

## **IMPLEMENTATION OF INOGATE PROGRAMME IN ARMENIA, AZERBAIJAN AND GEORGIA**

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### **Abstract**

INOGATE Programme is one of the instruments designed for the implementation of the energy policy developed by the EU and the countries of the East European, Caucasus and Central Asian regions. Its objectives include the formation of a common energy market, increasing the security of supply, diversification, transit and supporting the development of energy efficiency and renewable energy sources. Armenia, Azerbaijan and Georgia were implementing projects in the framework of the programme between 2009 and 2014 in selected thematic areas, at a different pace and with emphasis on different thematic areas. Armenia focused on the introduction of energy passports for houses, Georgia – on the development of an energy efficiency plan and Azerbaijan – on the establishment of procedures increasing the security of petroleum, gas and energy transit. Of the three countries, Georgia made the most significant and Azerbaijan – the least progress; this was due to the policy pursued by this country which, in common with Armenia, aimed a less strong relationship with the EU.

**Key words:** *INOGATE Programme, Armenia, Georgia, Azerbaijan, EU, energy policy*

### **INTRODUCTION**

The instruments of energy policy in the Caspian Sea and Black Sea regions include the Baku Initiative as well as the INOGATE and TRACEA Programmes. Launched in 1996, INOGATE is one of the longest-running energy cooperation programmes between the European Union and 11 countries situated in: Eastern Europe (Ukraine, Belarus and Moldova), Caucasus (Armenia, Georgia and Azerbaijan) and Central Asia (Kazakhstan, Kyrgyzstan, Turkmenistan, Tajikistan and Uzbekistan). The Programme also operates within the framework of the Eastern Partnership initiative. Its objectives are: technical support of the restoration of the post-Soviet pipeline network and ensuring integration with Western pipelines. The goals to be fulfilled reflect the commitments of the EU: formation of a common energy market taking account of the specific character of the partner countries, increasing the security of supply,

diversification, transit, supporting the development of energy efficiency and renewable energy sources and participation in energy-related investments [Czech 2013]. INOGATE offers extensive technical support in the form of seminars and conferences serving the exchange of know-how, promotes dialogue between countries, contributes to the establishment of contact between the EU, partner countries and other countries and to dissemination of information about INOGATE energy policy [Kaczmarek 2010: 124]. The EU is represented in the Programme structures by the European Commission, whereas the representatives of other participants are the relevant ministers responsible for energy. The three South Caucasus countries – Armenia, Azerbaijan and Georgia – have been active participants in the programme since 1996, represented in its structures by selected delegates. Armenia is represented by the head of department of foreign relations in the Ministry of Energy and Natural Resources of the Republic of Armenia. In Azerbaijan this function is performed by the head of administration in the Ministry of Industry and Energy of the Republic of Azerbaijan, whereas in Georgia – by the chief adviser to the Minister of Energy and Natural Resources. Of the three countries, only Azerbaijan has petroleum and gas deposits and 90% of the energy produced by this state is generated by thermal power plants. Owing to the lack of fossil fuel deposits, Armenian economy is based on nuclear energy and hydroelectric power stations, which generate ca. 40% of the total energy [Nieczuja-Ostrowski 2014: 14]. Georgia has no such resources, either. 37.1% of electric energy in this country is generated from fossil fuels and 62.9% by hydroelectric power stations. There are no nuclear power stations in Georgia; alternative sources of energy are not used here, either [Energy Sector of Georgia 2013].

INOGATE Programme has been engaged in the analysis and evaluation of the infrastructure for gas extraction and transport in the partner countries since 1996. Considerable emphasis is placed on the construction of modern oil, gas and electrical energy networks. In 2004, during the first ministry conference on energy cooperation, four priority areas of cooperation between the EU and partner countries were defined: energy market convergence based on EU market principles, increasing the security of energy supplies, support for sustainable energy and energy efficiency development, as well as participation in investments related to energy [Adamiec 2010: 123]. To achieve its objectives, INOGATE began to prepare a work plan in 2007 and a year later it started to introduce international energy standards in the participant countries. Since 2009 INOGATE has been supporting EU initiatives with respect to sustainable energy and technology harmonisation, placing emphasis on the development of renewable energy use and energy efficiency. The purpose of this article is to analyse and evaluate the progress of the INOGATE Programme in the three Caucasus region countries: Armenia, Azerbaijan and Georgia until the end of 2014.

## **INOGATE INSTITUTIONS AND THEMATIC AREAS**

A range of institutions in Armenia, Azerbaijan and Georgia are involved in the implementation of INOGATE Programme. A list of these institutions is shown in Table 1.



