

Report on the 2nd ITS Technical Assistance Mission to Armenia 02-03 April 2014

**INO GATE Technical Secretariat and Integrated Programme in support of the
Baku Initiative and the Eastern Partnership energy objectives**

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1. INTRODUCTION

The main objective of the 2nd ITS Technical Assistance Mission in Armenia was to continue the implementation of the activities initiated in 2013 and to start new activities as defined in the Energy Statistics Action Plan 2012 – 2014. The ESAP was adopted through a Memorandum of Understanding (MoU) on statistical cooperation and was signed between the National Statistics Service of the Republic of Armenia (NSS), Ministry of Energy and Natural Resources (MENR) and Inogate Technical Secretariat (ITS) on 2nd July 2013.

The 2nd TA Mission in Armenia was organised in the period from 2nd to 3rd April 2014 and was based on the combination of meetings and trainings adapted for the continuation and beginning of new activities. Some activities that were launched during 2013 have been completed and the results of those activities are briefly discussed in Chapter 4. *Results achieved.*

The activities prepared for the 2nd ITS TA Mission included:

- TA-2 Development of the reporting system based on international standards
 - TA-2.2. Development of methodologies for the collection, compilation, quality control and dissemination of energy supply statistics (continuation of the activity);
 - TA-2.3. Development of methodology for the collection of data on final energy consumption (continuation of the activity);
 - TA-2.4. Adaptation of the existing surveys to data collection on energy consumption (continuation of the activity).

Besides the activities which were started in 2013, the new activities were initiated during the 2nd ITS TA Mission.

- TA-3 Energy balances compilation and submission to joint questionnaires to IEA
 - TA – 3.1. Provision of a user friendly tool for energy balance compilation based on EU Regulation and IEA/EUROSTAT/UNSD standards;
 - TA – 3.2. Training and assistance in the completion of annual energy balances.

2. SUMMARY

The main objective of the mission in Armenia was to explore the possibility of organizing a new activity at the National Statistical Service of Republic of Armenia (NSS) with the view to collect energy data from the industry sector. Given the fact that the Armenian energy system is relatively simple, which means that energy supply statistics are not questionable, ITS experts focused on the final consumption as stated in the conclusions of the 1st ITS TA Mission in Armenia. The industry sector is a key sector for final energy consumption statistics and definitely a priority in countries where these statistics do not exist.

Other projects and programmes focusing on the development of energy statistics in Armenia were addressed in a special discussion during the meeting, in particular the USAID programme which has been present in Armenia for two years. **The NSS emphasized several times during the mission that following the 1st ITS TA Mission, it opted for the programme and methodologies proposed by the ITS expert team because the ITS proposals are implementable and well adapted to the conditions – available human and financial resources – which currently prevail in Armenia.**

3. MISSION OVERVIEW

The first meeting was held on 2nd April at 11:30 at the NSS. The welcoming address was given by the Member of the State Council on Statistics, Mr. Gagik Ananyan, whereas the keynote speech on the objective and purpose of the mission was given by Ms. Alenka Kinderman Lončarević, the ITS senior expert for energy statistics.

Mr. Ananyan pointed out that the concept proposed by the ITS expert team fully corresponds to the conditions at the NSS and said he hoped that the next two days would be enough time to analyze in detail the possibility to organize and conduct a questionnaire survey in the industry sector with the support of the ITS project.

Mr. Ananyan also pointed out that the structure of costs as proposed by the ITS experts is very useful and transparent and that such structure may serve to identify precisely the true scope of work that such form of research in the industry sector demands.

The NSS thinks that this new questionnaire survey to be established in the statistics system should definitely be conducted as an on-site survey because it is conducted in Armenia for the first time. It is because it provides a possibility of communication between the company representatives (responsible persons) and trained interviewers who can help the interviewees in filling in the questionnaires and provide additional explanations regarding specific terms. It is estimated that such a survey requires some 30 interviewers, 3-4 controllers and 3-4 operators who would enter the data from the questionnaires into the database, and one IT expert who would be responsible for the data base design. Mr. Ananyan emphasized that the NSS is ready to include this type of research as a regular annual activity in the following years.

After the keynote speeches the meeting /training is continued separately with the working group on energy statistics and with the MENR and SRIE representatives. The main topics which were discussed on the first day were related with the input tables for the industry sector and methodological explanations.

Firstly, the Head of the Industry Statistics Division informed the ITS experts about a similar survey which was implemented 14 years ago and which resulted in collecting high-quality information. This survey was implemented only once and was financed from foreign sources.

Ms. Alenka Kinderman Lončarević prepared a specific presentation with the examples of the autoproducer types of industry enterprises. She presented the concept how to recognise such types of enterprises in the industry sector, how to process data they report and how to import data in the integrated energy balance format.

