

**\*\*FINAL REPORT\*\***

# **NATIONAL ENERGY STATISTICS ACTION PLAN FOR GEORGIA**

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**“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 with the decision making process, reduces administrative workload when collecting and supplying data, reduces efforts of organisations in explaining differences between different datasets, helps the 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 in monitoring 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 technical 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 goal of the ITS project and Component D is to assist the Partner Countries (PCs) in developing their own institutional frameworks for energy statistics in order to harmonise them with international standards, and to improve the methodologies applied in 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 (ESAPs) 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 the 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 synchronized 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 has ended.

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 the 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 way so that maximum results can be achieved.

The methodology comprises the following steps and tasks:

- assessing of the institutional framework (legal regulation and institutional organisation) for energy statistics;
- reviewing reporting systems and the energy data collected from the sources that were made available by National Statistics Institutes (NSI) and other responsible institutions in the PCs, as well as from other relevant available sources, such as the publications of the IEA and from official energy statistics sources; and checking and verifying findings from other sources (including other departments of NSIs, ministries, agencies and/or other entities involved in monitoring and forecasting energy data);
- evaluating uniform surveys prepared and submitted by the ITS experts to each PC, identifying gaps in data collection and in the applied procedures and methodologies compared to IEA requirements, developing benchmarks for specific segments of the energy statistics system and identifying specific groups and levels of development;
- proposing concepts and methodologies for the establishment of 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;
- creating Energy Statistics Action Plans proposals for each PC, referring to the period for the following 2,5 years of duration of ITS project and based on a uniform list of specific tasks and applicable measures that are required to implement in order to overcome the identified gaps in all the PCs – both in countries in which the process had begun and in those which are lagging behind the process;
- estimating the technical, financial and human resources needed to overcome the gaps and missing statistics and setting priorities for further actions and activities supported by the ITS project.

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

- Strengthening of the legal and institutional framework,
- 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/quarterly 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 Georgian representatives which aims to define the steps in the implementation of the needed actions and to determine actions with high priority. Such approach will provide the maximum and the most efficient contribution to the progress towards harmonization of the Georgian statistics with the international standards.

The ITS expert team had developed the Energy Statistics Action Plan proposals for Georgia, which was sent to the relevant institution dealing with energy statistics (National Statistics Office of Georgia) in order to receive feedback and opinions on the proposed activities, as well as suggestions for further ESAP improvements. Suggested comments from Georgia were additionally discussed and integrated into the final Energy Statistics Action Plan.

### 3. ENERGY STATISTICS COUNTRY PROFILE

#### 3.1. Legal and institutional framework

Since February 2010, the National Statistics Office of Georgia (GEOSTAT) has been acting as a legal entity under public law (*Law on Official Statistics of Georgia*, 11<sup>th</sup> December 2009), established to produce statistics and disseminate statistical information according to the Georgian legislation. The goal of the GEOSTAT is to produce official statistics on the social, demographic, economic and environmental situation of the county, based on internationally recognised principles and standards.

According to historical chronicles, the collection of statistical data began in Georgia a long time ago, and the first document dates from the 12<sup>th</sup> century. Since then, statistical activities have been carried out under different statistical system organisations. Until 1990, statistical activities were based on Soviet standards and methodologies. According to the *Law on Georgia (Official gazette: 27 February 1991)*, in the period 1991 – 1995, statistical activities were carried out by the Social and Economic Information Committee, and *the Law on Statistics of the Republic of Georgia* was the legal basis for statistical work. The transition to a market economy began in 1995 and the state statistics obtained the priority position in the state administration.

In the period between 1997 and 2004, statistical activities were carried out by the State Department for Statistics of Georgia. In 2004, the State Department for Statistics was merged with the Ministry of Economic Development of Georgia, and it carried out statistical activities as a subordinate body of the Ministry of Economic Development from then until February 2010. The *Law on Statistics*, adopted in 1997, was applied from 1998 until December 2009.

Today, GEOSTAT's competences are the following:

- developing a unified policy for statistical activities and ensuring a coordinated cooperation with territorial units and other bodies involved in the statistic system organisation;
- developing and implementing programs for statistical activities, including: conducting statistical surveys, processing administrative data solely for the purpose of statistical analyses, processing data on the observation units, determining the statistical data publication schedule, developing statistical standards and methodologies in line with international methodologies, ensuring the confidentiality of statistical data;
- conducting the population census;
- producing the annual progress report;
- establishing territorial units and their scope of work, as well as other activities defined in the Law.

Based on a relevant agreement, the GEOSTAT can be authorised to produce statistics not envisaged by the statistical activity program.

Specific chapter of the *Law on official statistics* defines that the GEOSTAT, in order to carry out its functions, is authorised to collect statistical and other information (including those confidential) from administrative bodies and other legal and natural persons. Also, upon request, the administrative bodies are obliged to provide GEOSTAT all information on legal and natural persons. The Law does not define obligations for legal and natural persons to report to GEOSTAT requested information.

Dissemination of statistics data and publications in electronic format is free of charge; however, the GEOSTAT charges dissemination of publications in hard copy format, excluding dissemination to administrative bodies.

The organisational structure of the GEOSTAT includes nine divisions in the central office and eight territorial units.

The Business Statistics Division is responsible for developing, updating and coordinating the system of registers for legal and private entities. The Business Statistics Division is responsible for planning and organising statistical surveys and for collecting, processing, compiling, analysing, disseminating and maintaining data on various economic activities, including energy statistics. There is no special legal regulation on energy statistics and energy balances in Georgia. Likewise, the GEOSTAT's *Statistical Working Programme for 2012* does not include any activities related to energy statistics.

According to the new *National Strategy for the Development of Statistics in Georgia 2011–2014*, the GEOSTAT brings new incentives to energy statistics. The Business Statistics Division has set energy statistics and balances as one of its main objectives in this period. More complete energy statistics and energy balances aligned with international standards should be accomplished by the end of 2013. Although the energy statistics in Georgia is at the beginning of its development process, there is a strong initiative in the GEOSTAT to adopt methodologies compatible with the EU Regulation No. 1099/2008 and to comply with IEA/EUROSTAT requirements.

The monitoring of the energy statistics data on electricity and gas is regulated by the Ministry of Energy of Georgia, and supported both by the *Law on Electricity and Natural Gas* and the *Law on Electricity Market Rules*.

### **3.2. Capacities and capabilities in the energy statistics system**

In the GEOSTAT Business Statistics Division, there are five persons responsible for collecting, processing, analysing and disseminating energy statistics data. They are not employed full time on energy statistics, but also work on industry and construction statistics. It was not possible to determine the exact amount of time the experts spend solely on energy statistics.

Due to the observer status of Georgia in the Energy Community, the GEOSTAT was invited to participate in several trainings/workshops on energy statistics. Most of these trainings took place in the IEA in Paris and in the Energy Community in Vienna, during 2010 and 2011. In addition, as a member state of the International Atomic Energy Agency (IAEA), the joint teams from Georgia, including the GEOSTAT, have participated in different programs aimed at raising capacity building in modelling energy data and planning energy systems.

