

FINAL

# INOGATE Technical Secretariat Country Work Plan: Armenia

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

**Contract No 2011/278827**

A project within the INOGATE Programme

**Implemented by:**

**Ramboll Denmark A/S (lead partner)**

**EIR Global**

**The British Standards Institution**

**LDK Consultants S.A.**

**MVV decon GmbH**

**ICF International**

**Statistics Denmark**

**Energy Institute Hrvoje Požar**

|                        |   |
|------------------------|---|
| <b>Document title</b>  | INO GATE Technical Secretariat<br>Country Work Plan Armenia |
| <b>Document status</b> | Final   |

|                    | <b>Name</b>  | <b>Date</b> |
|--------------------|--|-------------|
| <b>Inputs by</b>   | Nikos Tsakalidis, Alexander Antonenko, Alenka Kinderman<br>Lončarević, Viktor Petrenko | 30/01-2015  |
| <b>Edited by</b>   | Fredrik Pitzner-Jorgensen  | 02/02-2015  |
| <b>Approved by</b> | Peter Larsen   | 05/02-2015  |

---

This publication has been produced with the assistance of the European Union. The contents of this publication are the sole responsibility of the authors and can in no way be taken to reflect the views of the European Union.

## **Contents**

|   |    |
|---|----|
| Abbreviations and acronyms .....  | 4  |
| Section 1 Introduction .....  | 5  |
| Section 2 Energy policy of Armenia .....  | 5  |
| Section 3 Achievements of the Armenia-ITS cooperation .....                                       | 7  |
| Section 4 Work Plan for Armenian-ITS cooperation .....  | 10 |
| <br>  |    |
| Table 1: Priorities of the Armenia-ITS cooperation for 2015-2016.....                             | 7  |
| Table 2: Completed and ongoing activities of the Armenia-ITS cooperation in 2011-2014 .....       | 7  |
| Table 3: Top priority planned activities for the Armenia-ITS cooperation in 2015-2016.....        | 10 |
| Table 4: Secondary priority planned activities for the Armenia-ITS cooperation in 2015-2016 ..... | 11 |

## Abbreviations and acronyms

|          |   |
|----------|---|
| AA       | Association Agreement   |
| AHEF     | Ad Hoc Expert Facility  |
| AM       | Armenia   |
| AP       | Action Plan   |
| CWP      | Country Work Plan   |
| E & G    | Electricity and Gas   |
| EE       | Energy Efficiency   |
| EnC      | Energy Community  |
| ECT      | Energy Community Treaty   |
| ESAP     | Energy Statistics Action Plan   |
| ESCO     | Energy Service Company  |
| EU       | European Union  |
| GE       | Georgia   |
| IEA      | International Energy Agency   |
| INO GATE | Energy Cooperation between the EU, the Littoral States of the Black & Caspian Seas and their Neighbouring Countries |
| ITS      | Inogate Technical Secretariat   |
| LNG      | Liquefied Natural Gas   |
| NSS      | National Statistics Service   |
| PC       | Partner Country   |
| RES      | Renewable Energy Sources  |
| RM       | Road Map  |
| SE       | Sustainable Energy  |
| TA       | Technical Assistance  |

## Section 1 Introduction

The overall purpose of the Country Work Plan (CWP) for the project period February 2015 – April 2016 is to define the INOGATE activities to be carried out based on the experience of experts and the explicit requests of the Partner Country. This document outlines the ITS analysis of the needs and priorities of the countries and the proposed ITS strategy and rationale for intervention.

The proposed activities presented here take into account the bilateral and trade agreements of the EC and the PC as well as other EU projects and the activities of other donors in a PC.

This country work plan has been drafted by ITS in consultation with the Partner Country and the European Commission.

INO GATE is an EU regional cooperation instrument, that is based on inter and intra-regional cooperation of Partner Countries and capacity building, focusing on the following areas:

- Technical and regulatory advice on energy security, energy markets efficiency and development;
- Implementation of energy efficiency and renewable energy policies;
- Energy and economic planning through the use of improved energy statistics;
- Facilitating energy efficiency and renewable energy investments.

The ITS provides short or medium-term technical assistance in these areas at regional and country level.

## Section 2 Energy policy of Armenia

The government's main energy policy directions, based on analysis by ITS experts, are:

- Energy security and diversification of energy supply sources;
- Attraction of foreign direct investment into the rehabilitation and modernisation of the Armenian gas and electricity grids, and construction of new generating facilities;
- Creating conditions for the development of competition and the efficient operation of the energy sector;
- Protecting the rights of consumers and businesses in the energy and balancing their interests;
- Full use of the economically and ecologically exploitable potential of renewable energy sources and energy efficiency across the whole economy;
- Development of nuclear energy;
- Integration of Armenia into the regional energy markets and participation in regional projects.