**Table 1.** Institutions participating in the implementation of INOGATE Programme in Armenia, Azerbaijan and Georgia

Armenia	Azerbaijan	Georgia
<ol style="list-style-type: none"> <li>1. Ministry of Energy and Natural Resources</li> <li>2. Public Services Regulatory Commission</li> <li>3. EU Delegation</li> <li>4. National Statistical Office</li> <li>5. Renewable Resources and Energy Efficiency Fund</li> <li>6. Electric Networks Company</li> <li>7. Yerevan State University of Architecture and Construction</li> <li>8. German-Armenian Fund</li> <li>9. Climate Change Information Centre</li> </ol>	<ol style="list-style-type: none"> <li>1. Ministry of Industry and Energy</li> <li>2. EU Delegation</li> <li>3. Tariff Council</li> <li>4. Ministry of Economic Development</li> <li>5. Association of Engineers and Specialists</li> <li>6. SOCAR</li> <li>7. EBRD Delegation</li> <li>8. State Committee for Standardisation, Metrology and Patents</li> </ol>	<ol style="list-style-type: none"> <li>1. Ministry of Energy and Natural Resources</li> <li>2. EU Delegation</li> <li>3. Georgian Oil and Gas Corporation</li> <li>4. Georgian National Energy and Water Supply Regulatory Commission</li> <li>5. Electrical Power System Commercial Operator</li> <li>6. Georgian Gas Transport Company</li> <li>7. Georgian National Agency for Standards and Metrology</li> <li>8. Georgian Electro System</li> <li>9. EBRD Delegation</li> <li>10. Energy Efficiency Centre</li> </ol>

Source: own work based on INOGATE GEORGIA, INOGATE ARMENIA, INOGATE AZERBAIJAN, <http://www.microsofttranslator.com/bv.aspx?from=en&to=pl&a=http%3A%2F%2Fwww.inogate.org%2Fcountries%2F4%3Flang%3Den> [22.10.2015]

The data in Table 1 indicate that Georgia has the greatest and Azerbaijan – the smallest number of institutions participating in INOGATE Programme. There is a European Union Delegation in all the three countries but only Azerbaijan and Georgia have EBRD Delegations that take part in the Programme activities [INOGATE & Azerbaijan; INOGATE & Georgia 2015].

The activities in the framework of INOGATE Programme are grouped in the following thematic areas:

1/ Energy policy, encompassing the issues of global warming and liquid fuel depletion. The INOGATE Programme closely cooperates with the countries' ministries and agencies responsible for the implementation of energy policy. Organisations in these countries may apply for assistance in the transformation of legislation, development of action plans and support of work on the use of renewable energy sources.

2/ Energy markets reflecting the dependence of INOGATE partner countries on imported oil, gas and energy. It is necessary to create an integrated energy market and make efforts aimed at stabilisation of prices. There are also plans to create a common renewable energy market [Antoń 2014: 75]. INOGATE supports cross-border energy cooperation as well as collaboration with other countries from East European, Caucasus and Central Asia regions.

3/ Energy security, largely depending on transport efficiency and systematic supplies of gas and oil. The losses in fuel transfer in the region of Caucasus and Central Asia have been estimated at 20–25%. They are due to fuel theft, inaccurate metering and default in payments [Zasztowt 2008: 275–276]. In order to reduce these losses, the partner countries undertook the construction of new pipelines and collection of outstanding payments.

4/ Energy tariffs, established while taking into account the size of imports and as well as quality and security of supplies. The Programme aims to reduce the differences in the methodologies used by the partner countries to set their tariffs.

5/ Energy investments contributing to the economic development of the individual countries. The INOGATE Programme provides for co-funding of the most important projects in this sector.

6/ Energy efficiency improvement measures undertaken by the individual countries in order to reduce energy consumption. It is one of INOGATE's goals to prepare the legal framework for these measures and create favourable conditions for their implementation. INOGATE organises training and specialist courses devoted to energy consumption in residential buildings and the industry sector.

7/ Energy statistics, showing the progress in the implementation of energy policy. Since 2012 INOGATE with Eurostat and International Energy Agency developed 11 action plans for partner countries and helped some of the states to prepare energy balances in compliance with EU standards.

8/ Energy standards which, if adopted by the partner countries, would facilitate access to markets, increase competitiveness, protect consumers, improve efficiency and reduce risk. In 2008 the process of translation of EU standards into the languages of the participants in the INOGATE Programme was commenced, as well as organisation of seminars presenting the EU standardisation systems.

9/ Renewable energy, which would enable reduction in greenhouse gas emission and contribute to better protection of the natural environment.