Energy databases in the GEOSTAT are managed by a Microsoft SQL server.

As defined by the *Law on the Statistics*, the sources of funding of the GEOSTAT activities are the following: state budget, fees charged for the services, provided grants and other sources.

### **3.3. Energy profile of Georgia**

#### **PRODUCTION**

According to the energy balance for 2009 (IEA source<sup>1</sup>) total primary energy

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<sup>1</sup> [http://www.iea.org/stats/balancetable.asp?COUNTRY\\_CODE=GE](http://www.iea.org/stats/balancetable.asp?COUNTRY_CODE=GE)

production amounts 1258 ktoe, 51 percent of total production belongs to hydropower, 30 percent to biofuels, 11 percent to coal and peat, while crude oil production amounts 4 percent.

#### **IMPORT AND EXPORT**

In 2009, Georgia imports 2092 ktoe of primary energy, gas and oil products are the main imported energy forms. Georgia does not export significant quantities of primary energy. Total primary energy supply (TPES) amounts 3189 ktoe.

#### **ENERGY TRANSFORMATION**

In 2009, electricity production in Thermal Power Plants (TPPs) and Hydro Power Plants (HPPs) amounts 730 ktoe. The fuels used in TPPs are natural gas and fuel oil.

#### **ENERGY CONSUMPTION**

Total final energy consumption (TFEC) amounts 2517 ktoe, the largest share in TFEC has oil products consumption (32 percent). It is followed by natural gas and electricity consumption with shares of 21 and 20 percent respectively, biofuels consumption is represented with 15 percent while other energy forms have shares less than 5 percent.

Consumption structure is as follows: industry sector uses 14 percent, transport sector 32 percent, while other sectors consume 52 percent of TPES. Share of the residential sector in other sectors category amounts 74 percent.

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

The GEOSTAT collects a limited set of energy data; it does not conduct any special surveys about energy statistics. In terms of regular compilation of statistical data, the GEOSTAT only conducts business and household surveys (LSMS – Living Standards Measurement Survey) on a quarterly and annual basis.

Among other things, the business surveys include the collection of specific data on expenditures for energy (electricity and heat, natural gas, oil and oil products, solid fossil fuels and manufactured gas, renewable energy and waste) in the business sector, expressed in monetary units. The business surveys also include collecting and compiling data on energy production by different energy forms: oil, natural gas, coal, as well as data on energy transformations like electricity produced in HPP and TPP. Enterprises report the data on expenditures in electronic format and hard copy format. The GEOSTAT applies several forms to collect data on business statistics. The survey in the business sector is conducted annually and quarterly. Annual survey covers a sample of 12500 enterprises, while quarterly it covers 9500 enterprises. The response rate in enterprises survey amounts 78 percent. This also includes the reports from private enterprises. GEOSTAT collects data from the enterprises sector using web-based applications (online survey), by mail, by fax, by Computer Assisted Telephone Interviews (CATI) and by on-site interviews (hard copy format).



Quarterly questionnaire applied in household surveys (Form Shinda 04) includes, among other questions, a query about household expenditures for energy: electricity, natural gas, liquid gas, kerosene, diesel, fuel oil, coal and wood, but only in monetary units. The sample size for surveying household sector is about 3400. In the household sector, GEOSTAT collects data via on-site interviews (hard copy format).

GEOSTAT has and uses its own network of interviewers.

The GEOSTAT collects data on the export and import of different energy forms from administrative sources (Custom Office), from the Georgian Electric System, and from the International Gas Transportation Company.

The GEOSTAT does not collect data on stock changes, marine and aviation bunkers.

The GEOSTAT does not collect data on transformation plants input and output, except for electricity power plants.

The GEOSTAT does not collect data on losses and energy distribution.

The GEOSTAT does not collect data on energy consumption in the agricultural and fishing sector.

In general, except for data on electricity and natural gas, there are no data on petroleum products, renewable, coal and other energy forms.

Till 2002, collection, processing and dissemination of energy data had been the responsibility of the State Department for Statistics of Georgia. After which, no governmental institution has been responsible for this task. Energy data are available from different open sources such as the MENR, websites of the electricity industry, other regulatory bodies, etc.

At the moment GEOSTAT applies NACE rev. 1.1 standards as a classification of economic activities and CPA standards for classification of products. However, GEOSTAT is working on the establishment of NACE rev. 2 standards.

### **3.5. Energy balances compilation and their submission to the IEA**

Currently, the GEOSTAT does not compile energy balances. The latest official complete energy balance was compiled in 2002, in the framework of the TACIS project. At the time, the institution responsible for the energy statistics was the State Department for Statistics of Georgia.

The energy balance for 2001 is based on the surveys on energy consumption conducted in the sector of enterprises and the household sector. The implementation body was the Division of Industry, Energy and Water Supply. Although these surveys provided valuable information at that time, they did not initiate further reforms of energy statistics, due to the lack of additional funds necessary for expert advisors, and of additional necessary improvements in capacity building. The main achievement of the last energy balance for 2001 was the recognition that more detailed approaches should be taken in collecting energy data and compiling energy balances. The procedure in 2002 did not include the

collection of energy data from public administration and other institutions funded by the state budget, services and other sectors. Furthermore, huge discrepancies have occurred after comparing the total final energy consumption and the total energy production and import.

Today, the Ministry of Energy and Natural Resources (MENR) is responsible for electricity and gas balances and it has available time series of energy data for the period between 1995 and 2011. The MENR collects only data on electricity and natural gas supply, while the final energy consumption data are not available in the MENR energy balances. The Ministry of Energy and Natural Resources prepares the monthly and annual balance of electricity and natural gas according to the Georgian Law on Electricity and Natural Gas. The MENR considers that the main challenge for energy statistics is gathering data on energy consumption in different sectors.

In recent years, the Energy Efficiency Centre from Georgia (EEC) has been trying to work on the improvement of Georgian energy balance. It has succeeded in compiling balances for 2008, 2009 and 2010 based on all open sources of data, and provided estimates when it was necessary. The EEC closely cooperates with the IEA and submits energy questionnaires to the IEA. These balances are not officially approved by the MENR.

### **3.6. Reporting on monthly / quarterly energy statistics**

The GEOSTAT neither elaborates nor produces any energy efficiency indicators.

### **3.7. Reporting on energy prices**

GEOSTAT neither elaborates nor produces statistics on energy prices.

### **3.8. Energy and energy indicators reporting**

GEOSTAT neither elaborates nor produces energy efficiency indicators.

## **4. ENERGY STATISTICS ACTION PLAN 2012 - 2015**

The Energy Statistics Action Plan 2012 – 2015 for Georgia is based on the document that was developed in 2010, within the framework of the project: *Energy statistics in Energy Community 2010 - 2012*, commissioned by the Energy Community Secretariat in Vienna. The new plan is expanded with several new findings and with proposals for Georgia to implement certain activities with the support of the ITS project, which can significantly contribute to the improvement of energy statistics and to its alignment with international standards.

