



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



PROGRAMME
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Updated Baseline Survey (Policy Document)

INOGATE Partner Countries Institutional and Regulatory Frameworks in Sustainable Energy

On-line database with sustainable energy policies of the PCs

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

The following abbreviations will be used throughout this document:

AHEF	Ad Hoc Expert Facility
CC	Country Coordinator
DSO	Distribution System Operator
EE	Energy Efficiency
EnC	Energy Community
EPC	Energy Performance Contract
ESCO	Energy Service Company
FIT	Feed-in Tariff
GDP	Gross Domestic Product
GHG	Greenhouse Gas
ITS	INOGATE Technical Secretariat
MUD	Ministry of Urban Development of Armenia
NEEAP	National Energy Efficiency Action Plan
NERC	National Commission for State Energy Regulation
NREAP	National Renewable Energy Action Plan
PC	Partner Country
PSRC	Public Services Regulatory Commission of Armenia
RE	Renewable Energy
RES	Renewable Energy Sources
SAARES	State Agency for Alternative and Renewable Energy Sources of the Azerbaijan Republic
SAEE	State Agency on Energy Efficiency and Energy Saving in Ukraine
SE	Sustainable Energy
TSO	Transmission System Operator

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Executive summary

This report comprises the results of the baseline survey of institutional and regulatory frameworks in sustainable energy (SE) in INOGATE Partner Countries (PCs), namely Azerbaijan, Armenia, Belarus, Georgia, Moldova and Ukraine. The survey was conducted according to sub-task C1-2 “Baseline survey / update of country institutional and regulatory frameworks” of INOGATE Technical Secretariat (ITS) project. The purpose of this document is to assess the state-of-play in terms of the institutional setting, including regulatory practices and regulatory reform susceptible to facilitate energy efficiency (EE) and renewable energy sources (RES) development in each PC. The specific objective of this work is inherently to better understand the prevailing situation as well as the pace and direction of regulatory reform, through identifying obstacles and gaps towards sustainable development in the legislation and institutional frameworks.

The document has five chapters. Chapter 1 provides the background of the Baseline Survey and highlights the importance of this document in identifying gaps and obstacles in institutional and regulatory frameworks in order to facilitate the sustainable development of Partner Countries. The Baseline Survey was not developed from scratch, as a significant number of studies in the SE field have been published in recent years. However, the previous studies did not provide a clear and concise message for policy makers on the overall reforms needed to improve EE and develop RES.

The methodology of the Survey is presented in Chapter 2, whereas Chapter 3 provides the results of the conducted survey per each PC. The survey represents a snapshot of the institutional and legislation framework in sustainable energy as of March 2016. Each PC profile contains 7 sections according to the methodology.

Chapter 4 shows the results of the analysis in matrix form, which clearly illustrates the gaps in the legislation framework in the SE field. The matrix can be used by policy makers as a tool for comparison of INOGATE Partner Countries and for the identification of the reform they needed to promote sustainable energy.

Chapter 5, “Conclusion and recommendations,” incorporates suggestions for the improvement and regional harmonisation of EE/RES policies with respect to best European practice. This chapter offers 15 recommendations aimed at determining to a great extent the specific areas that INOGATE Partner Countries should focus on.

1. Introduction

Good working relations between ITS and local stakeholders will serve the multiple purposes of:

- a) verifying the views of important stakeholders concerning potential proposals related to legal-regulatory reform;
- b) verifying areas of agreement and disagreement;
- c) building consensus;
- d) eventually mobilizing support for subsequent Project activities.

A critical step in this initial stage is to determine the current and expected role for energy efficiency and renewable energy development. This step should be focused on existing targets for sustainable energy, planned priority actions and institutional arrangements for policy implementation. An important role should be assigned to pricing and a tariff-setting system as well as to the enhancement of institutional capacities. In the same context, the existing incentive mechanisms for the improvement of EE and development of RES in PCs should be highlighted and made available to potential RES/EE developers.

More specifically, the document highlights an independent view on the key areas of the EE and RES policies and provides a baseline for the evaluation of the achievements of the INOGATE PCs on the way towards sustainable development in the future. The Survey will also serve as a tool for comparison of RES/EE policies in INOGATE PCs and for identification of reforms needed to achieve sustainable development of their economies.

It should also be mentioned that the document was not developed from zero as a significant number of studies, reports, policy documents, strategies and action plans have been already developed by the EU and other donors. However, the previous studies did not provide a clear and concise message on the overall reforms needed to achieve sustainable development. Nowadays, providing short and comprehensible information for policy makers becomes essential as people who can make decisions do not usually have time to read long and technical reports. Therefore, it is very important to provide a concise summary for policy makers on the state-of-play of PCs in the field of RES/EE and on the directions needed to achieve sustainable development.

2. Methodology

The report provides a 'snapshot' of the institutional and legislative framework in sustainable energy as of March 2016 unless another period is mentioned in the body of the report. The survey of six INOGATE Partner Countries, namely Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine, has been conducted using the common methodology, which consists of seven sections:

1. Membership in the Energy Community
2. The authority/organisation responsible for improvement of sustainable energy (SE)
3. Energy strategy or other main documents, which establish energy policy
4. Sustainable energy targets
5. Renewable energy legislation
6. Energy efficiency legislation
7. Electricity and gas prices

Section 1 "Membership in the Energy Community" provides general information about the status of the cooperation with the Energy Community (EnC). The progress towards becoming a full member of this organisation is a clear indicator of a PC's willingness to adopt EU legislation on EE and RES, which are the part of the EnC *acquis communautaire*.

Section 2 "The authority/organisation responsible for improvement of SE" describes the institutional framework in the fields of Sustainable Energy (SE). It includes identification of authorities responsible for the improvement of EE and RES in the country as well as information about legislation establishing their key duties.

Section 3 "Energy strategy or other main documents, which establish energy policy" provides information about key strategic documents which promote EE and RES in the country. This section also indicates whether the INOGATE PCs adopted National energy efficiency action plans (NEEAP) and National renewable energy action plans (NREAP) according to the EU Directives 2006/32/EC and 2009/28/EC respectively.

Section 4 "Sustainable energy targets" outlines information about the key long term targets in the following fields: Renewable energy, energy efficiency and CO₂ emissions.

Section 5 “Renewable energy legislation” describes the legislative framework on RES, which includes concise information about the following pieces of legislation:

- Primary legislation
 - Law on RE or any other laws which regulate development of RES
- Secondary legislation
 - Regulation on feed-in-tariffs (FIT) or other support mechanisms
 - Regulation on RES grid connection procedures
 - Regulation on other financial incentives for RES, like tax exemption, customs duty exemption, etc.

Section 6 “Energy efficiency legislation” describes the legislative framework on EE, which includes concise information about the following pieces of legislation:

- Primary legislation
 - Law on Law on EE or any other laws which regulate improvement of EE
- Secondary legislation
 - Mandatory building codes and regulations on minimum energy performance requirements
 - Regulation on appliances and equipment labelling
 - Regulation on other financial incentives for EE improvement, like obligatory energy audits, vehicle fuel-efficiency standards, activities of energy service companies (ESCO), energy performance contracts (EPC), etc.

Section 7 “Electricity and gas prices” provides key information about the tariff-setting system (tariff menu) which gives consumers correct signals for the improvement of energy efficiency. This section includes information on the authority responsible for setting energy tariffs and different types of residential and industrial tariffs, in the form of a table. The table shows the availability of the following tariffs in a country:

- *Single rate tariff* - sometimes referred to as ‘flat rate tariffs’ when a consumer is charged a fixed price per unit energy, no matter what quantity of energy is consumed or what time of day it is used.
- *Step (block) tariff* - the electricity or gas bill can be split into different tariff blocks, with each block charged at a different rate. When the consumer has reached the cap of the first block, any additional electricity or gas it uses is charged at the second block price and so on.

- Increasing block tariffs provide social protection of vulnerable consumers. The price increases if a consumer uses more energy. Declining block tariffs provide reduction of tariffs due to economy of scale if much energy is consumed.
- *Time-of-use price* – a consumer can be charged a different price depending on whether electricity is during the day, at night or on weekends. There are usually two (sometimes more) different price periods: peak and off-peak. Peak is the most expensive tariff period, and off-peak is the cheapest. Time-of-use pricing provides clear signals for consumers to use energy in a way that increases the efficiency of the whole power system.
 - *Voltage or capacity based tariffs* – an industrial consumer can be charged a different price depending on voltage or pressure level it is connected to the electricity or gas network. Due to the physical nature of energy losses, the higher the voltage or pressure level, the lower the tariffs.
 - *Two-part tariffs* - tariffs which consist of two or more parts, where the first part represents payment for the energy actually consumed, and the second part is a fixed fee, which a system operator charges for its services in a defined time period.
 - *Non-regulated tariffs* – a result of opening the electricity and gas market for consumers, giving them the ability to buy energy from producers using bilateral contracts and energy exchange, or to purchase electricity or gas from the wholesale market.
 - *Cross-subsidy* – shows that residential energy tariffs are not cost-reflective and are partially subsidised through higher industrial tariffs. Subsidized tariffs do not provide the right signals for households to implement energy efficiency measures.