The parameters influencing the organization of the questionnaire survey in the industry sector were also discussed with the representatives of the Industry Statistics Division. The possibility of including the companies from the agriculture, services and construction sectors into the survey on the energy consumption in the industry sector was discussed and a conclusion was made that since these sectors come within the competence of other divisions at the NSS, their inclusion into the survey will be analysed next year, after finishing the survey on the energy consumption in 2014 in the industry sector, which has a high priority in the energy statistics. Questionnaires to be sent to industrial enterprises and energy companies (e.g. ArmRusGasProm) were once again discussed and analysed with the representatives of the Industry Statistics Division. The ITS experts suggested to send different questionnaires to the industrial enterprises and to energy companies as suggested in the *Model for Energy Data Collection*.

The next topic discussed in the framework of the 2nd ITS TA Mission was the statistics on transport which comes within the competence of the Transport and Communication Statistics Division. On the second day, the meeting was also attended by the Head of the Transport Statistics Division, Mr. Georgiy Torosyan, who presented the procedures used to collect data in the transport sector.

Ms. Alenka Kinderman Lončarević presented the concept and methodology of compiling energy balances and pointed out that the Armenian energy system is not complex and that the compilation of an integrated balance for 2013 will not be questionable if the data from the industry sector are collected during 2014.

In the second part of the meeting at the NSS, the working group was again joined by Mr. Gagik Ananyan and the steps for conducting the questionnaire survey in the industry sector were systematised and analysed.

The mission ended with the visit to the EU Delegation in Armenia where a meeting was held with Mr. Ludovic Ciechanowski who is the focal point for the INOGATE project in Armenia. He expressed the need for the organisation of a specific type of local event to promote the achievements in the energy statistics. He considers energy statistics as a starting point for the development of energy security policies, renewable energy programmes; energy energy efficiency measures and other.

4. RESULTS ACHIEVED

The activities initiated during 2013 were continued and some were completed in the meantime. In the Mission Report which was completed after the 1st ITS TA Mission, the ITS expert provided a very detailed proposal for the organisation of the institutional framework for energy statistics and distribution of tasks and responsibility among the NSS, MENR and SRIE. The 2nd Mission provided a forum to discuss the activities concerning the survey in the industry sector which is the prerequisite for the compilation of energy balance.

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

Natural gas, Oil and Petroleum Products, Electricity, Renewable Sectors

Questionnaires designed to collect data in the coal, natural gas, oil and petroleum products and electricity sectors are sent to all companies whose economic activity includes the production, transformations and supply of energy to final consumers. Draft of the *Model for Energy Data Collection* which was presented in the framework of the 1st ITS TA Mission was finished after the mission and delivered to the NSS. It was translated into Russian.

There is almost no coal production in Armenia. Small amounts are imported and used.

Data on natural gas imports, stock changes (underground gas storage), transport and supply could almost entirely be collected from ArmRusGasprom which plays the role of the TSO and DSO in Armenia. The questionnaires were reviewed by ArmRusGasprom and an agreement was reached that the NSS that this year the questionnaire will be sent to ArmRusGasProm.

The statistics on petroleum product trade is questionable. The NSS considers that Trade Statistics Division at the NSS should be responsible for this type of statistics. Given the fact that the structure of data on import of petroleum products should be revised, the NSS considers that this part of energy statistics should be compiled in cooperation with the MENR and SRIE. The final energy consumption of petroleum products is an important issue which could largely be solved by a new survey in the industry sector and results from the Household's Integrated Living Condition Survey.

The power sector is not complex and the NSS collects quite good statistics on electricity generation and supply. The existing forms can be amended with data items as proposed in the Model for Energy Data Collection.

Renewable energy sources were specially discussed as the information about such types of energy are not well known in Armenia.

4.2. TA - 2.3. Implementation of surveys on final energy consumption

Transport

The statistics on energy consumption in the transport sector is covered quite good. It was agreed that an additional question will be added to the official questionnaires applied by the Transport Statistics Division. Data on electricity consumption in the railway transport and city transport (underground and trolleybus) will be collected.

Industry

Methodology proposed by the ITS experts will be applied in 2014. It has been selected among methodologies proposed by other donors in Armenia as the most appropriate for the Republic of Armenia. The survey is currently being organized and the NSS plans to select the sample of 1000 enterprises, engage 30 interviewers, 4 controllers and an IT expert for designing a database to import and store data. The planned duration of data collection (field work) is about 2 months.

Industry Statistics Division is responsible for the collection of data from energy companies and companies whose economic activity is manufacturing - industry production.