In the following paragraphs, the Energy Statistics Action Plan for Georgia is presented as a sequence of integrated horizontal and vertical activities planned for the period 2012 – 2015.

All proposed activities are specified in such a manner that they reflect Georgia's demands for timely and reliable energy statistics data. The activities that are suggested and planned to be supported by the ITS project particular Technical assistances (ITS TA) are highlighted. A list and a short explanation of all applicable ITS Technical assistances can be found in Annex 2.

During the overall project implementation, 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 to all the Program Countries (PCs), such as workshops, conferences, study tours, networking and national meetings (horizontal activities), that complement the vertical ITS technical assistances.

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

The main goals of all these activities envisaged in the ESAP are increasing the capacity building in Georgia and establishing a reliable and timely energy statistics system, available to a growing number of energy statistics users.

The implementation plan with timelines is presented in table 5-2, Chapter 5, and it provides the schedule of the activities to be accomplished until 2015.

The ITS expert team has developed a set of indicators for monitoring the implementation of the ESAPs during the period 2012 – 2014. The indicators are listed in the table in Annex 3, and will be filled in at the beginning of the implementation phase and at the end of every project year (2013, 2014). The GEOSTAT and the ITS expert team will fill in the table jointly.

#### **4.1. Key area 1: Legal and institutional framework strengthening**

On-site missions confirmed that Georgia is faced with a very weak institutional organisation for energy statistics. There are certain efforts, but they are not properly coordinated. Several activities related to energy statistics are implemented every year but not in an organised way.

The attitudes of relevant energy stakeholders in Georgia are quite similar. They consider GEOSTAT as the institution that should take the leading role in the energy statistics system and work more intensively on collecting and compiling energy data. The MENR has expressed a particular concern about the lack of energy data in Georgia, which are important and crucial for policy and decision making processes.

The following activities aimed at strengthening the legal and institutional framework are proposed for Georgia:

- **Development of the appropriate legal framework for energy statistics**

It is recommended that GEOSTAT finds an option to amend the existing law and to set forth that respondents are obliged to provide primary statistical data to the state statistical bodies

as prescribed and defined in the statistical reporting documentation, and that this data cannot be altered without the permission of the state statistical bodies. The law should also specify who respondents are.

- **Development of a program for data collection and compilation**

The aim of this activity is to create a proposal, which includes specific activities related with development of energy statistics in GEOSTAT in accordance with GEOSTAT's *Statistical Working Programmes*.

The proposal will be based on the detailed analysis of energy flows and of stakeholders involved in the energy system. The proposal will include the lists of the **needed data, methodologies and procedures** to be adopted by GEOSTAT in the following *Statistical Working Programmes*. Proposal will be finalised after the discussion with main stakeholders, which is planned during the capacity building on the institutional relations (**Activity TA-1.4**).

The implementation of this activity can be supported by the **ITS Technical Assistance ITS TA - 1.2**.

- **Establishment of the institutional organisation**

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

The first activity will support organisation of a national meeting, which aims 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 Georgia to avoid duplication of tasks and responsibilities among main stakeholders and to ensure that work 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 GEOSTAT and other bodies involved in the energy statistics system.

The second activity will include support to a national meeting, which aims to raise awareness among decision makers, relevant national authorities, energy data suppliers and users on the importance of available, reliable, timely and transparent energy statistics.

The duration and time plan for the regional activities listed above is presented in Table 5.3.a – Regional activities (RA1– Development/improvement of the Legal and Institutional Framework).

In addition to the activities mentioned above Georgia needs the development of a much firmer institutional organisation, consisting of relevant stakeholders involved in the collection, compilation, standardization and dissemination of energy statistics, which will contribute both to the effectiveness of the statistics system and to the avoidance of duplication and overlapping of stakeholders' work. According to the assessment of Georgian energy statistics systems, there are several institutions working on energy statistics, so it is obvious that there is some overlapping of similar activities. For example, the Ministry of Energy and Natural Resources (MENR) and the GEOSTAT do not submit energy statistics to

any international statistics body, although the MENR produces partial electricity and gas balances. The Energy Efficiency Centre (EEC), which acts as a NGO, on a voluntary basis, collects, compiles and submits energy questionnaires to the IEA. A proper division of labour can significantly contribute to developing timely, reliable and quality energy statistics.

Effective institutional arrangements are usually characterized by the designation of only one agency responsible for disseminating energy statistics, so that the GEOSTAT, as the officially appointed institution for collecting, compiling and disseminating statistics, should take the leading position in the governance of the national statistics system regarding energy statistics. A proper organisation must be based on a clear definition of the rights and responsibilities of all stakeholders involved in data collection and compilation. The establishment of formalised working arrangements among the involved stakeholders will contribute to a clear, efficient and sustainable governance of the national system of energy statistics.

The ITS project can provide technical assistance (**ITS TA-1.3.**) in establishing a concept of a proper institutional framework for energy statistics. This assistance will be based on the detailed analysis of the major stakeholders and their possible contribution and involvement in energy statistics. The result of this activity will be a proposal (concept paper) for the GEOSTAT and responsible Ministry, which will serve as a guide in the organisation of the institutional framework among major stakeholders in the energy statistics system.

- **Capacity building on the institutional organisation for energy statistics**

During the on-site mission to Georgia, it has been noticed that there was a certain degree of awareness among policy and decision makers on the urgent need to increase the capability of relevant stakeholders involved in the energy statistics system. It is recommended to Georgia to create a working group for energy statistics, which will permanently meet and discuss legislation, administrative regulation and institutional organisation, as well as prepare future initiatives and activities. The group must review and understand changes in the energy sector and the impacts of adopted decisions and national strategies upon the energy sector; recognise priorities in energy statistics; and actively participate in the creation of statistical strategies. For example, a new refinery, which will be in operation after 2014, is under construction in Porti. Therefore, statisticians should be prepared for the inclusion of this type of technology into energy data reporting.

Additionally, the GEOSTAT has expressed the intention to form an analytical department in the near future, which will provide support to statisticians in the creation of more demanding analyses, like energy balances. The ITS expert team considers such an initiative a very helpful, efficient, professional and important support to the Business Statistics Division.

Capacity building activities regarding institutional organisation are planned to be supported by the ITS project technical assistance (**ITS TA-1.4.**) The capacity building will also include 2 days meeting/training on the topics which are listed in the Annex 2 – Description of the indicative Technical assistances (TA) under the ITS project.

#### 4.2. Key area 2: Development of a reporting system based on international standards (EUROSTAT/IEA)

Establishing a reporting system on energy data in the GEOSTAT is the most important among the planned activities. As the energy sector evolves constantly, it cannot be expected that the energy statistic system will be set at once. The reporting system in Georgia will need to pass through several interrelated stages of development, and therefore every step must be planned and organised carefully.