Usually cross-subsidies can be graphically illustrated when residential tariffs are lower than industrial tariffs. The EU Directives 2003/54/EC and 2003/55/EC on common rules for the internal electricity/gas markets stipulate the removal of cross-subsidies in the EU member states. Therefore, a graphical comparison of residential and industrial energy tariffs in the PCs and the EU is provided at the end of the each PC's survey. The graphs illustrate the EUROSTAT¹ average electricity and gas tariffs in 28 EU countries and INOGATE PCs, which are calculated in €/kWh using the following methodology:

¹ <http://epp.eurostat.ec.europa.eu/portal/page/portal/energy/data/database>

- Electricity:
 - Households with an annual consumption of 3,500 kWh that are connected to low-voltage networks, all taxes and levies are included;
 - Industrial consumers with an annual consumption of 2 GWh that are connected to medium-voltage networks, all taxes and levies are included.
- Gas:
 - Households with an annual consumption of 30 MWh (2 800 m³ of gas) that are connected to low-pressure networks, all taxes and levies are included;
 - Industrial consumers with an annual consumption of 10 GWh (933 thousand m³ of gas) that are connected to medium-pressure networks, all taxes and levies are included.

The methodology for the assessment of the institutional and legislative framework can be revised based on the future needs of the INOGATE Partner Countries. The methodology can also be applied to conduct a baseline survey for INOGATE PCs in Central Asia.

3. INOGATE Partner Countries

3.1 Armenia

3.1.1. Membership in the Energy Community

Armenia became an observer of the EnC on 01.10.2011. In June 2013, the Government of Armenia expressed interest in becoming a full member of the Energy Community and this [initiative](#) was supported by ITS. However, no further steps towards becoming a contracting Party of the EnC have been taken since then. As the observer, Armenia does not have any responsibilities to implement EU acquis.

3.1.2. The authority/organisation responsible for improvement of SE in the country

[Ministry of Energy and Natural Resources](#) is the main responsible body for the improvement of EE and the development of RES in the country.

The Ministry's responsibilities for the improvement of sustainable energy are assigned by the Resolution of the Government of the Republic of Armenia № 55H dated 25.01.2005 "On granting the rights of an authorized body in the area of energy saving and renewable energy to the Ministry of Energy of Armenia".

3.1.3. Energy strategy or other main documents, which establish energy policy (promote EE & RES) in the country

There are six key strategic documents which establish energy policy in the country:

- "The Strategy of energy sector development in the context of economic development of the Republic of Armenia", adopted by the Protocol Decision № 1 of the Minutes № 24 of the Government Session of the Republic of Armenia dated 23.06.2005 ([en](#));
- "Action Plan of the Ministry of Energy of Armenia based on the provisions of the National Security Strategy of the Republic of Armenia", approved by the Government Resolution of the Republic of Armenia № 1296-H dated 01.11.2007([en](#));
- "National Programme on Energy Saving and Renewable Energy of Armenia", adopted by the Protocol Decision № 2 of the Government Session of the Republic of Armenia dated 18.01.2007 ([en](#));

- “Strategic Plan of Development of Hydro Energy of the Republic of Armenia” adopted by the Protocol Decision № 35 of the Government Session of the Republic of Armenia dated 08.09.2011;
- “The Concept of Providing Energy Security of the Republic of Armenia” 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).

All the above documents provide a general perspective of the development of the energy sector of Armenia and consider SE issues only from the perspective of developing wind and small hydro projects. The documents do not provide clear and transparent targets on the improvement of EE and the achievements of the share of RES in the country’s energy balance.

National renewable energy action plan – no legislation.

National energy efficiency action plan – the first [NEEAP](#) for 2011-2020 was approved by Government Resolution № 43 dated 4.11.2010. Even though the first NEEAP was developed for a 10-year period, Armenia with support of donor organisations started the development of the second NEEAP in 2015. The 2nd NEEAP aims at the development of more coherent targets and policies based on the collected statistical data and gained experience of the implementation of the 1st NEEAP during 2010-2015.

3.1.4. Sustainable energy targets

Renewable energy

The Strategy of energy sector development ([en](#)) stipulates that during next 15-20 years the electricity RES generating should reach 5,100 GWh, including:

- Hydro energy - 3,600 GWh (including medium and large HPP);
- Wind energy - 1,500 GWh.

The National Programme on Energy Saving and Renewable Energy ([en](#)) and Strategic Plan for Hydro Energy (2011) set the following targets by 2025:

- Construction of new small HPPs with installed capacity up to 400 MW, which will produce up to 1000 GWh annually.

- Construction of wind plants with an installed capacity of 200 MW, which will produce up to 525 GWh annually.

As of 2014, the installed capacity of operating SHPP was 282 MW, and of wind farms was 2.6 MW.

Energy efficiency - no strategic targets.

CO₂ emissions – no strategic targets.

3.1.5. Renewable energy legislation

Law on RE or any other laws which regulate development of RES -

- The Law of the Republic of Armenia "On Energy Saving and Renewable Energy" dated 09.11.2004 ([en](#)); As of March 2016, the new Law on Energy Efficiency and Renewable Energy is currently in the Parliament and is expected to be adopted by the end of 2016.
- The Law "on Energy" dated 21.03.2001 ([ru](#), [en](#)).

Regulation on feed-in-tariffs or other support mechanisms – The Resolution of the Public Services Regulatory Commission (PSRC) # 424-N dated 26.11.2014 "On approval of tariffs for sale of electricity generated from RES on the territory of the Republic of Armenia in 2012" sets the following FIT:

Wind power	0.079 €/kWh
Biomass	0.084 €/kWh
Small hydro	0,019-0.044 €/kWh

According to article 59 of the "Law on Energy", the obligatory purchase of electricity produced from RES using FIT is guaranteed for 15 years. However, there are no set tariffs or regulation on the calculation of the price of electricity produced from RES after the 15-year period.

Regulation on RES grid connection procedures - no specific legislation (provision in legislation framework) on RES grid connection.

In 2013, the New ITS Project implemented task "AHEF.18.AM."Grid connection procedure for RES power plants"", which was requested by Public Services Regulatory Commission (PSRC). As a result of this task, the introduction of new regulation on RES grid connection can be introduced in 2016.

Laws/regulation on financial incentives (tax exemption, custom duty exemption) for RES - no legislation.

3.1.6. Energy efficiency legislation

Law on EE or any other laws which regulate improvement of EE - The Law of the Republic of Armenia "On Energy Saving and Renewable Energy" dated 09.11.2004 ([en](#)). As of March 2016, the new Law on Energy Efficiency and Renewable Energy is currently in the Parliament and is expected to be adopted by the end of 2016.

Mandatory building codes and regulations on minimum energy performance requirements – the current requirement “Building Thermophysics of Fencing Constructions” RACN II-7.02.95 was approved about 25 years ago is outdated and has a very low level of enforcement. At the same time there are number of voluntary standards in this area, i.e. National Standard on Building Energy Profile (AST 363-2013) and Energy Auditing Methodology (AST 371-2016).

During the period May 2015 – February 2016, ITS provided technical assistance project “[CWP.04.AM \(AHEF.124.AM\)](#), 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” for the Ministry of Urban Development of Armenia (MUD). The project aimed at the development of an energy performance certification system according to the EU Directive on Energy Performance in Buildings, including the introduction of minimum energy performance of buildings.

Regulation on appliances and equipment labelling – Government Resolution “About the approval of the form of the energy labelling and application procedures for energy consuming appliances and equipment” № 1492-N dated 17.12.2015. The Resolutions introduces the general framework for energy labelling in Armenia according to the EU Directive 2010/30/EU. Regulations (standards) per energy product group are at the stage of development.

Other EE regulation (on industrial EE, vehicle fuel-efficiency standards, energy service companies and energy performance contracts) - The number of voluntary standards on energy savings are approved by the National Institute of Standards. During the period March - May 2015, ITS also provided technical assistance project “[AHEF.90.AM](#), Capacity Building: Industrial Energy Audit Analysis for Bankable Projects” that among other tasks included the improvement of legislative framework for Energy Service market in Armenia.

3.1.7. Electricity and gas prices

The authority responsible for setting energy tariffs: [Public Services Regulatory Commission of the Republic of Armenia \(PSRC\)](#).

Table 3.1.1 Differentiation on electricity and gas tariffs in Armenia

Tariff type	Electricity		Gas	
	Residential	Industrial	Residential	Industrial
Single rate	yes	yes	yes	-
Step (block)	-	-	-	yes (declining)
Time-of-use	yes	yes	-	-
Voltage/capacity dependent	-	yes	-	-
Two-part	-	-	yes	-
Non-regulated	-	-	-	-
Cross-subsidy	-		yes	

It should also be mentioned that the menu and rates of electricity tariffs for residential and industrial consumers are approved by the same document - PSRC regulation №233-N from 2014. There is also no differentiation of gas tariffs for different groups of consumers in Armenia. The PSRC regulation 190-N from 2013 establishes the following tariffs for all consumers:

- 292 € per thousand cubic meters, if a customer consumes up to 10 thousand cubic meters per month;
- 255 € per thousand cubic meters, if a customer consumes 10 thousand cubic meters or more per month.

The table above shows 'single rate' gas tariff for residential consumers only as very few residential consumers can consume more than 10 thousand cubic meters per month).

The two-part residential gas tariff in Armenia consists of the payment for gas actually consumed and the annual fee for technical maintenance service provided, which depends on the amount of gas burning appliances installed on the households' premises. The annual fee for the technical maintenance is regulated by the PSRC regulation 516-N from 2012.

A comparison of average energy tariffs in 28 EU countries and Armenia is presented below.

