA, man/day	20	0	0	0	3	0	11	0	0	0	6
ITS TA, man/day	18	0	0	0	3	0	10	0	0	0	5
ITS LE, man/day	0	0	0	0	0	0	0	0	0	0	0
HC, man/day	60	0	0	0	9	0	33	0	0	0	18
TA 4. Development of the reporting system on energy prices											
TA, man/day	9	0	0	0	0	0	0	0	0	9	0
ITS TA, man/day	0	0	0	0	0	0	0	0	0	0	0
ITS LE, man/day	0	0	0	0	0	0	0	0	0	0	0
HC, man/day	9	0	0	0	0	0	0	0	0	9	0
TA 5. Development of the energy and energy efficiency indicators											
TA, man/day	9	0	0	0	0	0	0	9	0	0	0
ITS TA, man/day	9	0	0	0	0	0	0	9	0	0	0
LE, man/day	0	0	0	0	0	0	0	0	0	0	0
HC, man/day	9	0	0	0	0	0	0	9	0	0	0
TOTAL											
TA, man/day	89	0	0	0	30	13	22	9	0	9	6
ITS TA, man/day	61	0	0	0	23	8	16	9	0	0	5
LE, man/day	18	0	0	0	8	5	5	0	0	0	0
HC, man/day	178	0	0	0	61	26	55	9	0	9	18

Table 5-3: Energy Statistics Action Plan 2012 – 2015 for Kazakhstan: Technical assistance (TA) and Regional activities (RA)

TECHNICAL ASSISTANCE				2012		2013		2014					
	Main stakehold.	Needed TA, man/days	ITS support, (ITS TA)	3	4	1	2	3	4	1	2	3	4
TA 1. Development/improvement of Legal and Institutional Framework including:													
1.1 Proposals for the appropriate legal framework													
1.2 Energy statistics strategies and programs (short/long-term)													
1.3 Institutional relationship between main stakeholders	MOG, ARKS	3	yes										
1.4 Capacity building on institutional organisation	MOG, ARKS	1	yes										
1.5 Capacity building on the integration of the energy statistics and energy planning													
TA 2. Improvement of the data collection, compilation, management and analysing in line with EU and international standards													
2.1.Capacity building on EU and International Energy Statistics Standards													
Introduction of the EU standards into energy statistics system													
2.2. Development/improvement of the reporting system													
Energy supply data (production, imports, exports, international marine bunker, stock)	ARKS	2	yes										
Energy transformations (electricity and heat, petroleum products, coal derived fuels, LNG, CNG, ...)	ARKS	2	yes										
Final consumption (industry, transport, non-energy, other sectors: residential, services, agriculture,)	ARKS	2	yes										
Dissemination of the improved forms, data collection and elaboration from energy reporting units	ARKS	2	yes										
Monthly statistics (M-3), (M-1)													
2.3. Development/improvement of the surveys for the final energy consumption data collection:													
Industry													
Transport													
Households													
Service	ARKS	35	yes										
Others (agriculture, construction...)													
2.4. Adaptation of the existing surveys to the research on energy consumption	ARKS	4	yes										
2.5 Reconstruction of the data from energy surveys in the years after the reference year													

TA 3. Energy and commodity balance compilation in line with EUROSTAT/IEA methodologies

3.1. Compilation of the commodity balances (2011, 2012, 2013):

Electricity and heat	ARKS	3	yes		
Natural gas	ARKS	3	yes		
Oil	ARKS	3	yes		
Solid fossil fuels and manufactured gas	ARKS	3	yes		
Renewable and waste	ARKS	3	yes		

3.2. Application of the simple tool for the energy balance compilation:

Application and adoption of the user friendly tool for the energy balance compilation

Energy supply data compilation	ARKS	1	yes		
Energy transformation data compilation	ARKS	1	yes		
Balance on final energy consumption	ARKS	1	yes		