The main documents of the policy and regulatory framework of Armenia, identified by ITS experts, are<sup>1</sup>:

---

<sup>1</sup> Details are provided in "Country Report: Armenia October 2014".

- The Law on Energy (2001).
- The Law on Energy Savings and Renewable Energy (2004).
- The Law on Public Services Regulator.
- The Law on Environmental Protection.
- The Comprehensive National Energy Strategy and Energy Sector Improvement Action Plan (2007).
- The National Security Strategies of the Republic of Armenia (2007).
- The Law on the Construction of New Nuclear Unit(s), 2009.
- The Concept of Providing Energy Security of the Republic of Armenia (2011) approved by the Decree of the President of the Republic of Armenia HK-182-H dated 23.10.2013.
- Schedule of activities for 2014-2020 aimed at enforcing provisions of the Concept of energy security of the Republic of Armenia (Resolution of the Government of the RA N 836-H dated 31.07.2014).

Since 2011 Armenia has observer status of the Energy Community (EnC), hence no obligations to adapt the EU acquis.

Based on the ITS Strategy the priorities for the cooperation between Armenia and INOGATE for the period 2015-2016 are shown in Table 1<sup>2</sup>.

**Table 1: Priorities of the Armenia-ITS cooperation for 2015-2016**

| Priorities                              |
|---|
| Tariff reform                           |
| Improvement of the regulatory framework |
| Improvement of market rules             |
| Cross-border trade                      |
| SE policy improvement                   |
| EE in building sector                   |
| RES mapping                             |
| Energy data collection                  |
| Energy balances                         |

---

<sup>2</sup> To the best knowledge of the ITS Project there are no overlaps with other donors.

### Section 3 Achievements of the Armenia-ITS cooperation

Armenian representatives have actively participated in all regional seminars and study tours, please refer to Table 2: Completed regional activities in 2011-2014 of the Regional Work Plan, as well as in national INOGATE activities, listed in Table 2. In addition to completed activities, Table 2 also contains ongoing activities, to which the INOGATE project is already committed.

**Table 2: Completed and ongoing activities of the Armenia-ITS cooperation in 2011-2014**

| Implemented/ongoing Activities  | Results  | Impacts  | Areas  |
|---|--|--|--|
| <b>ELECTRICITY AND GAS</b>  |  |  |  |
| Technical assistance on grid connection procedure for all types of consumers and producers of electricity including RES (AHEF.018.AM, completed).   | Grid connection procedures proposed.   | Improved functioning of the electricity grid, facilitating investments in RES.   | Regulatory Issues/Market Rules                   |
| Training/workshops in the introduction of safety and security indicators of electricity transmission system of the Republic of Armenia (AHEF.045.AM, completed).                                  | Safety and security indicators of the electricity transmission system adopted.   | Improved planning of maintenance and repair of the electricity transmission system.  | Efficiency of Electricity and Gas Infrastructure |
| Technical assistance on Reactive power control (AHEF.053.AM, completed).  | A proposal for a tariff methodology that compensates the electricity company (TSO) for avoidable losses caused by lower-than-normal power factors in the consumption of large consumers. Recommendations regarding any enabling modifications to secondary legislation | Tariffs providing incentive for reduction of technical losses in the distribution system and consequent improvement in the security of electricity supply. | Regulatory Issues/Market Rules                   |
| Technical assistance on rules of connection to the electricity and gas distribution networks (AHEF.064.AM, completed).  | Set of rules proposed on connection to the electricity and gas distribution networks and associated tariff charges.  | Improved functioning of the electricity and gas distribution networks.   | Regulatory Issues/Market Rules                   |
| Technical assistance on service quality criteria for electricity and natural gas, and other principles of balancing the legal powers of the distributor and consumer (AHEF.065.AM) – (completed). | Service quality criteria and other principles proposed.  | Improved functioning of the electricity and gas sectors.   | Regulatory Issues/Market Rules                   |
| Harmonisation of standards  | Report comprising a set  | A standardized   | Harmonisation of                                 |