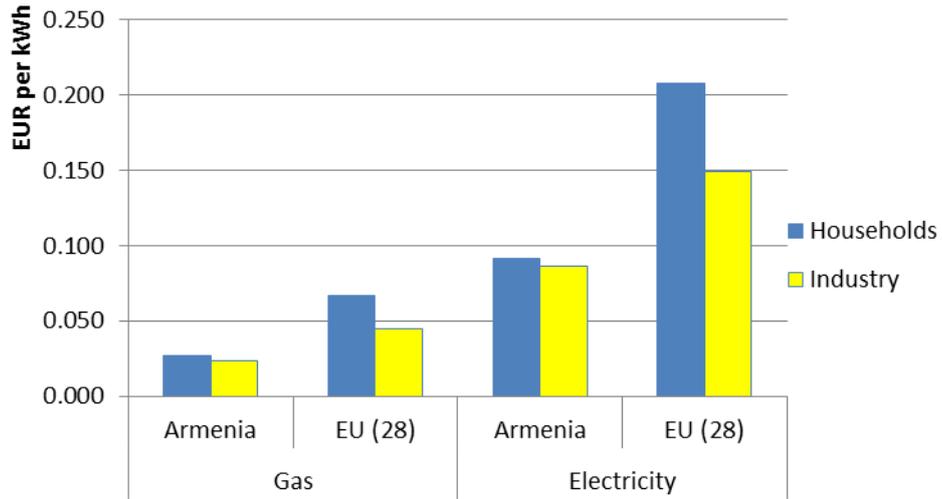


Fig 3.6.1. Comparison of energy tariffs (incl. all taxes and levies) in EU 28 as of second part of 2015 and in AM as of March 2016 (sources: <http://appsso.eurostat.ec.europa.eu> and national legislative documents approving energy tariffs)

3.2 Azerbaijan

3.2.1. Membership in the Energy Community

Azerbaijan is not a member of the Energy Community.

3.2.2. The authority/organisation responsible for improvement of SE in the country

[The Ministry of Energy](#) is the main responsible body for the improvement of EE in the country.

According to article 2.02 of the Provision of the Ministry of Energy of Azerbaijan, approved by Presidential Decree № 149 dated 11.04.2014, the Ministry ensures the implementation of actions related to a rational use of energy resources and the protection of the state's interest in this area.

During the period November 2013 - May 2014, ITS provided technical assistance project "AHEF.67.AZ. Support for the Creation of Energy Efficiency Department" helped the Ministry of Energy to design an institutional framework for the improvement of energy efficiency in the country. As a result of ITS assistance, the Energy Efficiency, Alternative and Renewable Energy Sources Department was created within the Ministry in May 2014. The Department is particularly responsible for the development and implementation of the state policy on energy savings and energy efficiency.

During the period from 01/2010 to 01/2012, the EU provided 13 million € to the Government of Azerbaijan within the framework of the EC Budget Support Programme. The assistance was devoted to the development of a strategy for energy efficiency and use of renewable energy resources. As a result of EC support program, there were developed but not yet approved the following legislative documents:

- National Strategy on the use of Alternative and Renewable Energy Sources (RES) for 2012-2020 (obtained comments and suggestions from relevant state bodies and the document is being improved)
- Action Plan on Renewable Energy Sources (short-term & mid-term), adopted by the Order of the Ministry of energy № 28 dated 05.07.2013
- Action Plan on Energy Efficiency (short-term & mid-term), adopted by the Order of the Ministry of energy № 28 dated 05.07.2013
- The Law on Alternative and Renewable energy Sources (ARES) (submitted to the Cabinet of Ministers for approval)

- The Law on Energy Efficiency (EE) (submitted to the Cabinet of Ministers for approval)
- 21 Secondary legislative documents (submitted to the Cabinet of Ministers for approval)

[State Agency for Alternative and Renewable Energy Sources of the Azerbaijan Republic \(SAARES\)](#) is the main responsible body for the development of RES in the country. SAARES was established in February 2013 according to article 1.1. of Presidential Decree «On additional measures in the field of alternative and renewable energy» dated 01.02.2013. The Agency was created on the basis of the State-owned Company on Use of Alternative and Renewable Energy (ABEMDA). However, as of March 2014, ABEMDA is a subsidiary of SAARES, which owns wind and solar installations and will continue developing government-funded RES projects in the country.

3.2.3. Energy strategy or other main documents, which establish energy policy (promote EE & RES) in the country

There are currently no strategic documents which established energy policy in the country. The previous State Programmes on Development of Fuel-energy complex in Azerbaijan in 2005-2015 years, approved by presidential decree dated 14.02.2005 ([en](#)) and on Use of Alternative and Renewable Energy Resources in Azerbaijan 2005-2013 years, approved by Presidential decree No 462, dated 21.10.2004 ([en](#)) are outdated and the new Programmes have not been approved yet.

At the same time, the Government of Azerbaijan developed a draft State Program on “Energy Savings and Energy Efficiency of the end-consumers, 2016-2020” which is currently under review by relevant institutions. It should also be mentioned that on July 23, 2015, the Minister of Energy approved ten strategic tasks for the future development of energy sector of Azerbaijan, among which are the development of the following strategic documents:

- Strategy for the energy sector development of the country for next 25-30 years;
- State Program for the efficient use of energy resources, improvement of end user energy efficiency and the use of alternative energy sources for next 15-20 years;
- 5-year State Program for energy sector development.

[National Renewable Energy Action Plan](#) – no legislation.

[National Energy Efficiency Action Plan](#) – no legislation.

3.2.4. Sustainable energy targets

It is important to note that there are no officially approved targets for sustainable energy in Azerbaijan. However, as results of the EC support reform programme (see section 3.2.2), the following targets were proposed for adoption:

- a reduction in GHG of at least 20% below 1990 level
- 20% share of RES in the overall energy consumption by 2020
- 20% increase in EE compared to a business-as-usual scenario by 2020

Renewable energy – no officially approved targets.

Energy efficiency – no officially approved targets.

CO₂ emissions – no officially approved targets.

It should also be mentioned that even though there are no strategic targets for the reduction of GHG emissions, this issue is regulated by two laws:

- Law on Protection of Atmosphere Weather, dated 27.03.2001, No109-IIQ;
- Law on Joining to the Frame Convention on Climate Changes, Kyoto Protocol of Azerbaijan, dated 18.07.2000, No 912-IQ.

3.2.5. Renewable energy legislation

Law on RE or any other laws which regulate development of RES - the legislation is under development.

Regulation on feed-in-tariffs or other support mechanisms – Resolution of the Tariff (Price) Council of Azerbaijan Republic № 3 dated 06.01.2007 ([en](#)), is in fact the main document in the country which regulates generation costs, FIT and end-user tariffs. The Resolution sets the following FIT:

Wind plants	0.026 €/kWh
Small hydro power plants	0.015 €/kWh

It should also be mentioned that the document does not guarantee the obligatory purchase of electricity produced by RES in the long term.

Regulation on RES grid connection procedures - no specific legislation (provision in legislation framework) on RES grid connection.

Laws/regulation on financial incentives (tax exemption, custom duty exemption) for RES

According to the Cabinet of Ministers Decision “On the list of imported goods which benefit from VAT exemption,” No11 dated 31.01.2005 (with amendments from 25.04.2014), import of equipment and materials for renewable energy installation and LED lamps are exempt from VAT. The same equipment and materials are also exempt from the customs duty according to the Cabinet of Ministers Decision “On duties for export-import operations” No91 dated 22.04.1998 (with amendments from 25.04.2014).

3.2.6. Energy efficiency legislation

Law on EE or any other laws which regulate improvement of EE- no legislation on EE in Azerbaijan. However, Chapter 3 of the Law on Energy Resources Utilisation No: 94-IQ, dated 30.05.1996 ([en](#)), stipulates that energy efficiency measures have to be taken during extraction, processing, transportation, storage and consumption of the energy resources.

Mandatory building codes and regulations on minimum energy performance requirements
- the legislation is under development.

Regulation on appliances and equipment labelling – no legislation in this area. The introduction of energy labelling is a part of the draft State Program on “Energy Savings and Energy Efficiency of the end-consumers, 2016-2020” which is currently under review by relevant institutions.

Other EE regulation (on industrial EE, vehicle fuel-efficiency standards, energy service companies and energy performance contracts) - no legislation in this area, except Euro 4 emissions standard (2005) for vehicles is identified. According to the Cabinet of Ministers decision № 2 dated 14.01.2014, from April 2014 all vehicles which are being used and imported to Azerbaijan have to meet Euro 4 requirements.

3.2.7. Electricity and gas prices

The authority responsible for setting energy tariffs: [Tariff \(Price\) Council of Azerbaijan Republic](#).

Table 3.2.1 Differentiation on electricity and gas tariffs

Tariff type	Electricity		Gas	
	Residential	Industrial	Residential	Industrial
Single rate	yes	yes	Yes	Yes
Step (block)	-	yes (declining)	-	yes (declining)
Time-of-use	-	yes	-	-
Voltage/capacity dependent	-	-	-	-
Two-part	-	-	-	-
Non-regulated	-	-	-	-
Cross-subsidy	yes		yes	

It should also be mentioned that there is no differentiation of tariffs for different groups of consumers in Azerbaijan. According to the Tariff Council's Decision, electricity tariff for all consumers in Azerbaijan is 0.035 €/kWh. However, for aluminium, steel and chemistry plants which consume monthly at least 5 GWh – the tariff is 0.025 €/kWh in daytime and 0.012 €/kWh at night. The natural gas tariff for all consumers is 58.5 €/1000 m³. If monthly consumption is more than 10 million m³ – the tariff is 46.8 €/1000 m³ (the table above shows ‘single rate’ gas tariff for residential consumers as only large industrial consumers can possibly consume more than 10 million m³ per month).