3.3. Dissemination to annual energy questionnaires to IEA:

Electricity and heat, Natural Gas, Oil, Solid fossil fuels and manufactured gas, Renewable and waste	ARKS	2			
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3.4. Monthly energy statistics reporting

Dissemination of monthly energy balances (M-3), (M-1)

TA 4. Development of the reporting system on energy prices

4.1. Development of the methodology for:

a) electricity and gas prices reporting for industrial customers and households (EUROSTAT)	ARKS, ANMR	3			
b) energy prices reporting (IEA)	ARKS, ANMR	3			

4.2. Dissemination of the reports on gas and electricity prices

	ARKS, ANMR	3			
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TA 5. Development of the energy and energy efficiency indicators

5.1 Review of the data available for energy indicators compilation, assessment of the needed data

	ARKS	3	yes		
5.2 Development of the methodology for energy indicators monitoring and verification	ARKS	3	yes		
5.3 Adaptation, training and application of the user friendly tool for the energy indicators calculation	ARKS	3	yes		

REGIONAL ACTIVITIES		2012		2013		2014					
Duration in days		3	4	1	2	3	4	1	2	3	4
RA 1: Development/improvement of the Legal and Institutional Framework											
1st workshop: Energy Statistics Network meeting: Development of ESAP and establishment of ESN, 25-26 September 2012	2										
International Conference on Raising Awareness on the Importance of Energy Statistics for National Policies, April 2013	2										
Support to national meeting on the importance of energy statistics for national policies	1										
Support to the national meeting on division of labour and data sharing among stakeholders	1										
RA 2: Improvement of the data collection, compilation, management and analysing in line with EU and international standards											
Study tour on energy statistics and balances with special emphasis on surveys on final energy consumption	5										
International conference on the quality of energy data	2										
RA 3. Energy and commodity balance compilation in line with EUROSTAT/IEA/UNECE methodologies											
Study tour on energy statistics and balances with special emphasis on the development of the 5 energy IEA/EUROSTAT questionnaires	5										
RA 4. Development of the reporting system on energy prices											
This activity will be combined with RA 5. activity at a later stage of the project.											
RA 5. Development of the reporting system on energy and energy efficiency indicators											
Study tour on energy statistics and balances with special emphasis on energy efficiency indicators	5										
Study tour on energy statistics and balances with special emphasis on energy indicators and planning for the energy strategies											
RA 6. Evaluation of the achieved results											
International conference on the achievements in the Energy Statistics Action Plans	2										
Workshop on the Achievement of Energy Statistics Action Plans & other activities	2										

ANNEX 1 – LIST OF THE MEETINGS DURING THE INCEPTION MISSION

Meeting with Center of Energy Research, Nazarbayev University, June 5, 2012, 11:30 AM

Address: 53, Kabanbay batyr Ave.
010000 Astana
Republic of Kazakhstan
Website: <http://cer.nu.edu.kz/portal/>

Participants:

- Ms. Aiyngul Ismagulova, Junior Researcher, Department of Energy, Environment and Climate, Tel.: +7 7172 706 457, E-mail: aismagulova@nu.edu.kz
- Mr. Yerbol Akhmetbekov, Junior Researcher, Department of Energy, Environment and Climate, Tel: +7 7172 706 457, E-mail: yerbol.akhmetbekov@nu.edu.kz
- Ms. Zhanel Karina, Junior Researcher, Department of Energy, Environment and Climate, Tel.: +7 7172 706 457, E-mail: zhkarina@nu.edu.kz
- Mr. GianCarlo Tosato, Project Head, ETSAP, Tel.: +39 335 537 7675, E-mail: gct@etsap.org
- ITS Team: Gloria Aguinaldo, Alenka Kinderman, Anna Petrus

Meeting with the EU Delegation, Astana, 05 June, 2012

Participants:

- Ms. Alia Baidebekova, Project Manager, EU Delegation, 62 Kosmonavtov Str, 010000, Astana, KZ. Tel: +7 7172 97 16 17 (direct). Email: alia.baidebkova@eeas.europa.eu
- Ms. Rasa Jautakaite-Tunaitiene, Economic Affairs Officer, EU Delegation, 62 Kosmonavtov Str, 010000, Astana, KZ. Tel: +7 7172 97 1045 (direct) Email: rasa.jautakaite-tunaitiene@eeas.europa.eu
- ITS team: Gloria Aguinaldo, Anna Petrus, Vladimir Ternitskiy, Viktor Petrenko, Nikos Tsakalidis, Alenka Kinderman Lončarević, Peter Larsen, Kevin McCann

Meeting with the EU Delegation - Astana, EU Member States Representatives Meeting, 05 June, 2012

Participants:

- Ms. Alia Baidebekova, Project Manager, EU Delegation, 62 Kosmonavtov Str, 010000, Astana, KZ. Tel: +7 7172 97 16 17 (direct). Email: alia.baidebkova@eeas.europa.eu
- Mushtaq Hussain, Head of Trade section, EU Delegation, 62 Kosmonavtov Str, 010000, Astana, KZ. Tel: +7 7172 97 10 40 (direct). Email: mushtaq.hussein@eeas.europa.eu
- Mr. Frantisek Trojacek, Counsellor, Commercial and economic Section, Embassy of the Czech republic, Sary-Arka 6 Str, Business Centre Arman, 13th Floor, Astana. Tel: +7 7172 660 478, email: commerce_astana@mzv.cz

- Mr. Wolfgang Brett, German Embassy, 62 Kosmonavtov Str, 010000, Astana, KZ. Tel: +7 7172 791 200 email; v@astana.diplo.de
- Ms. Rasa Jautakaite-Tunaitiene, Economic Affairs Officer, EU Delegation, 62 Kosmonavtov Str, 010000, Astana, KZ. Tel: +7 7172 97 1045 (direct) Email: rasa.jautakaite-tunaitiene@eeas.europa.eu
- ACCESS Project Team
- ITS Team: Peter Larsen, Kevin McCann

Meeting with KEGOC (Kazakhstan Electricity Grid Operating Company), 05 June, 2012

Participants:

- Mr. Askerbek Kuanyshbayev, Managing Director, 37 Beibitshilik St. Astana, KZ Tel: +7 7172 970 154 Email: kuanyshbayev@kegoc.kz
- Ms. Farida Sh. Zharmegambetova Senior Manager, 37 Beibitshilik St. Astana, KZ Tel: +7 7172 970 174 Email: zharmegambetova@kegoc.kz
- Mr. Marat Auyelbek, Chief Manager of the National Power Grid Development Department, (+7 701 588 84 09), auyelbek_m@kegoc.kz
- ITS Team: Anna Petrus, Nikos Tsakalidis, Viktor Petrenko, Kevin McCann

Meeting with the Statistics Agency of Kazakhstan, June 6, 2012, 15:00 PM

Address: 8 Orinbor St.
Dom Ministerstv, 4th entrance
Astana

Website: <http://www.eng.stat.kz>

Participants:

- Mrs. A. Epbayeva, Director of the Department for Statistics of Production and Environment, Tel: +7 7172 749 056, E-mail: aepbaeva@stat.kz
- Mrs. Zafa Yakupova, Director of the Department for Statistics of Services, Tel.: +7 7172 449 060, E-mail: zyakupova@stat.kz
- Ms. Ainur Adilova, Head of the Department of Statistics Service, Tel.: +7 7172 749 524, E-mail: aadilova@stat.kz
- Ms. S. Karteyeva, Leading Expert, Statistics Agency of Kazakhstan, Tel.: +7 7172 749 311, E-mail: s.kartayeva@stat.kz
- Mr. Zh. Abilkasimov, Expert, Statistics Agency of Kazakhstan, Tel.: +7 7172 749 311, E-mail: zh.abilkassimov@stat.kz
- ITS Team: Gloria Aguinaldo, Alenka Kinderman, Anna Petrus