- **Capacity building on the EU and International Energy Statistics Standards**

The statistics system in GEOSTAT neither collects nor compiles any data on coal, oil and petroleum products, nor on renewable energy sources, so that before any actions related to these statistics are taken, statisticians must be educated and trained in energy measurement units, conversion equivalents, energy flows etc. For example, Georgian statisticians can use various available literatures, such as the publication *Energy Statistics Manual (prepared by the International Energy Agency (IEA) in cooperation with Statistical Office of the European Communities (Eurostat)*, which certainly can significantly contribute to their better understanding of these issues in the future.

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

In their efforts to establish a reporting system, the GEOSTAT should be supported in the elaboration of appropriate methodologies that are at the same time aligned with international standards. Besides these methodologies, the GEOSTAT needs to create adequate reporting forms for reporting units: energy supply industries (including importers) and other energy producing industries and energy consumers.

In a very early phase, it will be necessary to assess and evaluate all available administrative and other official data that are available to the GEOSTAT and that can be used for energy statistics, like the data on electricity and gas that are compiled by the MENR. Specifically, data used for compilation of the energy balance for Georgia in EEC will be analysed.

This is followed by intensive work, which should be directed towards organising reporting procedures, preparing adequate reporting forms and their submitting to reporting units, collecting and verifying the collected data, as well as towards elaborating models for data dissemination. Particular attention should be paid to energy data provided by energy supply companies, and especially to data on oil and petroleum products, as this is a completely new segment in energy statistics. The data on petroleum products from Custom Duty have an important role in Georgian energy balances.

In addition, the GEOSTAT should pay lot of the attention to the collection of data on renewable energy sources because of their significant share in the TPES and TFC, and their important role in the future. Namely, the new Governmental energy programs foresee a more intensive use of renewable energies and investments in new technologies. Besides biomass (fuel wood), certain potentials can be found in the wind, solar and geothermal energy sources.

The procedure described above is planned to be implemented during 2013 and it will be repeated, under expert supervision of the ITS expert team, during the following year.

The ITS project intends to provide assistance (**ITS TA-2.2**) in the development of proper methodologies for collection, compilation and dissemination of energy data, which are necessary for the energy balance compilation. The list and explanation of the potential actions in the framework of the ITS TA-2-2 are presented in Annex 2.

- **Implementation of surveys on final energy consumption in industry**

In order to have a complete insight on energy data flows, the ITS expert team recommends the implementation of surveys on final energy consumption.

Conducting surveys is a time and money consuming activity which requires specific expertise, so that it is not realistic to expect that Georgia will be able to implement alone all needed surveys during the ESAP's planned period.

Therefore, since certain prerequisites are met (available human resources, established business register, experience in annual surveys in the industry sector), the ITS expert team proposes to the GEOSTAT to organise and implement first the survey on annual energy consumption in the industry sector, which in the case of Georgia very essential. This activity should also be completed during 2013. Additional prerequisite for the implementation of this survey is the readiness of the GEOSTAT to continue surveying (reporting) in the industry sector in the following years. The result of the 2013 survey will be the final energy consumption in the industry sector, presented by different energy forms and by different specific subsectors of the industry sector (as prescribed by the IEA and EUROSTAT methodology). The ITS expert team will provide technical assistance during the whole surveying process in industry sector in 2013. The implementation of the survey on energy consumption in the industry sector is planned to be supported by the ITS project (**ITS TA-2.3**).

Related to the conduction of the survey in the industry sector, the ITS expert team will provide technical assistance for the following:

- Defining of survey (reporting) methodology and questionnaire;
- Designing and developing the IT applications for the survey (reporting);
- Carrying out of a survey (reporting);
- Processing of collected data;
- Analysing and verifying of survey (reporting) results;
- Establishing and setting up of an energy statistics database;
- Consolidating of energy data from available sources;
- Drafting quality reports;
- Development of final energy consumption in the industry sector;

It is expected from GEOSTAT to provide the staff which will not only be trained, but will also actively participate in conducting all the above-mentioned activities together with the ITS expert team. At this moment the ITS expert team can only approximately estimate the



sample size (2000-5000 enterprises). It can conclude that the survey will be conducted by web, fax, e-mail and using on-site interviews, as it is common practice in GEOSTAT. Since the result of this project has to be a periodical (annual) system of collecting, processing and dissemination of energy data in the industry sector it is expected in the following period that GEOSTAT will work on the adoption of the procedures for these new types of data observation.

At the beginning of the survey implementation, the ITS expert team will need to discuss with GEOSTAT the usage of other GEOSTAT resources, except the staff (IT support, ways of collecting data, etc.). The ITS's project plans to start the survey in the first half of the year 2013 and ITS suppose that GEOSTAT does not have the funds for these activities at the moment. The ITS project can, for example, provide assistance in the development of IT support (for the development of the database and online web application for data entering) by employing local experts.

Since GEOSTAT confirmed that it has available statisticians who will participate in the implementation of this survey, the only expenses that should be covered by GEOSTAT are the expenses of the interviewing process (printing of the questionnaire, etc.). Since GEOSTAT conducts surveys by web, fax, e-mail and using on-site interviews, the expenses are expected to be minimum.

GEOSTAT will be able to use the IT support which will be provided from the ITS project in the following years.

The plan described above is the main plan of carrying out of the survey in the industry sector, but all the other details, by all means, will have to be explained in detail at the beginning of the project.

#### **Adaptation of existing surveys to the research on energy consumption**

The ITS expert team, together with the GEOSTAT, should try to explore possibilities for adapting existing surveys in business and household sector e.g. by including a simple table (one question) into the questionnaires on the quantities of the energy consumed in the defined periods. ITS expert team proposes to implement a specific activity - **ITS TA-2.4** which will aim to assist GEOSTAT in adapting the existing survey to the research on energy consumption and compile final energy balances from the data gathered. The result of this specific question will be the final energy consumption in the business sector and household sector, which will specifically contribute to the determination of fuel wood as the most frequent energy source used in households in Georgia.

### **4.3. Key area 3: Energy balances compilation and submission of the questionnaires to the IEA**

In the last few years, the Ministry of Energy and Natural Resources (MENR) has been trying to develop energy balances for electricity and natural gas, but these balances were not well structured. It is necessary to compile more aggregated energy balances in Georgia.



- **Provision of a user friendly tool and training and assistance in the completion of energy balances harmonised with the IEA/EUROSTAT**

Along with the process of developing questionnaires for reports and surveys on energy supply and consumption, the ITS expert team suggests organising an education procedure aimed at increasing the capacity of statisticians and staff experts in energy, on energy balance compilation. This education will result in the development of pilot energy balances, in accordance with the EU Regulation and the IEA/EUROSTAT standards, by the end of 2013.

The ITS expert team will provide the GEOSTAT with a user-friendly software tool adapted to Georgian energy statistics requirements, which will be used to as a guide and help when compiling an aggregated national energy balance harmonised with IEA/EUROSTAT requirements. This tool will remain available to the GEOSTAT after the project closure. This software is a simple excel based model, which will contain spreadsheets with templates for the compilation of IEA and EUROSTAT energy balances and will provide a set of the instructions about the compilation of the particular segment of the energy balances. The model will be adaptable to the changes according to the structure and sources of energy data.