Status: ongoing

4.3. TA - 2.4. Adaptation of the existing surveys to the research on the energy consumption

During the 1st ITS TA Mission the ITS experts proposed to the NSS to include questions about the quantities of annual energy consumption in the regular Household's Integrated Living Conditions Survey. This survey is carried out in Armenia every year since 2004 on the sample of about 7000 households. Until 2012, when analysing the energy situation in households, the NSS only collected data about energy forms used for heating. In 2013, the NSS introduced a question about the quantities of energy consumed (for each energy carrier which is used) which will certainly contribute to the final energy consumption statistics compilation. The results are expected to be ready by the end of 2014. During the 1st ITS TA Mission the ITS experts emphasized the importance of the renewable energy sources in energy balance several time because fuel wood was entirely neglected. The ITS experts analysed the recent results (database) of the Household's Integrated Living Conditions Surveys available for 2011 and they showed that more than 35 households in Armenia use fuel wood as the main energy source, which is a significant indicator that renewable energy sources should be shown in the energy balance.

The Household Surveys Division is responsible for carrying out of the Household's Integrated Living Conditions Survey.

Status: ongoing

4.4. TA – 3.1 & 3.2 Provision of a user friendly tool and assistance in the completion of energy balance harmonized with international standards

The ITS expert team designed a model - a user friendly tool for energy balance compilation which reflects the structure of the Armenian energy system. Armenian energy balances will show the commodity balances in a way that explains fuel conversion and the dependence of supply of one fuel on another. It presents the energy flow as the primary fuels are processed or used and as the consequent secondary fuels are produced and used.

Status: ongoing

5. CONCLUSIONS AND NEXT STEPS

The statistics regarding energy consumption in the industry sector is the key prerequisite for the compilation of energy balance of the Republic of Armenia. The NSS decided to follow the methodology and concept proposed by the ITS expert team and to collect data according to the given questionnaire for the year 2013 in 2014. If the NSS manages to organise and implement a survey on energy consumption in the industry sector, the energy balance compilation is guaranteed. Otherwise, the chances to compile an official energy balance until the end of 2014 are very small.

As Armenia, among other Project Countries, is the country with a less developed energy statistics system, the ITS experts proposed to the NSS, besides providing technical assistance, to support the survey implementation providing financial assistance from ITS project because the lack of financial resources is the most significant barrier to the implementation of the survey.

The organisation of the survey and its implementation as well as the costs specification were discussed during the mission and the NSS and the ITS agreed on the main survey parameters:

- sample size: 1000 enterprises
- number of surveyors involved in the survey: 30
- field work coordinator: 1
- number of controllers/supervisors: 3
- number of IT experts: 1
- engagement of specialists in the NSS: 20 man/days
- engagement of ITS experts: 10 man/days
- DURATION OF THE RESEARCH – 3 months.

Estimated costs for the translation of questionnaire and methodology, printing the questionnaires and field work amount approximately to 12,000 €.

ITS experts proposed three options for the survey implementation:

- OPTION 1 - Engagement of 40 persons (interviewers/controllers/coordinators to implement survey) through a contract with ITS.
- OPTION 2– Subcontracting of a market research agency to implement survey
- OPTION 3– NSS to organise a pilot survey to collect preliminary and test data which will form the basis for the planning of future surveys.

A detailed account of the use of resources (NSS specialists and ITS experts, translation and printing the questionnaires, field work) is presented in the tables below.

| | Allocation of the task | No. of experts involved | Engagement of experts (NSS and ITS) |
|--|------------------------|-------------------------|-------------------------------------|
| 1. Engagement of the NSS and ITS in the survey implementation | | | |
| Organisation and implementation of survey | NSS | 1 | 5 |
| Preparation of the questionnaires | NSS | 1 | 2 |
| Selection of the sample | NSS | 1 | 2 |
| Support to the specialists in NSS | ITS | 1 | 2 |
| Education of the interviewers | NSS | 3 | 3 |
| Data processing | NSS | 3 | 3 |
| Data analysis, preparation of the results | NSS | 3 | 8 |
| Data analysis, preparation of the results | ITS | 1 | 8 |
| Other | NSS | 1 | 2 |
| TOTAL ENGAGEMENT, man/days | | | 30 |

| | Allocation of the task | Costs specification | Total cost |
|---|------------------------|---------------------|--------------|
| 2. Translation and printing of the questionnaires | | | € |
| Translation of the questionnaire and methodology to Armenian language - 10 pages (1 page - 10 €/pg) | ITS | 1 page - 10 €/pg | 100 |
| Printing of the questionnaires: | ITS | | 220,5 |
| Number of printed questionnaires - 1050 | | | |
| Number of pages per questionnaire - 3 | | | |
| Total number of pages to be printed - 3150 | | | |
| Printing costs per one page - 0,07 €/pg | | | |
| TOTAL COSTS, man/days | | | 320,5 |

| | Financing support | No. of interviewers / controllers engaged | Costs of the field work |
|--|-------------------|---|-------------------------|
| 3. Field work | | | |
| Coordination of the field work (0,5€ per filled questionnaire) | ITS | 2 | 500,0 |
| Field work (10 € per correctly filled questionnaire) | ITS | 30-50 | 10.000,0 |
| Control and verification of collected data (1 € per questionnaire) | ITS | 3 | 1.000,0 |
| Data imports into database (0,5 € per questionnaire) | ITS | 3 | 500,0 |
| TOTAL COSTS | | | 12.000,0 |