Meeting with the Ministry of Oil and Gas (MOG) (2nd meeting), 06 June, 2012, 17:10

Participants:

- Mr. Almas Ikhsanov, Expert, Department of Strategy and International Cooperation
- ITS team: Gloria Aguinaldo, Alenka Kinderman Lončarević, Vladimir Ternitskiy

EUD Donor Co-ordination Meeting for Energy Sector, 06 June

Participants:

- Ms. Alia Baidebekova, Project Manager, EU Delegation, 62 Kosmonavtov Str, 010000, Astana, KZ. Tel: +7 7172 97 16 17 (direct). Email: alia.baidebkova@eeas.europa.eu
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- Ms. Rasa Jautakaite-Tunaitiene, Economic Affairs Officer, EU Delegation, 62 Kosmonavtov Str, 010000, Astana, KZ. Tel: +7 7172 97 1045 (direct) Email: rasa.jautakaite-tunaitiene@eeas.europa.eu
- Mr. Guanghui Li, Country Director, Asian Development Bank, 12 semal, Astana Tower Business Centre. Tel: +7 7172 32 50 53. Email: guanghuili@adb.org
- Laura Omarova, Senior Operations Assistant, Development Bank, 12 semal, Astana Tower Business Centre. Tel: +7 7172 32 50 53. Email: lomarova@adb.org
- Mr. Sergey Yelkin, Energy Projects Co-ordinator, USAID Park Palace Building, 41 Kazibek Bi Str. Tel. +7 71 72 250761. Email syelkin@usaid.gov
- Mr. Jonathan Cook, Second Secretary, Regional Energy Policy, British Embassy, Renco Building 6th Floor. Tel: + 7 7172 556 200. Email: Jonathank.cook@fco.gov.uk
- Anvar Nasridinov, Project Manager EBRD Almaty Tel: +7 727 258 1423. Email: NasritdA@ebrd.com

Meeting with the EU Delegation: Wrap-up Meeting

Participants:

- Ms. Aurelia Bouchez, EU Delegate EU Delegation, 62 Kosmonavtov Str, 010000, Astana, KZ. Tel: +7 7172 97 1040 (direct). Email: Aurelia.bouchez@eeas.europa.eu
- Ms. Alia Baidebekova, Project Manager, EU Delegation, 62 Kosmonavtov Str, 010000, Astana, KZ. Tel: +7 7172 97 16 17 (direct). Email: alia.baidebkova@eeas.europa.eu
- Ms. Rasa Jautakaite-Tunaitiene, Economic Affairs Officer, EU Delegation, 62 Kosmonavtov Str, 010000, Astana, KZ. Tel: +7 7172 97 1045 (direct) Email: rasa.jautakaite-tunaitiene@eeas.europa.eu
- ITS Team: Gloria Aguinaldo, Nikos Tsakalidis, Peter Larsen, Kevin McCann

ANNEX 2 – AREAS FOR TECHNICAL ASSISTANCES UNDER THE ITS PROJECT

5.1. List of the activities

Key area	Indicative Technical Assistance under the ITS
TA-1 Development/improvement of the Legal and Institutional Framework	<p>TA-1.1. Development of the appropriate legal framework for energy statistics (laws, sub laws, strategies, plans)</p> <p>TA -1.2. Development of long-term energy statistics strategies and programs for data collection and compilation</p> <p>TA-1.3. Improvement of institutional relationship on energy statistics</p> <p>TA-1.4. Capacity building on the institutional organisation for energy statistics</p> <p>TA-1.5. Capacity building on the integration of energy statistics and energy planning procedures</p>
TA-2 Improvement of the data collection, compilation, management and analysing in line with EU and international standards	<p>TA-2.1. Capacity building on the EU and International Energy Statistics Standards</p> <p>TA- 2-2. Improvement of the methodologies for the collection, compilation, control and dissemination of energy statistics</p> <p>TA - 2.3. Assistance/capacity building during the organisation and implementation of the surveys on final energy consumption, provision of a user-friendly tool for the management and compilation of energy data gathered from the surveys</p> <p>TA – 2.4 Adaptation of the existing (household) sector surveys to the research on energy consumption</p> <p>TA – 2.5. Reconstruction of data from the energy surveys in the years after the reference year</p> <p>TA – 2.6. Support to the Covenant of Mayor initiatives</p>
TA-3 Assistance in the compilation of energy and commodity balances	<p>TA – 3.1. Assistance in the completion of the national energy balance for (2011, 2012 or 2013) and harmonisation with EUROSTAT/IEA/UNECE methodologies and standards;</p> <p>TA – 3.2. Adaptation and training in the application of a user friendly software tool for energy balance compilation;</p> <p>TA – 3.3. Compilation of annual energy data in defined questionnaires and</p>