A comparison of average energy tariffs in 28 EU countries and Azerbaijan is presented below.

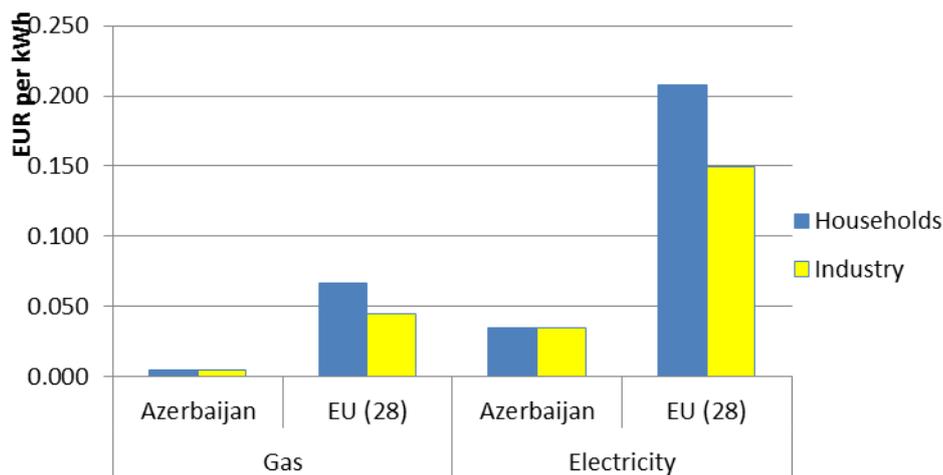


Fig 3.6.1. Comparison of energy tariffs (incl. all taxes and levies) in EU 28 as of second part of 2015 and in AZ as of March 2016 (sources: <http://appsso.eurostat.ec.europa.eu> and national legislative documents approving energy tariffs)

3.3 Belarus

3.3.1. Membership in the Energy Community

Belarus is not a member of the Energy Community.

3.3.2. The authority/organisation responsible for improvement of SE in the country

[The Department on Energy Efficiency of the State Committee for Standardization of the Republic of Belarus](#) is the main responsible body for the improvement of EE and the development of RES in the country. The department responsibilities are assigned by the Resolution of the Council of Ministers of the Republic of Belarus № 981 dated 31.07.2006 ([ru](#)).

3.3.3. Energy strategy or other main documents, which establish energy policy (promote EE & RES) in the country

The Strategy of energy potential development in the Republic of Belarus, approved by the Resolution of the Council of Ministers of the Republic of Belarus № 1180 dated 09.08.2010, represents the key strategic document which establishes RES and EE targets by 2020 ([ru](#)). However, the strategy is outdated and the Updated Strategy until 2025 should be approved in 2017.

At the same time, the updated indicators on the development of EE & RES by 2020 and 2035 are envisaged by the State Programme and the Concept of Energy Security accordingly:

- The State Programme “Energy efficiency 2016-2020” approved by the Resolution of the Council of Ministers of the Republic of Belarus №248 dated 28.03.2016 ([ru](#)).
- Concept of Energy Security of Republic of Belarus until 2035, approved by the Resolution of the Council of Ministers of the Republic of Belarus № 1084 dated 23.12.2015 ([ru](#)).

National energy efficiency action plan – no legislation.

National renewable energy action plan – no legislation.

3.3.4. Sustainable energy targets

The Strategy of energy potential development in the Republic of Belarus, approved by the Resolution of the Council of Ministers of the Republic of Belarus №1180 dated 09.08.2010 ([ru](#)) does not provide a separate target for RES development in Belarus, but share of own resources, including peat, oil, associated petroleum gas, brown coal and oil

shale. The main reason for combining local RE and conventional sources into one target was that the strategy mainly targeted the improvement of the energy security of the country rather than mitigates the impact on the environment.

At the same time, the Concept of Energy Security of Republic of Belarus, approved by the Resolution of the Council of Ministers of the Republic of Belarus № 1084 dated 23.12.2015 ([ru](#)) envisages the following targets until 2035:

Renewable energy

- Share of RES in energy mix – 9% by 2035 (Strategy envisages 32-34% share of own resources including RES by 2020);

Energy efficiency:

- 37% of the reduction of GDP energy intensity compared to 2010 by 2035;

CO₂ emissions – no strategic targets.

3.3.5. Renewable energy legislation

Law on RE or any other laws which regulate development of RES -

- "The Law of the Republic of Belarus "On Renewable Energy Sources" (№ 204-3 dated 27.12.2010) ([ru](#));

Regulation on feed-in-tariffs or other support mechanisms – There are two key support instruments for the development of RES in Belarus: maximum FITs and Quotas.

The Resolution of the Ministry of Economy “About electricity tariffs produced from RES” № 45 dated 07.08.2015 ([ru](#)) envisages the following maximum FITs (as of March 2016):

Wind power	0.1462 €/kWh
Solar	0.3036 €/kWh
Biomass	0.1462 €/kWh
Small hydro	0.1237 €/kWh
Geothermal	0.1462 €/kWh

The approved maximum FIT can vary from month to month as they are connected to the end-user tariffs for industrial consumers with installed capacity up to 750 kVA (end-user tariff * coefficient). The maximum obligatory purchase of the electricity produced from

RES is 20 years: coefficient = 2.7 for solar, 1.1 for wind and hydro and 1.3 for other RES during first 10 years, and coefficient = 0.85 during years 11-20.

At the same time it should be highlighted that from 2015, the above FITs represent the maximum tariffs that a developer can obtain based on a quota for each region in Belarus. Basically, RES developers submit their proposals (FIT and obligatory purchase periods) to a commission with the participation of the [Ministry of Energy](#), the [Ministry of Economy](#) and the [Department on Energy Efficiency](#). Based on the evaluated proposals, the FITs and the durations of the guaranteed purchase are approved separately for each developer. Quotas are regulated by the following legislative acts:

- the Decree of President of the Republic of Belarus “About use renewable energy” №209 dated 18.05.2015 ([ru](#))
- Resolution of the Council of Ministers of the Republic of Belarus “About setting and allocation renewable energy quotas” №662 dated 06.08.2015 ([ru](#)).

Regulation on RES grid connection procedures – article 21 of the Law on RES ([ru](#)) establishes the shallow costs of the RES grid connection. According to this scheme, a RES developer covers costs for the connection to the nearest point of the existing grid and a DSO/TSO covers all other expenses for modernisation/reinforcement of the existing grid.

Laws/regulation on financial incentives (tax exemption, custom duty exemption) for RES – according to articles 96 and 194 of the Tax Code of the Republic of Belarus (№ 71-3 dated 29.12.2009, [ru](#)), renewable energy installations are subject to the exemption from VAT on goods imported to the territory of the Republic of Belarus and exemption from the land tax.

It should also be mentioned that the New ITS Project implemented task “[AHEF 26.BY](#), Improvement of the current legislation aimed at RES promotion in heat and electricity generation” in 2013. The assistance was requested by the Ministry of Natural Resources and Environmental Protection. As results of this task, the ITS experts proposed changes to the legislation framework aimed at the facilitation of the development of RES in the country.

3.3.6. Energy efficiency legislation

Law on EE or any other laws which regulate improvement of EE - The Law "On Energy Saving" № 239_3 dated 08.01.2015 ([ru](#)).

Mandatory building codes and regulations on minimum energy performance requirements:

- The minimum energy performance of 60 kWh / m² /year (30-40 kWh / m² /year in perspective until 2020) are foreseen by the Comprehensive program for the design, construction and reconstruction of energy efficient residential houses in the Republic of Belarus for 2009-2010 and up to 2020, approved by the Resolution of the Council of Ministers № 706 dated 01.06.2009 ([ru](#)).
- Technical Code TKP 241-2010 (02230) Procedure of the development of feasibility study for the selection of heating supply schemes when constructing and reconstructing of facilities ([ru](#)).

Regulation on appliances and equipment labelling – no legislation on EU energy labelling, but national standard on energy efficiency of household electric appliances from that was introduced in 01.11.2002 (STB 1312-2002). There are also 61 standards ([ru](#)) on minimum requirements on energy efficiency of equipment that were introduced in 2011 and developed according the President's Directive "Savings and Economy – key factors of economic security of the state" № 3 dated 14.06.2007 ([ru](#)).

It also should be mentioned that on 31.11.2014 the State Committee for Standardization approved a list of 93 standards on energy efficiency that have to be harmonised with the EU ([ru](#)).

Other EE regulation (on industrial EE, vehicle fuel-efficiency standards, energy service companies and energy performance contracts):

- 174 standards in the area of energy efficiency (including 61 standards on minimum requirements for EE mentioned above), are operating as of 31.03.2016 ([ru](#)).
- Directive of the President of the Republic of Belarus № 3 as of 14.06.2007 "Savings and economizing are the main factors of economic security of the state" ([ru](#));
- Number of other documents secondary and tertiary documents on energy efficiency

3.3.7. Electricity and gas prices

The authority responsible for setting energy tariffs:

- [Council of Ministers](#) approves residential tariffs.
- [Ministry of Economy](#) approves industrial tariffs.