| Implemented/ongoing Activities  | Results   | Impacts   | Areas   |
|---|---|---|---|
| for small HPP equipment and standards used by the testing and certification laboratories (AHEF.063.AM, completed)   | of standards and procedures for the standardisation of energy equipment.  | way of working and certification system established on efficiency and quality of key equipment comprising the SHPP (turbine, generators, transformers) based on European standards. | electricity and gas standards and Codes.                  |
| Assistance on adoption of 12 interstate gas standards (identical to European gas standards) in Armenia's national standardization system.   | Adoption of 12 interstate gas standards (identical to European gas standards) in Armenia's national standardization system. | National gas standards are harmonised with European gas standards. Reduction of existing technical barriers for using the standards by the gas industry.                            | Harmonisation of electricity and gas standards and Codes. |
| Assistance in transfer to Armenia of 100 European oil and gas standards.  | European oil and gas standards have been transferred.   | Armenian standards on oil and gas are harmonised with European standards.   | Harmonisation of electricity and gas standards and Codes. |
| <b>SUSTAINABLE ENERGY</b>   |   |   |   |
| Development and introduction of curriculum for education of energy engineers in energy efficiency technologies in the energy and industrial sector,, including training for professors and students (AHEF.054.AM, completed).             | A new curriculum has been adopted.  | A pool of experts on energy efficiency in the energy and industrial sector.   | EE development  |
| Development and introduction of curriculum for education of architects in energy efficiency technologies in the design, construction and operation of buildings, including training for professors and students (AHEF.055.AM, completed). | A new curriculum has been adopted.  | A pool of experts on energy efficiency among architects.  | EE development  |
| Development and introduction of curriculum for education of energy engineers in renewable   | A new curriculum has been adopted.  | A pool of engineers trained in renewable energy solutions.  | RE development  |



| Implemented/ongoing Activities   | Results   | Impacts  | Areas                                 |
|--|---|--|---------------------------------------|
| energy sources (RES), including training for professors and students (AHEF.056.AM, completed)  |   |  |                                       |
| Training of staff in commercial banks on financing of EE/RES investment projects (AHEF.082, 093 and 103.AM, all completed).  | Capacity development of staff of Conversebank, Ameriabank and Union of Credit Organizations of the Republic of Armenia in assessing investment projects.                                      | Credit lines have been provided to projects which previously had not been moving forward.  | RES and EE investment facilitation.   |
| <b>ENERGY STATISTICS</b>   |   |  |                                       |
| Developing an Energy Statistics Action Plan (ESAP 2012 - 2014).  | ESAP developed and endorsed through the signing of Memorandum of Understanding between ITS, National Statistical Service (NSS) of Armenia and Ministry of Energy and Natural Resources.       | Improved data collection and analysis.   | Energy statistics system improvement. |
| Two Technical Assistance Missions to initiate and support implementation of the activities defined in ESAP.  | A model for energy data collection and format for energy balance compilation was developed. A pilot survey was conducted on the collection of data in industry sector and natural gas sector. | Increased capacity of NSS to collect and compile energy statistics and balances, harmonised with European and international standards (EUROSTAT, IEA). | Energy statistics system improvement. |
| Technical assistance in development of legal framework for energy balance in Armenia<br>Conducted national meeting with key energy stakeholders on the importance of energy statistics for policy and decision making and appropriate division of labour and data sharing. | Awareness raised on the importance and use of official statistics for policy and decision making.   | Improved energy planning.<br>Increased use of statistics in energy policy and planning.  | Energy statistics system improvement. |

## Section 4 Work Plan for Armenian-ITS cooperation

As an overall strategic approach ITS intends to support the national priorities set out in section 2. Due attention is also paid to ongoing technical assistance including from other donors. This is ensured by coordination meetings with the beneficiaries and donors currently providing Technical Assistance (TA) in Armenia.

Emphasis will be given to those areas of intervention which are in line with the scope of work of the ITS project and those that bring tangible impact and results and have no duplication with other EU programmes and bilateral donors and are in line with the new INOGATE strategy.

The top priority planned national activities for the extension period February 2015 - April 2016 are listed in Table 3, and the secondary priority planned activities are listed in Table 4.

**Table 3: Top priority planned activities for the Armenia-ITS cooperation in 2015-2016**

| Reference numbers                                       | Activities  | Expected results   | Expected impact   | Areas  |
|---|---|--|---|--|
| <b>ELECTRICITY AND GAS</b>                              |   |  |   |  |
| CWP.01.AM   | Review of the legislation covering Third Party Access (TPA) and comparison/gap analysis, assistance in developing draft amendments                | Revision of existing TPA methodology. Improvements proposed in line with EU best practices.  | Transparent TPA rules in line with EU best practices. Secured access to the market, increased liquidity of the energy market. | Regulatory Issues/Market Rules                     |
| <b>SUSTAINABLE ENERGY</b>                               |   |  |   |  |
| AHEF.90.AM, Implementation approved by the EC Dec 2014. | Capacity building of the personnel of energy service companies (ESCO).<br><br>Development of proposals for the improvement of legislation on ESCO | Improved ability of engineers from the the ESCO association to prepare a pipeline of potential investment projects in order to obtain financing.<br><br>Proposals provided for improvement of legislation on ESCO. | More ESCO investment in industrial energy efficiency<br><br>Improved legislation framework                                    | Investment facilitation                            |
| AHEF.124.AM, ToR being drafted                          | Development/improvement of legislative frameworks.  | Development of a road-map for introduction of an energy performance certificates system in the building sector of Armenia, including legal framework and distribution of institutional roles.                      | Road Map for EE in buildings approved and implemented.  | Improved energy efficiency in the building sector. |
| <b>ENERGY STATISTICS</b>                                |   |  |   |  |
| CWP.10.AM   | Technical assistance on the energy and  | Joint IEA energy questionnaires  | Increased harmonization of  | Energy balances                                    |