It is planned to support the GEOSTAT in implementing this activity through particular **ITS TA-3.1 and ITS TA-3.2**.

- **Compilation of five energy questionnaires and their submission to the IEA**

Following the dynamics of carrying out the activities mentioned above, five energy questionnaires for the IEA/EUROSTAT will be compiled at the end of 2013, after the compilation of the first complete pilot energy balance.

The ITS expert team will provide assistance in compiling the first energy **balance** for the year 2012 (**ITS TA 3.3.**) and will evaluate the progress, as well as assist during the energy balance compilation in 2014, if necessary.

The main results of the activities planned in Key area 3 will be:

- increased capacity of the GEOSTAT to compile the energy balances based on the international standards,
- energy balance accessible and available for dissemination free of charge,
- energy questionnaires compiled and submitted to the IEA.

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

In order to organise and implement the required set of goals related to monthly reporting, it is necessary to appoint a competent institution that will provide monthly energy reports, as well as to define its obligations and the methodologies to be used. The ITS experts consider the GEOSTAT to be the most relevant institution which should be responsible for this activity.

Taking into consideration the simplicity of the reports and the frequency of their submissions, the responsible institution should have one expert available for working particularly on monthly energy statistics. Considering the fact that the *Statistical Working Programme* for the year 2013 has already been adopted, it is suggested that the activities and budgeting related to monthly statistics are planned in the following statistical working programs. The ITS expert team considers the activities under Key areas 1, 2 and 3 as priorities for Georgia, and proposes that the implementation of activities under Key area 4 follows a successful realization and results achieved in the Key areas 1, 2 and 3. It is assumed that this activity could be implemented in the second half of 2014, however assistance for this activity cannot be provided by the ITS project.

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

A reporting system on energy prices should be developed after the establishment of the system for energy data collection, compilation and dissemination. It is assumed that this activity could be implemented in the second half of 2014.

As energy prices reporting is not the main priority of the Georgia's ESAP, the ITS expert team intends to implement a more comprehensive analysis of the pricing conditions in 2013. After that, it will propose the common concept for data prices compilation and dissemination for all PCs.

Presently, the electricity sector in Georgia is mostly privately owned and partially liberalized. Only transmission, dispatch and the largest hydropower plants are owned by the state, whereas all the other generation and distribution assets are privately owned. There are 46 power plants which are privately owned, with owners including Inter-RAO (Russia); Energo-pro (Czech Republic); EPC (China); and a range of German, Ukrainian and other foreign and Georgian companies.

The Georgian gas sector is made up of the state-owned Georgian Gas and Oil Corporation with daughter company Georgian Transportation Company, the privatised distribution company, KazTransGaz Tbilisi, owned by the Kazakhstani Company KazTransGaz and regional gas companies mostly owned by Azerbaijan state company SOCAR and the company Itera.

A transparent system of third party access to the distribution and transmission networks is in place in Georgia both for electricity and gas sectors.

Although the development of a reporting system on energy prices is envisaged in 2014, the GEOSTAT will be invited, in 2013 and 2014, to participate in common events (workshops/conferences) where invited NSIs and other stakeholders will have the possibility to learn more about energy prices reporting from other INOGATE partner countries. In addition, Georgian stakeholders will have available other information from various INOGATE communication activities.

The Action Plan estimates that additional technical assistance in this area will be needed, however this assistance cannot be provided by the ITS project.

#### 4.6. 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 number of other factors and require collecting additional data that are not available in the main statistics. They are mostly based on information gathered from extensive surveys on energy consumption characteristics, the technology used, the building characteristics, etc. in different consumption sectors (industry, transport, households, and services). Besides a statistical analysis, the compilation of energy efficiency indicators requires specific professional skills, such as energy modelling and similar analytical skills related to the identification of the end use energy consumption.

In 2013 and 2014, the GEOSTAT will be able to observe and analyse the progress of energy efficiency indicators development in other Program Countries, more advanced in such analyses. Also, Georgia will be invited to participate in special workshops/study tours, which will be organised in order to support energy and energy efficiency indicators development.

In the case of Georgia, it is not recommended to begin activities within this key area before having established a proper energy data reporting system, as well as concepts and procedures for compiling energy balances. The development of energy efficiency indicators should be based on joint efforts of the GEOSTAT and other institutions, like the Energy Efficiency Centre (EEC) of Georgia.

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

In order to achieve target goals described in the previous chapters, certain resources should be available to the GEOSTAT and other main stakeholders dealing with energy statistics so as to implement the proposed activities.

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

- total necessary expert **Technical assistance (TA)** for all the 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 selected activities,
- the engagement of **local experts (ITS - LE)** for the implementation of specific tasks within particular activities (man/days),

- needed availability of the existing **human capacities (HC)** within energy statistics system in the Partner Country (Georgia), 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 not exist or where existing capacities are not sufficient to implement the targeted actions.

The estimation of all the resources necessary for the implementation of the Georgian Action Plan is presented in the Table 5-1.

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

Engagement of **local experts** under the ITS project (**ITS LE**) is envisaged mostly for the cases where the implementation of energy consumption surveys is planned. The implementation of this activity strongly depends on the existence of certain prerequisites, such as supporting Programs in the NSIs, available human resources, and others. In the case of Georgia, it is planned to establish a reporting system in the industry sector, so it is envisaged to employ additional local experts who will be involved in the process of data collection and the IT support development. Before the final decision on the involvement of local experts, a detailed analysis of all GEOSTAT's capabilities to support the implementation of the survey will be carried out. The goal of the survey is not only to obtain results regarding energy consumption in the industrial sector in the planned year, but also to increase the capacities and capabilities of the GEOSTAT in order for it to conduct such researches in the following years.

If, during the project implementation, the GEOSTAT can ensure the resources and budget for conducting other surveys (household, services), the ITS project will additionally analyse the possibility to provide technical assistance in developing a methodology and in implementing the surveys.

In order to ensure the implementation of the activities defined in the Action Plan, the GEOSTAT needs to provide appropriate staff or **human capacities (HC)**, who will actively participate in the implementation of these activities. In case there is no such staff, the Action Plan estimates the needs for the employment of **new staff (NS)**, expressed in man units. In the case of Georgia, the employment of new personnel is not foreseen.

**The total technical assistance in Georgia is estimated to 108 man/days, and the ITS project support can provide 78,5 man/days or 65 percent of the total necessary assistance.** During the ESAP implementation, Georgia is required to make its experts in energy statistics available in the total amount of about 157 man/days. There is no need for employing additional staff in the GEOSTAT regarding the energy statistics activities.