Table 3.3.1 Differentiation on electricity and gas tariffs in Belarus

Tariff type	Electricity		Gas	
	Residential	Industrial	Residential	Industrial
Single rate	yes	yes	-	-
Step (block)	yes (increasing)		yes (increasing)	yes (declining)
Time-of-use	yes	yes (individually based on the methodology)	yes	-
Voltage/capacity dependent	-	yes (under or above 750 kva)	-	-
Two-part	-	yes	-	-
Non-regulated	-	-	-	-
Cross-subsidy	yes		yes	

A comparison of average energy tariffs in 28 EU countries and Belarus is presented below.

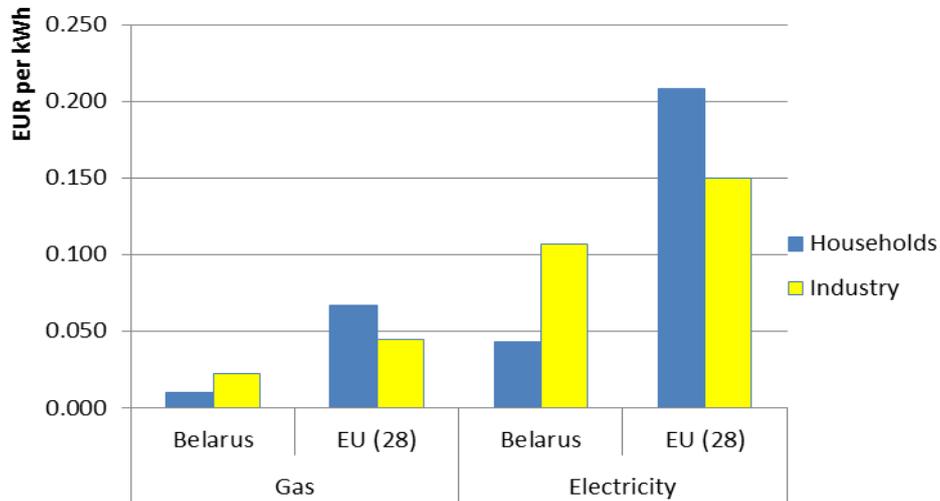


Fig 3.6.1. Comparison of energy tariffs (incl. all taxes and levies) in EU 28 as of second part of 2015 and in BY as of March 2016 (sources: <http://appsso.eurostat.ec.europa.eu> and national legislative documents approving energy tariffs)

3.4 Georgia

3.4.1. Membership in the Energy Community

Georgia became an observer of the EnC in December 2007. In February 2013, the Government of Georgia expressed interest in becoming a full member of the Energy Community and this initiative was supported by ITS project². ITS conducted the “Workshop on EU Directives and legally binding obligations in the area of Sustainable Energy under the Energy Community Treaty” for the Ministry of Energy and other interested stakeholders in Georgia. As of March 2016, the Georgian application for full membership is pending approval in the EnC.

3.4.2. The authority/organisation responsible for improvement of SE in the country

Ministry of Energy is the main responsible body for the improvement of EE and the development of RES in the country (<http://www.energy.gov.ge>).

The Ministry’s responsibilities for the improvement of sustainable energy are assigned by the Georgian Law "On Electricity and Natural Gas" dated 30.04.1999.

3.4.3. Energy strategy or other main documents, which establish energy policy (promote EE & RES) in the country

- Energy policy “Main Directions of State Policy in the Power Sector of Georgia” adopted by the Parliament № N3758-IIS dated 24.07.2015.
- State program “Renewable energy 2008”, approved by the Governmental Decree № 107 dated 18.04.2008
- Socio-Economic Development Strategy to 2020, referred to as “Georgia 2020” approved by the Government of Georgia on 06.06.2014.

It should also be mentioned that the first two policy documents are devoted to the development of hydro power only and does not establish clear and transparent targets on the improvement of EE and the achievements of the share of RES in the energy balance of the country.

Georgia 2020 establishes general economic priorities and main directions for country’s energy sector development aimed at enhancing energy security and self-sufficiency. In 2013 the Government of Georgia also launched a process of updating the Country’s

² http://www.inogate.org/index.php?option=com_inogate&view=activity&cid=239&pid=72&Itemid=75&lang=en

energy strategy, aiming at developing a policy with longer-term perspective to 2030 with the support of USAID's Hydro Power and Energy Planning Project. The draft Energy strategy of Georgia from 2015 to 2030 has been prepared and presented to the government of Georgia in July 2014

National renewable energy action plan – no legislation.

National energy efficiency action plan - the EBRD plans to provide technical assistance to the Ministry of Energy of Georgia on the preparation, drafting, adoption process and publishing of the country's first NEEAP in May 2016.

3.4.4. Sustainable energy targets

Renewable energy - no strategic targets.

Energy efficiency - no strategic targets.

CO₂ emissions – no strategic targets.

3.4.5. Renewable energy legislation

Law on RE or any other laws which regulate development of RES – the Law on RES is under development.

Regulation on feed-in-tariffs or other support mechanisms – no legislation. However, there are some documents approved by the Georgian National Energy and Water Supply Regulatory Commission, which deregulate tariffs for electricity produced from SHPP, i.e. SHPPs (less than 13 MW installed capacity) can directly sell electricity to any retail customer at unregulated tariffs.

Regulation on RES grid connection procedures - no specific legislation (provision in legislation framework) on RES grid connection. It should also be mentioned that component "National grid code regulation and standards that enable electricity from RES to feed into the national power grid" will be the part of a new 4-year TA project "Support to Energy Efficiency and Sustainable Energy in Georgia" financed by the Danish Neighbourhood Programme that will commence in June 2016.

Laws/regulation on financial incentives (tax exemption, custom duty exemption) for RES - no legislation.

3.4.6. Energy efficiency legislation

Law on EE or any other laws which regulate improvement of EE – no legislation

Mandatory building codes and regulations on minimum energy performance requirements

- no minimum energy performance requirements in buildings in Georgia. The Ministry of Economy and Sustainable Development (MoESD) is currently working on a number of initiatives to provide foundation for enhancing energy efficiency in buildings. The most important one is the draft of the Construction Code to be submitted to the Parliament of Georgia for hearing and adoption in 2016. However, Article 103 of the draft Code makes only general provisions for minimum energy performance requirements.

Currently EBRD also supports “Market Study of Residential Sector and Housing Sector Reform” key stakeholders – Ministry of Economy and Sustainable Development and Ministry of Energy. The project was launched in April, 2015 and envisages market assessment for EE financing of the residential sector: policy, legal, regulatory, institutional, technical and financial Considerations and drafting Amendments to the Housing Codes. In June 2016, the Danish Neighbourhood Programme will commence a new 4-year TA project “Support to Energy Efficiency and Sustainable Energy in Georgia” that will include component “Formulation of New National Energy Efficiency Building Code to support introduction of minimum energy efficiency requirements in public buildings in Georgia”.

Regulation on appliances and equipment labelling – no legislation. It should also be mentioned that component “Legislation on Labelling of energy related products and its delegated acts” will be the part of the 4-year TA project “Support to Energy Efficiency and Sustainable Energy in Georgia” financed by the Danish Neighbourhood Programme that will commence in June 2016.

Other EE regulation (on industrial EE, vehicle fuel-efficiency standards, energy service companies and energy performance contracts) - no legislation.

3.4.7. Energy tariffs

The authority responsible for setting energy tariffs: Georgian National Energy and Water Supply Regulatory Commission

Table 3.4.1 Differentiation on electricity and gas tariffs

Tariff type	Electricity		Gas	
	Residential	Industrial	Residential	Industrial
Single rate	-	-	yes	-
Step (block)	yes (increasing)	-	-	-
Time-of-use	-	-	-	-
Voltage/capacity dependent	-	yes	-	Yes
Two-part	-	-	-	-
Non-regulated	-	yes ³	-	-
Cross-subsidy	-		-	

A comparison of average energy tariffs in 28 EU countries and Georgia is presented below.

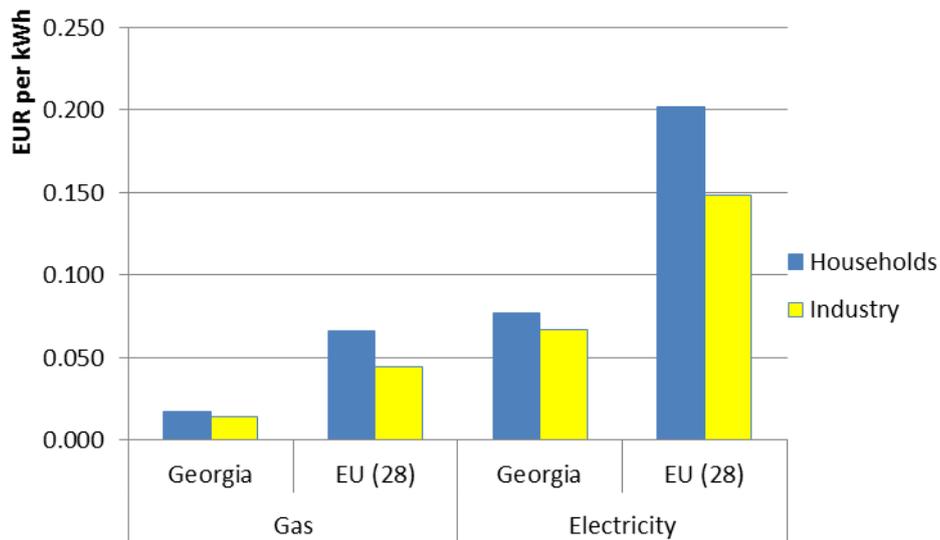


Fig 3.6.1. Comparison of energy tariffs (incl. all taxes and levies) in EU 28 as of second part of 2015 and in GE as of March 2016 (sources: <http://appsso.eurostat.ec.europa.eu> and national legislative documents approving energy tariffs)

³ Industrials consumers are allowed to conclude long term bilateral contracts with electricity producers

3.5 Moldova

3.5.1. Membership in the Energy Community

Moldova is a Contracting Party of the [Energy Community](#) from 01.05.2010.