| Reference numbers | Activities                     | Expected results  | Expected impact   | Areas |
|-------------------|--------------------------------|---|---|-------|
|                   | commodity balance compilation. | compiled, primarily on natural gas, electricity and heat. | energy statistics with international standards;<br>Improved energy planning |       |

**Table 4: Secondary priority planned activities for the Armenia-ITS cooperation in 2015-2016**

| Reference numbers          | Activities  | Expected results  | Expected impact   | Areas  |
|----------------------------|---|---|---|--|
| <b>ELECTRICITY AND GAS</b> |   |   |   |  |
| CWP.02.AM                  | Training on gas tariffs methodologies (including those for transit of gas), system used in EU.  | Knowledge created on EU best practices in gas tariff methodologies and systems.       | Regulations on gas transit with Georgia, cross-border trade agreement.  | Development and review of tariff methodologies         |
| New                        | Develop recommendations for the revision of the measuring and estimation of losses in the electricity distribution sector and of options for inclusion of cost of losses recovery in the distribution tariff.   | Proposed measures leading to reduction of losses in electricity distribution network. | Reduction of losses, reduction of maintenance cost.   | Development and review of tariff methodologies         |
| CWP.03.AM                  | Assistance in adopting electricity and gas priority standards (support to implementation of Action Plan):<br>a) Monitoring of performance<br>b) Update list of gas standards<br>c) Organisation of seminar on priority electricity standards.<br>d) Assistance on preparation and monitoring of national standardization plan for 2016. | Capacity building on adoption of EU electricity and gas standards.                    | Modernisation of electricity and gas infrastructure, enhanced cross-border trade with GE (using EU standards) | Harmonisation of electricity & gas standards and codes |

| Reference numbers         | Activities  | Expected results  | Expected impact  | Areas  |
|---------------------------|---|---|--|--|
| <b>SUSTAINABLE ENERGY</b> |   |   |  |  |
| CWP.08.AM                 | Developing a concept and communication material for an SE information centre as well as assisting in setting up the centre, and training of stakeholders.   | Information centre on Sustainable Energy is established and functioning.  | Increased awareness of the population on EE and RE solutions, reduced CO2 emissions, improved energy security. | Investment facilitation.                                   |
| NEW                       | Development of the model energy performance contract and improvement of the legislation framework for ESCOs according to the EU best practice.  | Increased capacity of the Ministry of Energy and Natural Resources on ESCO legislation. Developed and improved legislative framework according to the EU best practice. | Improved energy efficiency.  | Development of sustainable energy policies and strategies  |
| NEW                       | Development of recommendations for introduction of mandatory energy audits for large enterprises into the national legislation framework.   | Mandatory and regular energy audits according to the EU best practice.  | Improved energy efficiency.  | Development of sustainable energy policies and strategies. |
| <b>ENERGY STATISTICS</b>  |   |   |  |  |
| CWP.11.AM                 | Technical assistance on the improvement of the methodologies and procedures for energy data collection, including various surveys (petroleum product sector, agriculture, construction, households, transport, renewables). | An integrated system for energy data collection is established, new procedures are introduced.  | Increased capacity of National Statistics Service (NSS) to collect energy data. Improved energy planning.      | Energy data collection                                     |
| CWP.12.AM                 | Technical assistance on the improvement of the methodologies and procedures for energy data dissemination: development of   | Energy statistics and methodologies applied available to energy data users.   | Improved use of energy data for energy system planning and other national activities and policies.             | Energy Balances  |

| Reference numbers | Activities  | Expected results                                      | Expected impact  | Areas  |
|-------------------|---|---|--|--|
|                   | Standard Documentations (Quality Reports) for energy statistics and balances.   |   |  |  |
| CWP.13.AM         | Technical assistance in developing short, medium and long term energy demand forecast and short term energy balances. | Energy demand and energy balances forecasts compiled. | Improved use of energy data for energy system planning and other national activities and policies. | Support to the use of energy planning tools. |