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

**Table 5-1. Resources for the Georgian Energy Statistics Action Plan 2012 – 2015 implementation**

| Years   | 2012  |   |   | 2013 |     |     | 2014 |   |   |     |    |
|---|-------|---|---|------|-----|-----|------|---|---|-----|----|
| Quarters  | total | 3 | 4 | 1    | 2   | 3   | 4    | 1 | 2 | 3   | 4  |
| <b>Technical assistance (TA):</b>               |       |   |   |      |     |     |      |   |   |     |    |
| Total technical assistance, man/days            | 108   | 0 | 0 | 30   | 8,5 | 13  | 18   | 0 | 4 | 1   | 34 |
| ITS TA, man/day                                 | 68,5  | 0 | 0 | 23   | 6   | 7,5 | 17   | 0 | 4 | 1   | 10 |
| ITS LE, man/day                                 | 12,5  | 0 | 0 | 5    | 2,5 | 5   | 0    | 0 | 0 | 0   | 0  |
| <b>Human capacities (HC) in Partner Country</b> |       |   |   |      |     |     |      |   |   |     |    |
| Total, man/day                                  | 157,0 | 0 | 0 | 49   | 13  | 19  | 27   | 0 | 6 | 1,5 | 42 |
| <b>Additional employment</b>                    |       |   |   |      |     |     |      |   |   |     |    |
| Total, man/year                                 |       |   |   |      |     |     |      |   |   |     |    |

**Table 5-2: Specification of the resources for the Georgian’s Energy Statistics Action Plan 2012 – 2015 implementation**

| Years  | 2012  |   |   | 2013 |     |     | 2014 |   |    |   |   |
|--|-------|---|---|------|-----|-----|------|---|----|---|---|
| Quarters   | total | 3 | 4 | 1    | 2   | 3   | 4    | 1 | 2  | 3 | 4 |
| <b>TA 1. Development/improvement of Legal and Institutional Framework including:</b>   |       |   |   |      |     |     |      |   |    |   |   |
| TA, man/day  | 8     | 0 | 0 | 8    | 0   | 0   | 0    | 0 | 0  | 0 | 0 |
| ITS TA, man/day  | 8     | 0 | 0 | 8    | 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  | 16    | 0 | 0 | 16   | 0   | 0   | 0    | 0 | 0  | 0 | 0 |
| <b>TA 2. Improvement of the data collection, compilation, management and analysing in line with EU and international standards</b> |       |   |   |      |     |     |      |   |    |   |   |
| TA, man/day  | 50    | 0 | 0 | 22   | 8,5 | 13  | 1    | 0 | 4  | 1 | 1 |
| ITS TA, man/day  | 35,5  | 0 | 0 | 15   | 6   | 7,5 | 1    | 0 | 4  | 1 | 1 |
| ITS LE, man/day  | 12,5  | 0 | 0 | 5    | 2,5 | 5   | 0    | 0 | 0  | 0 | 0 |
| HC, man/day  | 150   | 0 | 0 | 66   | 26  | 38  | 3    | 0 | 12 | 3 | 3 |
| Surveys on energy consumption, units   |       |   |   |      |     |     |      |   |    |   |   |
| Industry - 1500 units  | 2000  | 0 | 0 | 800  | 400 | 800 | 0    | 0 | 0  | 0 | 0 |
| Transport - 0 units  | 0     |   |   |      |     |     |      |   |    |   |   |
| Households - 0 units   | 0     |   |   |      |     |     |      |   |    |   |   |
| Service - 0 units  | 0     |   |   |      |     |     |      |   |    |   |   |
| Others (agriculture, construction...) - 0 units  | 0     |   |   |      |     |     |      |   |    |   |   |
| <b>TA 3. Energy and commodity balance compilation in line with EUROSTAT/IEA/UNECE methodologies</b>                                |       |   |   |      |     |     |      |   |    |   |   |

|   |      |   |   |    |     |     |    |   |    |   |    |
|---|------|---|---|----|-----|-----|----|---|----|---|----|
| TA, man/day   | 32   | 0 | 0 | 0  | 0   | 0   | 17 | 0 | 0  | 0 | 15 |
| ITS TA, man/day   | 25   | 0 | 0 | 0  | 0   | 0   | 16 | 0 | 0  | 0 | 9  |
| ITS LE, man/day   | 0    | 0 | 0 | 0  | 0   | 0   | 0  | 0 | 0  | 0 | 0  |
| HC, man/day   | 96   | 0 | 0 | 0  | 0   | 0   | 51 | 0 | 0  | 0 | 45 |
| <b>TA 4. Development of the reporting system on energy prices</b>       |      |   |   |    |     |     |    |   |    |   |    |
| TA, man/day   | 9    | 0 | 0 | 0  | 0   | 0   | 0  | 0 | 0  | 0 | 9  |
| 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  | 0 | 9  |
| <b>TA 5. Development of the energy and energy efficiency indicators</b> |      |   |   |    |     |     |    |   |    |   |    |
| TA, man/day   | 9    | 0 | 0 | 0  | 0   | 0   | 0  | 0 | 0  | 0 | 9  |
| ITS TA, man/day   | 0    | 0 | 1 | 0  | 2   | 0   | 3  | 0 | 4  | 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  | 0 | 0  | 0 | 9  |
| <b>TOTAL</b>  |      |   |   |    |     |     |    |   |    |   |    |
| TA, man/day   | 108  | 0 | 0 | 30 | 8,5 | 13  | 18 | 0 | 4  | 1 | 34 |
| ITS TA, man/day   | 68,5 | 0 | 0 | 23 | 6   | 7,5 | 17 | 0 | 4  | 1 | 10 |
| LE, man/day   | 12,5 | 0 | 0 | 5  | 2,5 | 5   | 0  | 0 | 0  | 0 | 0  |
| HC, man/day   | 280  | 0 | 0 | 82 | 26  | 38  | 54 | 0 | 12 | 3 | 66 |