3.5.2. The authority/organisation responsible for improvement of SE in the country

[Ministry of Economy](#) is responsible for the development of the state policy on EE and RES in the country. The Ministry's responsibilities are assigned by the Government Decision No. 690 dated 13.11.2009 on approval of the Regulation on organization and functioning of the Ministry of Economy, its structure and staff limit ([ru](#)).

[Energy Efficiency Agency](#) is the main responsible body for the implementation of the state policy for improvement of EE and development of RES in the country. The agency's responsibilities are assigned by - Government Decision on Energy Efficiency Agency No. 1173 dated 21.12.2010 ([ru](#)).

The responsibilities of the above institutions are also foreseen by Law on renewable energy No. 160 dated 12.07.2007 ([ru](#)) and Law on energy efficiency No. 142 dated 02.07.2010 ([ru](#)).

[Energy Efficiency Fund](#) was created with the aim of identifying, evaluating and financing energy efficiency projects and renewable energy sources, improving energy efficiency and reducing dioxide carbon emissions. Government Decision No. 401 dated 12.06.2012 on Energy Efficiency Fund ([ru](#)).

3.5.3. Energy strategy or other main documents, which establish energy policy (promote EE & RES) in the country

[Energy Strategy of the Republic of Moldova until 2030](#) (№ 102 dated 05.02.2013, [ru](#)) is closely aligned with the requirements of the Energy Community Treaty and provides clear SE targets and incentive mechanisms needed to achieve these targets.

[National Energy Efficiency Action Plan](#) – As of March 2016, there is no NEEAP in Moldova. The previous NEEAP for 2013-2015 (adopted by the Government Decision № 113 dated 07.02.2013 [ru](#)) is expired and a new NEAP for 2016-2018 is undergoing preparatory procedures for Government's approval.

[National Renewable Energy Action Plan](#) (2013-2020) – adopted by the Government Decision 1073 from 27.12.2013) according to the requirements of the EnC ([ru](#)).

It should also be mentioned that there is one more strategic document, which establish SE targets - National Energy Efficiency Program for the period 2011-2020 approved by the Government Decision № 833 dated 10.11.2011 ([ru](#)).

3.5.4. Sustainable energy targets

The National Energy Efficiency Program for 2011-2020 ([ru](#)) and the Energy Strategy of the Republic of Moldova until 2030 ([ru](#)), establishes the following SE targets:

Renewable energy

- 20 % share of energy from renewable sources in the energy mix by 2020
- 10% share of biofuels in the total volume of fuel consumed by 2020

Energy efficiency – 20% reduction in overall primary energy consumption by 2020 compared to 2009. However, the Energy Efficiency Agency initiated revision of this target with the involvement of EnC Secretariat.

CO₂ emissions – 25% reduction of GHG emissions by 2020 compared to 1990.

3.5.5. Renewable energy legislation

Law on RE or any other laws which regulate development of RES - In February 2016, the parliament of Moldova approved a New Law on promoting use of energy from renewable sources (New RES Law, No.10 dated 26.02.2016, [ru](#)) that transposed EU Directive on RES promotion (2009/28/EC, [en](#)). However, art. 45 of this New RES Law envisages that the Law enters into force on 25.03.2017 only. Until this time, the Law on Renewable energy (Old RES Law, No. 160 dated 12.07.2007, [ru](#)) will remain operational.

Regulation on feed-in-tariffs or other support mechanisms – Currently, tariffs for RES are established case by case according to the “Methodology for calculation, approval and implementation of tariffs for electricity and biofuels produced from RES,” approved by ANRE Decision No. 321 dated 22.01.2009 ([ru](#)). According to the Methodology, a developer has to build the RES installation and submit the information about invested funds to ANRE. Based on the information submitted, ANRE establishes an individual tariff for a RES developer. The RES developer can also obtain guarantees of origin for electricity produced from RES according to the ANRE Decision No. 330 dated 03.04.2009 ([ru](#)). At the same time, the New RES Law ([ru](#)) envisages several support mechanisms for different scales of investments in RES:

- *For consumers who want to substitute (partially or entirely) electricity consumed from the grid with own generation from RES*, art.39 of the Law foresees the possibility of applying net-metering of electricity, whereas at the end of each billing period the consumer only pays the difference between electricity consumed from the grid and electricity generated in the grid.
- *For small scale generation from RES*: Government will define capacity limits for small-scale generation, as well as the mechanism for obtaining the “eligible producer” status. Eligible producers will benefit of feed-in tariffs approved by the National Agency for Energy Regulation (ANRE).
- *For large scale generation from RES*: Government will yearly issue a call for bids for building a certain capacity (calculated based on the schedule for attaining national targets), and investors will bid with their tariffs. The lowest tariff bidder(s) will get the tariff they bid with and guarantees of purchase for the entire volume of electricity produced with that capacity.

All Regulations and Methodologies enacting the above mentioned support mechanisms are under development and should be approved by ANRE by 25.03.2017 when the New RES Law ([ru](#)) enters into force.

Regulation on RES grid connection procedures – article 26 of the Old Law on RES ([ru](#)) stipulates that the technical specification for RES grid connection should be developed free of charge by a TSO/DSO. All other work should be completed according to contractual basis that establishes the deep costs of the RES connection to the grid, where a developer covers all costs related to grid connection.

At the same time, article 28 of the New RES Law ([ru](#)) stipulates the development of a new methodology that should guarantee non-discriminatory access to grid to all RES developers, based on transparent procedures and tariffs approved and published by ANRE. The new methodology and tariffs should be approved by ANRE by 25.03.2017 when New RES Law enters into force.

Laws/regulation on financial incentives (tax exemption, custom duty exemption) for RES – As of March 2016, there is no tax exemption for RES installations in Moldova because the budget for 2016 has not yet been approved by Parliament yet. The previous tax exemption of custom duty for wind generators with a capacity above 1 MW and PV panels expired on 31.12.2015 (article 28 of the Law on Custom tariff, № 1380 dated 20.11.1997, [ru](#)). However, it is envisaged that tax exemptions will be reintroduced again,

but the exact mechanism and period of application will be clear after the Parliament approves Budgetary Policy, Budget for 2016 and amendments to the Custom tariff.

3.5.6. Energy efficiency legislation

Law on EE or any other laws which regulate improvement of EE - Law "On Energy Efficiency" (№ 142 dated 02.07.2010, [ru](#)).

Mandatory building codes and regulations on minimum energy performance requirements: - Law "On energy performance of buildings" (№.128 dated 11.07.2014, [ru](#)).

Regulation on appliances and equipment labelling – Law "On appliances and equipment labelling" (№ 44 dated 27.03.2014, [ru](#)).

Other EE regulation (on industrial EE, vehicle fuel-efficiency standards, energy service companies and energy performance contracts):

The Regulation on energy services was approved by the Government Decision № 1093 dated 31.12.2013 ([ru](#), [en](#)) as one of the requirements for the transposition of Directive 2012/27/EU on Energy Efficiency ([en](#)). With the support of ITS assignment "Organisation of operational framework for Energy Service Companies (ESCO) [AHEF.119.MD](#)" and UNDP, Energy Efficiency Agency developed the operational framework for ESCO services, including the methodology and a model Energy Performance Contract (EPC).

In 2014, Moldova also approved the Law on Ecodesign (№151 dated 17.07.2014, [ru](#)) that transposed Ecodesign Directive 2009/125/EC ([en](#)).

3.5.7. Electricity and gas prices

The authority responsible for setting energy tariffs: [National Energy Regulatory Agency of Moldova \(ANRE\)](#)

Table 3.5.1 Differentiation on electricity and gas tariffs

Tariff type	Electricity		Gas	
	Residential	Industrial	Residential	Industrial
Single rate	yes	yes	-	Yes
Step (block)	-	-	yes (increasing)	-
Time-of-use	yes	yes	-	-
Voltage/capacity dependent	-	yes	-	Yes
Two-part	-	-	-	-
Non-regulated	-	-	-	-

Cross-subsidy	yes ⁴	yes
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A comparison of average energy tariffs in 28 EU countries and Moldova is presented below.

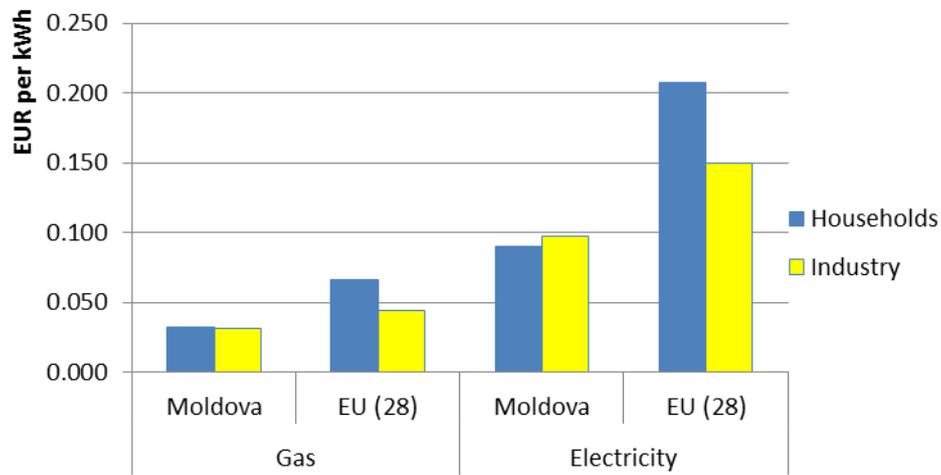


Fig 3.6.1. Comparison of energy tariffs (incl. all taxes and levies) in EU 28 as of second part of 2015 and in MD as of March 2016 (sources: <http://appsso.eurostat.ec.europa.eu> and national legislative documents approving energy tariffs)

⁴ Industrial consumers pay higher electricity prices than households primarily because households do not pay VAT, whereas tariffs for industrial consumers include 20% VAT.