While participating in INOGATE, Armenia, Azerbaijan and Georgia completed a number of projects with the use of Programme funds. Armenia was the beneficiary of 33 projects out of the 70 implemented in the framework of INOGATE. They were initiated in 2006 during a working meeting between the EU and countries from the Black Sea and Caspian Sea regions. Subsequent meetings of the group with the participation of Armenia were devoted to efficient management of the generation of and demand for renewable energy. Representatives of Armenia attended a training course organised in Budapest in November 2009, elaborating the legal regulations in the transformation period, and a seminar on the methodology of harmonisation of legislation in the energy sector of the partner countries in Tashkent in June 2010. A month later, in July 2010, these representatives took part in workshops on energy market regulations. In November 2010 a meeting was held in Minsk, presenting the adopted legislation related to renewable energy issues. In November 2010, at a conference held in Kiev, countries of Eastern Europe and Caucasus regions made an attempt to prepare harmonisation of the oil and gas market in that area. Mayors of the largest cities of Eastern Europe and Caucasus region, including Armenian cities, also attended a meeting devoted to efficient energy use in December 2010. A workshop in January 2011, concerned with the preparation of energy passports for buildings, concluded with a study visit of delegates from Eastern Europe and Caucasus region to Brussels. The work plan prepared for 2012 provided for improvement of knowledge of practical energy policy solutions in EU countries and numerous study visits in countries using renewable energy: Slovakia, Lithuania, Latvia, Estonia and Great Britain. In September 2012 a workshop on energy communication was held in the capital city of Armenia. In June 2013 an agreement between INOGATE and Armenia was signed, obliging the country to take measures aimed at harmonisation of legal acts with respect to energy policy and statistics [INOGATE & Armenia 2015]. The seminars and meetings held during 2014 were devoted to EU funding opportunities for projects within the individual thematic areas.

Georgia, the beneficiary of 36 out of 70 projects implemented, remained the leader in energy sector transformation. Since 2006, it participated in meetings, workshops and training related to seven out of eight thematic platforms. Georgia did not focus on the same issues as Armenia. Highest importance was placed on the broadly defined energy security, including the security of supply, which was discussed at meetings in Tbilisi in 2007, Brussels in 2008 and Astana in 2009, as well as during communication workshops attended by mayors of Georgian cities in Tbilisi in 2010. Georgia was a more frequent participant in training sessions on electrical energy market regulation in partner countries and financing of energy-related projects; it also became familiar with the Energy Roadmap of European Union countries. In June 2013, in common with Armenia, Georgia signed the agreement documenting mutual arrangements and obligating it to take measures aimed at harmonisation of legal acts with respect to energy policy and statistics. Subsequent meetings and seminars enabled Georgia to better prepare for drawing on EU's legislative and practical experience. Since 2009, after the initiation of the Eastern Partnership, the cooperation between Georgia and INOGATE increased [INOGATE & Georgia 2015]. Azerbaijan benefited from 33 out of 70 projects implemented in the framework of INOGATE. Similarly as Armenia and Georgia, it became involved in the joint efforts in March 2006 and participated in certain thematic areas of the Programme. The issue of particular importance for this oil and gas producer was regional cooperation in fuel supply, increasing investment in the fuel sector, particularly with respect to innovative technologies reducing gas losses during transport. Azerbaijan participated in a seminar on renewable energy sources. In practice, during the meeting of mayors, only one city – Icherisheher – agreed to reduce CO<sub>2</sub> emissions over a period of several years. The key issue from the viewpoint of Azerbaijan was the gas and oil tariffs, which had a direct impact on the country's GDP. In June 2013 Azerbaijan, Armenia and Georgia signed the agreement obliging the countries to take measures aimed at harmonisation of legal acts with respect to energy policy and statistics [INOGATE & Azerbaijan 2015]. All the projects implemented by Armenia, Azerbaijan and Georgia in the framework of INOGATE were soft projects. They were intended to acquaint the respective national institutions with EU achievements in the energy sector and to prepare them for necessary reforms.

### **IMPACT OF THE INOGATE PROGRAMME ON THE ENERGY INDUSTRY IN THE THREE COUNTRIES**

Armenia, Azerbaijan and Georgia were implementing projects in selected thematic areas at a different pace and with emphasis on different thematic areas. Although their cooperation with INOGATE started in 1996, the project implementation phase was between 2009 and 2014. A list of projects implemented in selected thematic areas in Armenia, Azerbaijan and Georgia is shown in Table 2.