6. ANNEX 1 - DRAFT AGENDA OF THE MISSION



ENERGY COOPERATION BETWEEN THE EU, THE LITTORAL STATES OF THE BLACK & CASPIAN SEAS AND THEIR NEIGHBOURING COUNTRIES



PROGRAMME
FUNDED BY THE EU

2nd ITS Technical Assistance Mission in Armenia

Wednesday, 02 April 2014

Venue: NSS

| | |
|-------------|---|
| 11:30-17:00 | ITS meeting with NSS (Industry Statistics Department) and MENR |
| | <ul style="list-style-type: none"> - ITS TA 2 – Development of the reporting system based on international standards - Discussion on the concept for the implementation of survey on energy consumption in industry sector, timelines and surveying methodology - Presentation of the questionnaire for industry sector and data control and validation - Discussion on the financial issues and support by ITS - Discussion on the engagement of the local expert for technical assistance - <i>breaks (lunch) will be agreed at the beginning of the meeting</i> |

Thursday, 03 April 2014

Venue: NSS

| | |
|-------------|---|
| 10:00-16:00 | ITS meeting with NSS (Industry Statistics Division & Transport Statistics Division) and MENR |
| | <ul style="list-style-type: none"> - ITS TA 2 – Development of the reporting system based on international standards - Analysis of the concept for surveying transport sector - Discussion on the further cooperation and allocation of the tasks between the NSS, MENR (SRIE) and ITS - Analysis of the results achieved from the surveys on energy consumption in industry sector and transport sector and its impact to the energy balance compilation - Discussion on the concept for further energy statistics development and coordination of the work between other donors in Armenia (USAID); - Discussion about ITS proposal for the institutional organisation for energy statistics in Armenia proposed, it is expected that MENR and NSS will provide instructions to ITS exerts project on the further cooperation. - <i>breaks (lunch) will be agreed at the beginning of the meeting</i> |

ITS Experts: Alenka Kinderman Lončarević, Damir Pešut, Tomasz Trus,
Translator: Ana Petrus

7. ANNEX 2 – LIST OF THE PARTICIPANTS

MEETING AT THE NSS WITH INDUSTRY STATISTICS DEPARTMENT AND MENR

2/04/2014 from 11.30 to 17.00

| Name | Title | Organisation | Phone / email |
|------------------|--|--------------------|--|
| Gagik Ananyan | Member of the State Council on Statistics | NSS RA | armstat@sci.am +374-10-524-340 |
| Anahit Manandyan | Head of the Section for Internal Audit | NSS RA | +374-10-56-50-75 |
| Ashot Ananyan | Head of the Industrial Department | NSS RA | +374-10-52-35-43 ashot@armstat.am |
| Gnuni Hrant | Scientific Researcher | ESC branch of SRIE | hrant.gnuni@energinst.am |
| Hasmik Hakobyan | Main Specialist in the Industrial Department | NSS RA | +374-10-52-35-43 hasohakobyan@gmail.com |
| Armine Hakobyan | Lead Specialist | MENR | +374-94-42-37-74 armine_91_08@mail.ru |

MEETING AT THE NSS WITH INDUSTRY STATISTICS DEPARTMENT AND MENR

3/04/2014 from 10.00 to 16.00

| | | | |
|------------------|--|-------------|--|
| Gagik Ananyan | Member of the State Council on Statistics | NSS RA | armstat@sci.am +374-10-524-340 |
| Ashot Ananyan | Head of the Industrial Department | NSS RA | +374-10-52-35-43 ashot@armstat.am |
| Gnuni Hrant | Scientific Researcher | ESC of SRIE | hrant.gnuni@energinst.am |
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| Georgiy Torosyan | Head of the Transport and Communication Department | NSS RA | +374-10-58-29-49 |

MEETING IN THE DELEGATION OF EU TO ARMENIA**3/04/2014 from 10.00 to 16.00**

| | | | |
|---------------|--|--------|-----------------------------------|
| Gagik Ananyan | Member of the State Council on Statistics | NSS RA | armstat@sci.am +374-10-524-340 |
|---------------|--|--------|-----------------------------------|