		submission to the EUROSTAT/IEA.
		TA – 3.4. Development of monthly energy data reports compliant with EUROSTAT/IEA standards (M-1, M-3)
TA-4	Development of a reporting system on energy prices	<p>TA – 4.1. Development of a methodology for gas prices reporting</p> <p>TA – 4.1. Development of a methodology for electricity prices reporting</p> <p>TA – 4.2. Reporting on gas and electricity prices</p>
TA--5	Development of a reporting system on energy (efficiency) indicators	<p>TA – 5.1. Review of data available for energy indicators compilation, assessment of the needed data</p> <p>TA – 5.2. Development of a methodology for energy (efficiency) indicators monitoring and verification</p> <p>TA – 5.3. Adaptation, training and application of a user friendly tool for calculating energy (efficiency) indicators</p>

5.2. Brief description of the indicative Technical assistances (TA) under the ITS project

TA- 1. Development/improvement of the Institutional and Legal Framework

TA -1.1. Proposals for the appropriate legal framework for energy statistics

This activity aims to identify gaps in the existing legal framework for the collection, compilation, maintenance, dissemination and confidentiality of energy data, and to propose the content of new laws.

TA -1.2. Assistance in the development of long-term energy statistics strategies and programs for a timely and reliable data collection and compilation

This activity includes proposals for the development of the following programs:

- collection and compilation of data from energy suppliers, energy industries, energy consumers (final energy consumption surveys);
- elaboration of the procedures for the collection of data from intermediate sources, analysis of the overlapping with other requests;
- development of a list of required activities and identification of the stakeholders involved in their implementation.

TA -1.3. Development of the institutional organisation

The establishment of an appropriate institutional organisation among relevant stakeholders involved in the collection, compilation, standardisation and dissemination of energy statistics is crucial for the “energy statistics system effectiveness” and will result in the following:

- a data collection system based on “minimum cost” and on the avoidance of the duplication of the stakeholders’ work,
- coordination mechanisms for monitoring the performance of the national energy statistics system,
- additional motivation of relevant stakeholders to actively participate in the system.

TA -1.4. Capacity building on the institutional organisation for energy statistics

This activity will be implemented by organising common meetings with relevant stakeholders in order to provide capacity building in the NSI and of other staff involved in the NSS:

- educating statisticians/experts in the NSIs, the responsible ministries, energy suppliers and industries, energy agencies/committees, energy planning and policy commissions about their roles and obligations in the institutional organisation,
- initiating common discussions and a dialogue about the national statistics legislation or relevant administrative regulation and institutional organisation, in order to establish a solid foundation for a good quality and timely energy statistics,
- increasing the awareness of the importance of timely and reliable energy data.

TA -1.5. Capacity building on the integration of energy statistics and energy planning procedures

The aim of this activity is to additionally educate experts and statisticians from the NSIs, responsible ministries, energy suppliers and industries, energy agencies/committees, energy planning and policy commissions about the importance of the integration of methodologies applied to short and long term energy planning and of an accurate, reliable and timely reporting of the official energy statistics and balances.