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

| HORIZONTAL ACTIVITIES  |               |                    |                       | 2012 |   | 2013 |   | 2014 |   |   |   |   |   |
|--|---------------|--------------------|-----------------------|------|---|------|---|------|---|---|---|---|---|
|  | Responsible   | Needed TA, man/day | ITS support, (ITS TA) | 3    | 4 | 1    | 2 | 3    | 4 | 1 | 2 | 3 | 4 |
| <b>TA 1. Development/improvement of Legal and Institutional Framework including:</b>   |               |                    |                       |      |   |      |   |      |   |   |   |   |   |
| 1.1 Proposals for the appropriate legal framework  | GEOSTAT       |                    |                       |      |   |      |   |      |   |   |   |   |   |
| 1.2 Energy statistics strategies and programs (short/long-term)  | GEOSTAT, MENR | 3                  | yes                   |      |   |      |   |      |   |   |   |   |   |
| 1.3 Institutional relationship between main stakeholders   | GEOSTAT, MENR | 3                  | yes                   |      |   |      |   |      |   |   |   |   |   |
| 1.4 Capacity building on institutional organisation  | GEOSTAT, MENR | 2                  | yes                   |      |   |      |   |      |   |   |   |   |   |
| 1.5 Capacity building on the integration of the energy statistics and energy planning  |               |                    |                       |      |   |      |   |      |   |   |   |   |   |
| <b>TA 2. Improvement of the data collection, compilation, management and analysing in line with EU and international standards</b> |               |                    |                       |      |   |      |   |      |   |   |   |   |   |
| <b>2.1.Capacity building on EU and International Energy Statistics Standards</b>   |               |                    |                       |      |   |      |   |      |   |   |   |   |   |
| Introduction of the EU standards into energy statistics system   | GEOSTAT       |                    |                       |      |   |      |   |      |   |   |   |   |   |
| <b>2.2. Development/improvement of the reporting system</b>  |               |                    |                       |      |   |      |   |      |   |   |   |   |   |
| Energy supply data (production, imports, exports, international marine bunker, stock)  | GEOSTAT       | 3                  | yes                   |      |   |      |   |      |   |   |   |   |   |
| Energy transformations (electricity and heat, petroleum products, coal derived fuels, LNG, CNG, ...)                               | GEOSTAT       | 3                  | yes                   |      |   |      |   |      |   |   |   |   |   |
| Final consumption (industry, transport, non-energy, other sectors: residential, services, agriculture, .....                       | GEOSTAT       | 3                  | yes                   |      |   |      |   |      |   |   |   |   |   |
| Dissemination of the improved forms, data collection and elaboration from energy reporting units                                   | GEOSTAT       | 6                  | yes                   |      |   |      |   |      |   |   |   |   |   |
| Monthly statistics (M-3), (M-1)  |               |                    |                       |      |   |      |   |      |   |   |   |   |   |
| <b>2.3. Development/improvement of the surveys for the final energy consumption data collection:</b>                               |               |                    |                       |      |   |      |   |      |   |   |   |   |   |
| Industry   | GEOSTAT       | 25                 | yes                   |      |   |      |   |      |   |   |   |   |   |
| Transport  |               |                    |                       |      |   |      |   |      |   |   |   |   |   |
| Households   |               |                    |                       |      |   |      |   |      |   |   |   |   |   |
| Service  |               |                    |                       |      |   |      |   |      |   |   |   |   |   |
| Others (agriculture, construction...)  |               |                    |                       |      |   |      |   |      |   |   |   |   |   |
| 2.4. Adaptation of the existing surveys to the research on energy consumption  | GEOSTAT       | 8                  | 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/UNECE methodologies**

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

|   |         |   |     |  |  |
|---|---------|---|-----|--|--|
| Electricity and heat                    | GEOSTAT | 2 | yes |  |  |
| Natural gas                             | GEOSTAT | 2 | yes |  |  |
| Oil                                     | GEOSTAT | 2 | yes |  |  |
| Solid fossil fuels and manufactured gas | GEOSTAT | 2 | yes |  |  |
| Renewable and waste                     | GEOSTAT | 2 | 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 | GEOSTAT | 4 | yes |  |  |
| Energy supply data compilation  | GEOSTAT | 4 | yes |  |  |
| Energy transformation data compilation  | GEOSTAT | 4 | yes |  |  |
| Data on final energy consumption  | GEOSTAT | 3 | 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 | GEOSTAT | 2 |  |  |  |
|--|---------|---|--|--|--|

3.4. Monthly energy statistics reporting

|   |         |   |  |  |  |
|---|---------|---|--|--|--|
| Dissemination of monthly energy balances (M-3), (M-1) | GEOSTAT | 5 |  |  |  |
|---|---------|---|--|--|--|

**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) | GEOSTAT | 3 |  |  |  |
| b) energy prices reporting (IEA)   | GEOSTAT | 3 |  |  |  |

4.2. Dissemination of the reports energy prices

|  |         |   |  |  |  |
|--|---------|---|--|--|--|
|  | GEOSTAT | 3 |  |  |  |
|--|---------|---|--|--|--|

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



| REGIONAL ACTIVITIES  |   | 2012 |   | 2013 |   | 2014 |   |
|--|---|------|---|------|---|------|---|
|  |   | 3    | 4 | 1    | 2 | 3    | 4 |
| <b>Duration in days</b>  |   |      |   |      |   |      |   |
| <b>RA 1: Development/improvement of the Legal and Institutional Framework</b>  |   |      |   |      |   |      |   |
| 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 the national meeting on the importance of energy statistics for national policies                                       | 1 |      |   |      |   |      |   |
| Support to the national meeting on division of the labour and data sharing among stakeholders                                      | 1 |      |   |      |   |      |   |
| <b>RA 2: Improvement of the data collection, compilation, management and analysing in line with EU and international standards</b> |   |      |   |      |   |      |   |
| 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 |      |   |      |   |      |   |
| <b>RA 3. Energy and commodity balance compilation in line with EUROSTAT/IEA methodologies</b>                                      |   |      |   |      |   |      |   |
| Study tour on energy statistics and balances with special emphasis on the development of the 5 energy IEA/EUROSTAT questionnaires  | 5 |      |   |      |   |      |   |
| <b>RA 4. Development of the reporting system on energy prices</b>  |   |      |   |      |   |      |   |
| This activity will be combined with RA 5. activity at a later stage of the project.  |   |      |   |      |   |      |   |
| <b>RA 5. Development of the reporting system on energy and energy efficiency indicators</b>  |   |      |   |      |   |      |   |
| 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     |   |      |   |      |   |      |   |
| <b>RA 6. Evaluation of the achieved results</b>  |   |      |   |      |   |      |   |
| International conference on the achievements in the Energy Statistics Action Plans   | 2 |      |   |      |   |      |   |
| Workshop on the Achievement of Energy Statistics Action Plans & other activities   | 2 |      |   |      |   |      |   |

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## **ANNEX 1 – LIST OF THE MEETINGS DURING THE INCEPTION MISSION**

### **Meeting with the Ministry of Energy and Natural Resources of Georgia (ad hoc meeting)**

Participants:

- Tamar Klataishvili, Senior Adviser to the Minister for Energy Policy, Ministry of Energy and Natural Resources of Georgia
- Temo Izoria. Chief Specialist of Investment Projects Department. Ministry of Energy and Natural Resources of Georgia.
- Gloria Aguinaldo, Key Expert, Energy Statistics, ITS
- Anna Petrus, Interpreter, ITS

### **Meeting with National Statistics Office of Georgia - GEOSTAT**

Participants:

- Nikoloz Gagua, Deputy Executive Director, National Statistics Office of Georgia – Geostat
- Gogita Todradze, Head of Business Statistics Division, National Statistics Office of Georgia – Geostat
- Tamar Klataishvili, Senior Adviser to the Minister for Energy Policy, Ministry of Energy and Natural Resources of Georgia
- Gloria Aguinaldo, Key Expert, Energy Statistics, ITS
- Branco Vuk, Senior Expert, EIHP,
- Anna Petrus, Interpreter, ITS

### **Meeting with the Energy Efficiency Centre Georgia**

Participants:

- George Abulashvili, Director, Energy Efficiency Centre Georgia
- Tengiz Ivanidze, Energy Efficiency Centre Georgia

- Tamar Klataishvili, Senior Adviser to the Minister for Energy Policy, Ministry of Energy and Natural Resources of Georgia
- Gloria Aguinaldo, KE Energy Statistics, ITS
- Branco Vuk, Senior Expert, EIHP
- Anna Petrus, Interpreter, ITS

#### **Meeting with World Experience for Georgia (WEG)**

Participants:

- Murman Margvelashvili, Director, Energy Studies, World Experience Georgia
- Giorgi Mukhigulishvili, Researcher, Energy Studies
- Gloria Aguinaldo, KE, ITS
- Branco Vuc, Senior Expert, EIHP

#### **Meeting with the Georgian State Electrosystem (GSE)**

Participants:

- Maya Pitskhelauri, Reporting and International Projects, Coordination Department Manager
- Gloria Aguinaldo, Key Expert, Energy Statistics, ITS

## ANNEX 2 – AREAS FOR TECHNICAL ASSISTANCES UNDER THE ITS PROJECT

### 5.2. List of the activities

| Key area  | Indicative Technical Assistance under the ITS  |
|---|--|
| <b>TA-1</b><br><b>Development/improvement of the Legal and Institutional Framework</b>  | <p><b>TA-1.1.</b> Development of the appropriate legal framework for energy statistics (laws, sub laws, strategies, plans)</p> <p><b>TA -1.2.</b> Development of long-term energy statistics strategies and programs for data collection and compilation</p> <p><b>TA-1.3.</b> Improvement of institutional relationship on energy statistics</p> <p><b>TA-1.4.</b> Capacity building on the institutional organisation for energy statistics</p> <p><b>TA-1.5.</b> Capacity building on the integration of energy statistics and energy planning procedures</p>   |
| <b>TA-2</b><br><b>Improvement of the data collection, compilation, management and analysing in line with EU and international standards</b> | <p><b>TA-2.1.</b> Capacity building on the EU and International Energy Statistics Standards</p> <p><b>TA- 2.2.</b> Improvement of the methodologies for the collection, compilation, control and dissemination of energy statistics</p> <p><b>TA - 2.3.</b> 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><b>TA – 2.4</b> Adaptation of the existing (household) sector surveys to the research on energy consumption</p> <p><b>TA – 2.5.</b> Reconstruction of data from energy surveys in the years after the reference year</p> <p><b>TA – 2.6.</b> Support to the Covenant of Mayor initiatives</p> |
| <b>TA-3</b><br><b>Assistance in the compilation of energy and commodity balances</b>  | <p><b>TA – 3.1.</b> Assistance in the completion of the national energy balance for (2011, 2012 or 2013) and harmonisation with EUROSTAT/IEA methodologies and standards;</p> <p><b>TA – 3.2.</b> Adaptation and training in the application of a user friendly software tool for energy balance compilation;</p> <p><b>TA – 3.3.</b> Compilation of annual energy data in defined questionnaires and submission to the EUROSTAT/IEA.</p> <p><b>TA – 3.4.</b> Development of monthly energy data reports compliant with EUROSTAT/IEA standards (M-1, M-3)</p>  |

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|              |  |  |
|--------------|--|--|
| <b>TA-4</b>  | <b>Development of a reporting system on energy prices</b>                  | <b>TA – 4.1.</b> Development of methodology for gas prices reporting<br><b>TA – 4.1.</b> Development of methodology for electricity prices reporting<br><b>TA – 4.2.</b> Reporting on gas and electricity prices   |
| <b>TA--5</b> | <b>Development of a reporting system on energy (efficiency) indicators</b> | <b>TA – 5.1.</b> Review of data available for energy indicators compilation, assessment of the needed data<br><b>TA – 5.2.</b> Development of methodology for energy (efficiency) indicators monitoring and verification<br><b>TA – 5.3.</b> Adaptation, training and application of a user friendly tool for calculating energy (efficiency) indicators |

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### 5.3. 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 the gaps in the existing legal framework, which refer to collecting, compiling, maintaining, disseminating and securing the confidentiality of energy data, and to propose the contents 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;
- developing 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 which will be involved in the collecting, compiling, standardizing and disseminating 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 build a solid foundation for a 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 commissions and policy commissions on the importance of integrating the applied methodology to short-term and long-term energy planning and on 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 the information collecting process 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 sample selection, 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,
- 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

A proposal on adding specific questions into the questionnaires in certain surveys, as well as a methodology on elaborating the collected data, will be developed in cases where the NSI conducts a regular, periodical (annual) survey in households about the living standards, consumption etc., and in cases when energy consumption surveys are not envisaged in the Action Plan

#### 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 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 staff training in the NSC and providing instructions for 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 on 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

The intention of this activity is 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 using the methodology and software for the energy (efficiency) indicators compilation

This activity will result in providing the representatives of the institutions competent for monitoring and verification of energy savings with training in using this methodology and software for the energy efficiency indicators compilation.

## ANNEX 3 – INDICATORS FOR MONITORING THE PROJECT IMPLEMENTATION AND SUCCESS

| ACTIVITY  | status<br>9/2012 | status<br>09/2013 |
|---|------------------|-------------------|
| <b>Development / improvement of Legal and Institutional framework</b>   |                  |                   |
| 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 harmonized with IEA/EUROSTAT standards (yes/no)   | no               |                   |
| Number of needed short/long-term development plans for energy statistics  | 0                |                   |
| Number of experts and statisticians employed in energy statistics in the NSS and the NSI (central and regional offices)   | 5                |                   |
| Number of experts and statisticians educated during the workshops/seminars organised by the IEA/EUROSTAT or other relevant institutions during the last five years  | 2                |                   |
| 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. | 2/1              |                   |
| <b>Improvement of the data collection, compilation, management and analyses in line with EU and international standards</b>   |                  |                   |
| 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               |                   |
| <b>Assistance in energy and commodity balance compilation</b>   |                  |                   |
| Compilation of energy and commodity balances harmonised with EUROSTAT/IEA   | no               |                   |
| Needed application of a simple software tool for energy balance compilation (yes/no)  | yes              |                   |
| 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               |                   |
| <b>Development of a reporting system for energy prices</b>  |                  |                   |
| Reporting on electricity and gas prices (yes/no)  | no               |                   |
| <b>Development of energy (efficiency) indicators</b>  |                  |                   |
| 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   | ?                |                   |

## ANNEX 4 – CONTACT DETAILS

Contact details of the person(s) who reviewed Draft /Proposal

**Institution:** National Statistics Office of Georgia - GEOSTAT  
**Address:** 30, Tsotne Dadiani Str., Tbilisi 0180, Georgia

**Name and Surname:** Gogita TODRADZE  
**Department:** Business Statistics Division  
**Position:** Head of Division  
**Date:** 04/12/2012

**Institution:** Ministry of Energy and Natural Resources of Georgia  
**Address:** 2, Sanapiro Str. Tbilisi 0180, Georgia

**Name and Surname:** Tamar Klateishvili  
**Department:**  
**Position:** Senior Adviser to the Minister  
**Date:** 04/12/2012

## ANNEX 5 – PROPOSED MANNER OF ADOPTION OF THE ENERGY STATISTICS ACTION PLAN

Please choose any of the following:

- YES** **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.
- Document of approval to be signed by responsible authorities in the NSI and Ministry will be enclosed with the final ESAP.
- Other manner of adoption, please suggest:  
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