3.6 Ukraine

3.6.1. Membership in the Energy Community

Ukraine is a Contracting Party of the [Energy Community](#) from 01.02.2011.

3.6.2. The authority/organisation responsible for improvement of SE in the country

The Law “On Alternative Energy Sources” (№ 555-IV dated 20.02.2003) envisages the following institutions responsible for the development of the state policy on RES in the country:

- [Verkhovna Rada](#) (the Parliament of Ukraine);
- [The Cabinet of Ministers](#);

The Law on energy saving (№ 75/94-VR dated 01.07.94) envisages the following institutions responsible for the improvement of EE in the country:

- [The Cabinet of Ministers](#);
- [The State Agency on Energy Efficiency and Energy Saving \(SAEE\)](#).

[SAEE](#) is also the main responsible body for the implementation of RES and EE policies in the country. The Agency’s responsibilities are assigned by the President Decree “About the State Agency on Energy Efficiency and Energy Saving of Ukraine,” № 462/2011 dated 13.04.2011 ([en](#)).

It should also be mentioned that during 2009-2012, the SAEE received 70 million € within the framework of the [EC Sector Policy Support reform programme](#) to support the implementation of Ukraine's strategy in the area of energy efficiency and renewable sources. However, as of March 2016, information about the results of this program is not available.

3.6.3. Energy strategy or other main documents, which establish energy policy (promote EE & RES) in the country

[Energy Strategy of Ukraine until 2030](#) (№ 1071 dated 24.07.2013) is the main strategy document which establish long-term RES and EE targets. As of March 2016, the Ministry of energy and coal industry developed a draft Energy Strategy of Ukraine until 2035 that addresses the impact of the recent political and financial crisis in Ukraine.

There are also a number of other strategic documents in the field of sustainable energy:

- The State Economic Program for EE and the development of energy production from RES and alternative fuels for 2010-2015, approved by the Resolution of the Cabinet of Ministers № 243 dated 01.03.2010.
- Law on Basic principles (Strategy) of public ecological policy of Ukraine until 2020 (№ 2818-VI dated 21.12.2010).
- Action Plan on Environmental Protection for 2011-2015, approved by the Resolution of the Cabinet of Ministers № 577-r dated 25.05.2011.

National Energy Efficiency Action Plan until 2020 adopted by the by the Resolution of the Cabinet of Ministers № 1228-r dated 25.11.2015 according to the requirements of the EnC..

National Renewable Energy Action Plan (until 2020) - adopted by the by the Resolution of the Cabinet of Ministers № 902-r dated 01.10.2014 according to the requirements of the EnC.

3.6.4. Sustainable energy targets

The above documents establish the following SE targets:

Renewable energy

- 11% share of RES in the primary energy balance by 2020 (NREAP);
- 12,6% share of RES in the total installed capacity by 2030 (Energy Strategy).
- 5% and 7% of mandatory share of biofuels in the fuel blend from 2014 and 2016 respectively (Law on alternative fuels);

Energy efficiency

- 20% reduction of GDP intensity by 2015 in comparison with 2008 (State Economic Program);

It also should be mentioned that the draft NEEAP, once adopted, will propose new target: of 9% improvement of EE by 2020.

CO₂ emissions

Ukrainian legislation base does not include the targets on the reduction of CO₂ emissions, but only reduction of environmental contaminant, like NO_x, SO_x etc.

- 15-20% reduction of environmental contaminant by 2015 in comparison with 2008 (State Economic Program)
- Reduction of environmental contaminant (except transport) by 10% by 2015 and by 25% by 2020 in comparison with 2010 – According to the Law on Basic principles (Strategy) of public ecological policy of Ukraine until 2020.

3.6.5. Renewable energy legislation

Law on RE or any other laws which regulate development of RES - The “Law on Alternative Energy Sources” (№ 555-IV dated 20.02.2003) and “Law on alternative fuels” (391-VI dated 21.05.2009).

Regulation on feed-in-tariffs or other support mechanisms – the “Law on Electric Power” (№575 / 97-BP dated 16.10.1997 with amendments) establishes the framework for FIT. [National Energy and Utilities Regulatory Commission \(NERC\)](#) approves FIT (in Ukrainian hryvnia, or UAH) for each RES developer every month. Once FIT is fixed for an RES developer, the monthly fluctuation depends only on the exchange rate of EUR-UAH. As of March 2016, the following levels of FITs are approved by NERC:

Wind power	0.0582-0.102 €/kWh
Solar	0.16-0.172 €/kWh
Biomass/Biogas	0.124 €/kWh
Small hydro	0.104-0.174 €/kWh
Geothermal	0.150 €/kWh

The Law on Electric Power also establishes the obligation to purchase all produced electricity using FIT until 01.01.2030 and promotes usage of local components through FIT premium, which is 5% if the share of Ukrainian equipment more than 30% and 10% if the share is more than 50%. The Law also streamlines procedures (no licencing) for FIT for surplus electricity produced by households from solar or wind electricity-generating units with capacity less than 30 kW.

Regulation on RES connection to the grid procedures – article 17 of the Law on Electric Power RES stipulates the following:

- Free of charge development of technical specification of RES connection to the grid.

- 50% of the connection cost is paid by the TSO/DSO.
- 50% of the connection cost paid by an RES developer is considered as reimbursable financial assistance, which should be repaid to the RES developer within 10 years.

The procedure and methodology on RES connection to the grid are stipulated by the relevant NERC legislation.

Laws/regulation on financial incentives (tax exemption, custom duty exemption) for RES –

Resolutions of the Cabinet of Ministers "On the promotion of substitution of natural gas in the heating sector" (№ 293 dated 09.07.2014) and "On stimulating the replacement of natural gas in the production of thermal energy for institutions and organizations financed from the state and local budget" (№ 453 dated 10.09.2014). The Resolutions promote the substitution of natural gas, which is used for heating need in public utilities sector.

The Tax Code of Ukraine stipulated the following incentives RES:

- Exemption of RES materials, equipment and installation from import tax (close 197.16 of the article 197 of Tax Code and article 17 of the Law on Common Import tax);
- Significant reduction of the land tax – the owners of the RES projects pay only 25% of the land tax;
- Exemption of electricity and heat energy from additional levy (tax) to the electricity prices;
- Exemption from income tax until 01.01.2020 for:
 - o Producers of biofuels
 - o RES electricity and heat producers
 - o Producers of RES materials, equipment and installation defined in article 7 of the Law on alternative energy sources (regarding converting vehicles and energy generating installations to use biofuels)
- Exemption of 80% of the income tax during period 01.01.2011-01.01.2020 for materials, equipment and installation for generating RES electricity and heat;

- VAT exemption until 01.01.2019 for RES materials, equipment and installation defined in article 7 of the Law on alternative energy sources (including equipment for converting vehicles and energy generating installations to use biofuels);
- Exemption of vehicles and agricultural transport on biofuels from import tax (provided this type of products are not produced in Ukraine).

3.6.6. Energy efficiency legislation

Law on EE or any other laws which regulate improvement of EE – Law “On energy saving” (№ 75/94-VR dated 01.07.1994) and the Law "On the combined heat and power (cogeneration) and Waste Energy Potential" (№ 2509-IV dated 05.04.2005).

Mandatory building codes and regulations on minimum energy performance requirements

- National Standard of Ukraine B A.2.2-8: 2010. This Standard specifies general requirements to the composition, layout and design of the "Energy Efficiency" in the design of residential and public buildings.

Regulation on appliances and equipment labelling – The energy labelling regulations covers the following products :

- freezers and washing machines (Resolution of the Cabinet of Ministers № 702 dated 07.08.2013
- lamps and luminaires (Resolution of the Cabinet of Ministers № 340 dated 27.08.2015).
- household dishwasher (Resolution of the Cabinet of Ministers № 514 of 17.07.2015.

The legislation on energy labelling for other appliances is under implementation..

Other EE regulation (on industrial EE, vehicle fuel-efficiency standards, energy service companies and energy performance contracts):

Resolution of the Cabinet of Ministers "On changes to the use of funds provided in the state budget for the implementation of measures for energy efficiency and energy saving" (№ 491 dated 01.10.2014). The Resolution foresees the compensation of 20% of the loans obtained by households under the credit agreement for the purchase of the boiler, but no more than 5000 UAH.

Law “On some issues regarding the import and registration of vehicles in Ukraine” (№2739-IV dated 06.07.2005 with amendments) foresees the following EU emission standards for vehicles: EURO 4 from 01/01/2014; EURO-5 from 01/01/2016 and EURO-6 from 01/01/2018.