TA -2. Improvement of the energy data collection, compilation, maintenance and dissemination in line with EU and international standards

TA -2.1. Capacity building on the EU and International Energy Statistics Standards

This activity will provide trainings in the standards applied to energy measurement units and conversion equivalents, energy commodity flows relevant in energy statistics: production, external trade, international marine bunkers, stocks, fuel transformation and final consumption.

TA -2.2. Improvement of the methodologies for the collection, compilation, quality control and dissemination of energy statistics

The following list of activities comprises actions, which will be provided through on-site training and expert assistance for:

- detailed identification of energy flows in the production, supply, transformation and consumption sectors,
- development/improvement of forms for administrative energy data reporting (annual, quarterly, monthly),
- development/improvement of information collecting from statistical data sources (census, surveys),
- development of data compilation methods: data validation and editing, calculation of missing data, estimation of population characteristics,
- development of a database for the organisation and management of energy data,

- development of a dissemination policy (reference period and data dissemination timetable, dissemination formats, metadata and quality reports).

TA -2.3. Assistance during the organisation and implementation of the surveys on final energy consumption

The following list of activities comprises actions that can be provided through on-site training and direct expert assistance for the following:

- definition of the sample size and the selection of a sample, the design of the questionnaire, training and education of interviewers, development of a database for the organisation of data, analysis procedure, final energy balance compilation,
- adoption of a model for the validation, editing, calculation of missing data and estimation of the final energy consumption balance,
- target sectors: industry, households, services, transport, construction, agriculture,
- identification of actual consumers, e.g. in the household sector.

TA -2.4. Adaptation of the existing surveys in the household sector to the research on energy consumption

In cases where the NSI conducts a regular, periodical (annual) survey in households on living standards, consumption etc., and where surveys on energy consumption are not envisaged in the Action Plan, a proposal for adding specific questions to the questionnaires applied in these surveys will be developed, as well as a methodology of elaborating the data gathered and the results achieved.

TA -2.5. Reconstruction of data from energy surveys in the years after the reference year

In cases where the energy consumption surveys will be implemented, in the years after the reference year, a calibration of data on energy consumption from the surveys and of updated data collected from administrative and other sources will be performed through on-site training and assistance.

TA- 3. Energy balance compilation

TA -3.1. Assistance in the completion of the national energy balance, harmonisation with EUROSTAT/IEA/UNECE methodologies and standards

This includes on-site training and assistance in the development of the framework for the compilation and harmonisation of data on fuel and energy products during the reference period.

TA -3.2. Adaptation and training in the application of a user-friendly model (software tool) for the energy balance compilation

This includes the development of a user-friendly tool for energy balance compilation, as well as the training of the staff in the NSC and providing instructions on its use. The tool will work as an open source model, which enables the presentation of energy data in a table format (columns – energy products, rows – energy flows).

TA -3.3. Compilation of annual energy data in defined questionnaires and submission to the EUROSTAT/IEA

This activity envisages capacity building and assistance in the completion of the five joint Eurostat/IEA/UNECE annual energy questionnaires for the years 2012/2013.

TA -3.4. Development of monthly energy data reports compliant with EUROSTAT/IEA standards (M-1, M-3)

This activity will result in the development of appropriate methodologies for the reporting of monthly energy data, in line with the Regulation 1099/2008 on energy statistics, and of their reporting to the IEA.

TA – 4. Development of a reporting system on energy prices

TA -4.1. Development of a methodology for gas prices reporting

This includes the development of appropriate methodologies for the collection and compilation of gas energy prices, according to the Directive 2008/92/EC on the transparency of gas and electricity prices charged to households and industrial end-users.

TA -4.2. Development of a methodology for electricity prices reporting

This includes the development of appropriate methodologies for the collection and compilation of electricity prices, according to the Directive 2008/92/EC on the transparency of gas and electricity prices charged to households and industrial end-users.

TA – 5. Energy (efficiency) indicators compilation and monitoring

TA -5.1. Review of data available for energy indicators compilation

This activity intends to review all available data in the NSI, energy agencies and other institutions, in order to evaluate the possibility for the development of energy indicators. This will include

possibilities for the compilation of energy efficiency indicators, basic indicators on the security of supply, environmental issues etc.