**Table 2.** Projects implemented in Armenia, Azerbaijan and Georgia in the framework of INOGATE

Thematic area	Armenia	Azerbaijan	Georgia
Energy policy	Assistance to the Ministry of Energy and Natural Resource with the aim of introducing energy passports for residential buildings	Assistance to the Ministry of Industry and Energy for the purpose of creating an energy efficiency plan	Attaining a higher level of energy security, higher technical and economic efficiency, cooperation between the Georgian Electro System and INOGATE with the aim of introducing procedures enhancing oil, gas and electrical energy transfer security
Energy markets	Introduction of laws regulating the charges for connection to the power grid	Facilitating the parties' access to the energy sector and acquainting the partners with energy regulations	Work on aligning Georgian legislation with aqvis communautaire
Energy tariffs	Analysis and calculation of energy tariffs	Assistance to the Tariff Council with the aim of improving legislation to reduce losses in the energy and gas sectors	Review of electrical energy and gas tariffs according to EU requirements
Energy statistics	Development of a plan of energy consumption and energy quality for 2012–2014 by the National Statistical Office	Development of an energy consumption plan for 2012–2014 based on previous calculations	Preparation of an energy consumption plan for 2012–2014. A survey conducted in the enterprise and household sectors
Renewable energy	Preparation of a study concerning the use of renewable energy in buildings	Development, by the national operator, of a roadmap of demand until 2020	--
Energy efficiency	Research undertaken by Yerevan University and SEUA into the efficient utilisation of energy in industrial buildings	Preparation, by the University of Architecture and Construction, of educational materials intended to increase students' knowledge about energy efficiency	Audit and training sessions conducted by the Ministry of Energy and Natural resources devoted to the improvement of efficiency of energy use in residential buildings
Energy investments	Development a project by the Armenian Bank and Erste Bank Austria concerning renewable energy for heating greenhouses with the use of solar technology, with an overall value of EUR 2.8 million	Bank financing of energy audit training and establishment of the Centre for Strategic Studies	Improvement of financing of projects promoting the use of sustainable energy; providing access to international credit lines

Source: own based on INOGATE & Armenia, <http://www.inogate.org/countries/1?lang=en>; INOGATE & Georgia, <http://www.inogate.org/countries/4?lang=en>; INOGATE & Azerbaijan, <http://www.inogate.org/countries/2?lang=en> [ 21.10.2015].

The data presented in Table 2 suggest that each country took a different direction in the implementation of energy policy. Armenia focused on the introduction of energy passports for houses, Georgia began to develop an energy efficiency plan and Azerbaijan took steps to establish procedures increasing the security of petroleum, gas and energy transit. With respect to energy markets, Georgia was the only country that undertook to align its energy laws with aqvis communautaire. Azerbaijan



focused on becoming acquainted with the energy laws of the partner countries and Armenia targeted the issue of charges in the sector. The only country that conducted a tariff review according to EU requirements was Georgia. Armenia carried out tariff calculation, whereas Azerbaijan made slight adjustments in the national law [Investing in Azerbaijan Pipelines 2015]. The statistical offices of the three countries prepared energy consumption plans for 2012–2014. Only Armenia prepared a study concerning the use of renewable energy in buildings, while Azerbaijan produced a forecast of demand until 2020. Georgia took no practical measures in this respect [Renewable Energy 2015]. The energy efficiency objectives in Armenia were pursued by university research, in Azerbaijan – by improving students' knowledge and in Georgia – by organising training and audits. The energy sector investments in Armenia were financed by Armenian and foreign banks; in Azerbaijan – by Azerbaijani banks. Only Georgian investments were largely financed from EU funds. To evaluate the changes made in the energy sector in Armenia, Azerbaijan and Georgia, it is necessary to emphasise the low rate of progress and illusory character of the transformation [Nichol 2014]. The changes resulted from INOGATE objectives for 2009–2014, which included implementation of soft projects intended only as a preparation for transformation in the energy sector in order to approximate laws and subsequently adopt EU legislation and practices.

## **SUMMARY**

The INOGATE Programme is one of the instruments for implementation of energy policy developed by the EU and the countries of the East European, Caucasus and Central Asian regions. In 1996 it was joined by Armenia, Azerbaijan and Georgia. The INOGATE Programme in the partner countries was implemented within nine thematic areas, at a different pace and with emphasis on different thematic areas in the individual countries. Armenia focused on the introduction of energy passports for houses, Georgia – on the development of an energy efficiency plan and Azerbaijan – on the establishment of procedures increasing the security of petroleum, gas and energy transit. With respect to the implementation of energy policy in 2009–2014 Georgia was the most successful of the three countries, undertaking implementation of objectives in all the thematic areas except renewable energy sources. Despite Armenia and Azerbaijan's declaration of commitment in the Programme implementation, the changes in these countries were introduced at a far slower pace and were largely of illusory nature. This was also due to the policy pursued by Armenia and Azerbaijan which aimed a less strong relationship with the EU despite their attention to the region's energy security.



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