TA -5.2. Provision of methodology for energy (efficiency) indicators monitoring

On the basis of available data and of a plan for gathering new data, a clear and transparent methodology for monitoring and verifying energy savings and improving energy efficiency will be developed.

TA -5.3. Development of a user-friendly tool for calculating energy (efficiency) indicators

The PCs will be provided with an easy-to-use and cost-effective tool for calculating energy (efficiency) indicators.

TA -5.4. Training in the use of the methodology and software for the energy (efficiency) indicators compilation

This activity will result in providing the training to the representatives of the institutions who are competent for the monitoring and the verification of energy savings.

ANNEX 3 – INDICATORS FOR MONITORING THE ESAP IMPLEMENTATION AND SUCCESS

ACTIVITY	status 10/2012	status 09/2013
Development / improvement of Legal and Institutional framework		
Number of needed new or improved legal documents (primary and secondary) related to energy statistics	0	
Available methodology for the energy statistics and energy balances compilation harmonised with IEA/EUROSTAT/UNECE standards (yes/no)	yes	
Number of needed short/long-term development plans for energy statistics	1	
Number of experts and statisticians employed in energy statistics in the NSS and the NSI (central and regional offices)	19	
Number of experts and statisticians educated during the workshops/seminars organised by the IEA/EUROSTAT/UNECE or other relevant institutions during the last five years	4	
Number of common meetings among the key energy statistics stakeholders (data collectors and providers) held during the last five years in order to discuss energy statistics issues/energy efficiency issues.	no	
Improvement of the data collection, compilation, management and analyses in line with EU and international standards		
Applied International standards on economic activities and International standards on products and services in energy statistics (yes/no)	yes	
Number of forms officially applied in the collection of energy data/number of forms to be improved/number of new forms needed	1	
Developed and implemented methodology of the surveys on energy consumption during last 5 years in (yes/no):		
- household sector	no	
- industry sectors	no	
- services	no	
- agriculture/construction	no	
Assistance in energy and commodity balance compilation		
Compilation of energy and commodity balances harmonised with EUROSTAT/IEA/UNECE standards	1	
Needed application of a simple software tool for energy balance compilation (yes/no)	no	
Submission of the energy questionnaires in defined formats to the IEA (0-5)	0	
Number of improved energy questionnaires submitted to the IEA	0	
Short-term (monthly) energy statistics compiled in line with the EC Regulation 1099/08	no	
Development of a reporting system for energy prices		
Reporting on electricity and gas prices (yes/no)	yes	
Development of energy (efficiency) indicators		
Available special methodology and a simple software tool for the compilation of the disaggregated energy efficiency indicators	no	
Number of energy efficiency indicators defined in the current methodologies/number of energy efficiency indicators needed	no	

ANNEX 4 – CONTACT DETAILS

Institution: The Agency of the Republic of Kazakhstan on Statistics
Address: 8 Orynbor, The House of Ministries

Name and Surname: Zifa Rafikovna Yakupovna
Department: Department of Service Statistics
Position: Director
Date: 03/04/2013

Institution: The Agency of the Republic of Kazakhstan on Statistics
Address: 8 Orynbor, The House of Ministries

Name and Surname: Aynur Gadylbekovna Adilova
Department: Department of Service Statistics
Position: Head of Divison
Date: 03/04/2013

ANNEX 5 – PROPOSED MANNER OF ADOPTION OF ESAP

Please choose any of the following:

- ü **Memorandum of understanding (MoU)** - a formal alternative to a gentlemen's agreement between the National Statistical Institute (NSI), Ministry responsible for policy making in the energy sector and the INOGATE Technical Secretariat on the implementation of the Energy Statistics Action Plan.

- ü Document of approval to be signed by responsible authorities in the NSI and Ministry will be enclosed with the final ESAP.

- ü Other manner of adoption, please suggest _____.