3.6.7. Electricity and gas prices

The authority responsible for setting energy tariffs: [National Energy and Utilities Regulatory Commission \(NERC\)](#)

Table 3.6.1 Differentiation on electricity and gas tariffs

Tariff type	Electricity		Gas	
	Residential	Industrial	Residential	Industrial
Single rate	-	yes	-	yes
Step (block)	yes (increasing)	-	yes (increasing)	-
Time-of-use	yes	yes	-	-
Voltage/capacity dependent	-	yes (2 classes only)	-	-
Two-part	-	-	-	-
Non-regulated	-	yes	-	yes
Cross-subsidy	yes		yes	

A comparison of average energy tariffs in 28 EU countries and Ukraine is presented below.

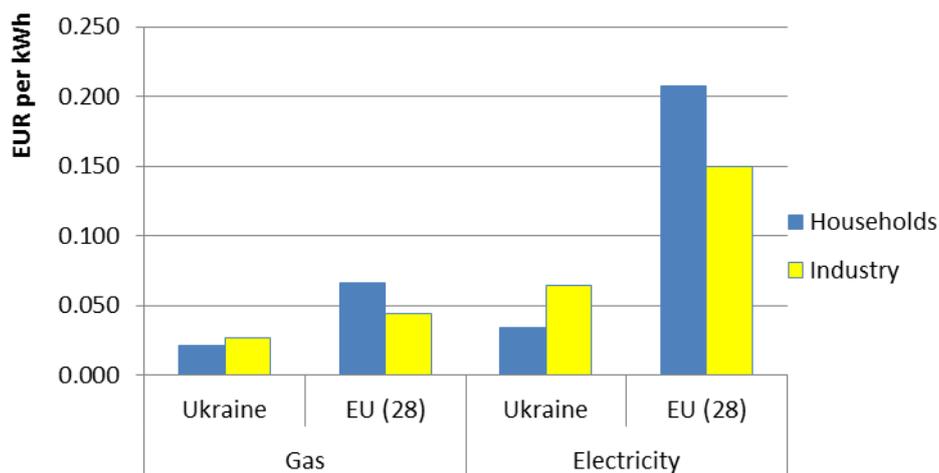


Fig 3.6.1. Comparison of energy tariffs (incl. all taxes and levies) in EU 28 as of second part of 2015 and in UA as of March 2016 (sources: <http://appsso.eurostat.ec.europa.eu> and national legislative documents approving energy tariffs)

4. Matrix of baseline survey

	Armenia	Azerbaijan	Belarus	Georgia	Moldova	Ukraine
1. Membership in the EnC	Observer	-	-	Candidate to a full member	Full member	Full member
2. Authority responsible for:						
- RES	Ministry of Energy and Natural Resources	State Agency for Alternative and Renewable Energy Sources (SAARES)	State Committee for Standardization	Ministry of Energy	Energy Efficiency Agency	State Agency on EE and Energy Saving (SAEE)
- EE	Ministry of Energy and Natural Resources	Ministry of Energy	State Committee for Standardization	Ministry of Energy	Energy Efficiency Agency	State Agency on EE and Energy Saving (SAEE)
3. Strategy documents						
- Energy strategy	Strategy of energy sector dev. (2005)	State Program on EE for 2016-2020 is under development	Concept of Energy Security until 2035 (2015)	Main Directions of State Policy in the Power Sector (2015)	Energy Strategy until 2030 (2013)	Energy Strategy until 2030 (2013)
- Key strategy legislation on RES, EE and GHG	Program on Energy Saving and RES (2007); Strategic Plan (2011)	-	The State Programme "Energy efficiency 2016-2020" (2016)	State program "Renewable energy 2008" (2008)	Energy Strategy until 2030 (2013)	Number of state and national programs on EE, RES and environment
- NREAP	-	-	-	-	yes (2013)	yes (2014)
- NEEAP	NEEAP 2011-2020	-	-	under development	Prepared for Government approval (2016)	under development
4. SE Targets, including:						
- RES	SHPPS - 400 MW & wind - 200 MW installed by 2025	-	share of RES in energy mix – 9% by 2035	-	- 20 % RES share in the energy mix in 2020; - 10% share of biofuel in the total volume of fuel consumed in 2020.	11 % RES share in the energy mix in 2020; - 7% share of biofuel in the total volume of fuel consumed in 2016.
- EE	-	-	37% reduction of GDP energy intensity by 2035 (compared to 2010)	-	20% reduction in overall primary energy consumption by 2020 (compared to 2009)	20% reduction of GDP intensity by 2015 (compared to 2008)
- CO ₂ Emissions	-	-	-	-	25% reduction of GHG emissions by 2020 (compared to 1990)	Reduction of environ. contaminant by 25% in 2020 (compared to 2010)
5. RES legislation						
- RES Law	on Energy Saving and RE (2004)	under development	on RES (2010)	Under development	Old Law (2007) is still in force. New Law (2016) coming into force in 2017	Law on Alternative Energy Sources (2003) & Alternative Fuels (2009)
- FIT (€/kWh)	PSRC Resolution (2014)	Tariff (Price) Council Resolution (2007)	Resolution of the Ministry of Economy (2011)	-	cap FIT are under development	Law on Electric Power & NERC' Res. (monthly)
• Wind	0.079	0.026	0.1462	-	-	0.0582-0.102

	Armenia	Azerbaijan	Belarus	Georgia	Moldova	Ukraine
• Solar PV	-	-	0.3036	-	-	0.16-0.172
• Biomass	0.084	-	0.1462	-	-	0.124
• Small hydro	0.019-0.044	0.015	0.1237	-	-	0.104-0.174
- FIT obligatory purchase	15 years	-	Maximum 10 years + 10 years of reduced FIT	-	-	until 2030
- RES grid connection	PSRC Resolutions - deep connection costs	-	Law on RES - shallow cost	-	Law on RES – deep connection costs	Law on Electric Power: 50% -system operator 50% - RES developer to be reimbursed during next 10 years
- Other incentives	-	Custom duty and VAT exemption for RES and LED (equipment and materials)	VAT exemption for RES installations; exemption from the land tax	-	Custom duty exemption to be specified after approval by Parliament.	Custom duty and VAT exemption, subsidies for biomass and number of other incentives
6. EE legislation						
- EE Law	on Energy Saving and RE (2004)	under development	on Energy Saving (1998) new law adopted in 2015	-	on EE (2010)	On energy saving (1994)
- Building performance	Voluntary standards	under development	Program for the design, construction and reconstruction of energy efficient residential houses (2009)	Under development	Law on energy performance in buildings (2014)	National Standard of Ukraine B A.2.2-8: 2010
- Energy labelling	Government Decree N 1492-n 17-12-2015	under development	-	-	Law “On appliances and energy labelling (2014)	freezers & washing machines (2013); electric lamps & dishwashers (2015)
- Other EE regulation	Voluntary standards	under development	174 standards on EE	-	Regulation on ESCO (2013), Law on Eco-design (2014)	Subsidised loans for EE
7. Energy prices						
- Authority setting tariffs	Public Services Regulatory Commission (PSRC)	Tariff (Price) Council	Residential - Council of Ministers; Industrial – Ministry of Economy	National Energy and Water Supply Regulatory Commission	National Energy Regulatory Agency of Moldova (ANRE)	National Commission for State Energy Regulation (NERC)
- Electricity (€/kWh)						
• Residential	0.091	0.035	0.043	0.077	0.090	0.034
• Industrial	0.086	0.035	0.107	0.067	0.097	0.065
• Cross-subsidy	-	Yes	yes	-	yes	yes
- Gas (€/kWh)						
• Residential	0.027	0.005	0.0097	0.017	0.032	0.022
• Industrial	0.023	0.005	0.0223	0.014	0.031	0.027
• Cross-subsidy	yes	yes	yes	-	-	yes

5. Conclusion and recommendations

This survey provides a clear and concise baseline for the evaluation of future reforms/improvements in the areas of EE and RES in Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine. According to the publicly available information, this is currently the only document which provides survey of six INOGATE PCs in the SE area using a common methodology. The methodology can be also applied for conducting the same baseline survey for INOGATE PCs in Central Asia and, if necessary, modified depending on the future needs of the INOGATE PCs.

The gaps identified in legislation and institutional frameworks can be used as indicators for policy makers on the direction of regulatory reforms needed to contribute to the sustainable development of their countries. The key findings and conclusion of the Survey are presented below in a form of table which illustrates the applicability of the ITS recommendations for each INOGATE Partner Country.

Table 5.1. General recommendations for the improvement of the institutional and legislation framework in sustainable energy in INOGATE Partner Countries

General recommendations	AM	AZ	BY	GE	MD	UA
1. Submission of application to the Energy Community for full membership	√	√	√			
2. Establishment of a key authority responsible for the development of RES	√			√		
3. Establishment of a key authority responsible for the improvement of EE	√	√		√		
4. Development of a sustainable energy policy that includes SMART (specific, measurable, achievable, realistic and time-bound) targets on EE and RES	√	√		√		
5. Adoption of the NREAP and NEAAP which provide clear breakdowns and paths towards achievement of the established SE targets	√	√	√	√		√
6. Development or improvement of primary legislation on RES that establishes clear and transparent incentives for development of RES	√	√		√		
7. Development or improvement of FIT legislation that includes an economically feasible level of FIT, FIT reduction due to technological progress, a guaranteed period for obligatory purchase, support to different scales of installation, etc.	√	√	√	√	√	
8. Establishment of a clear and transparent scheme for grid connection of RES installations	√	√		√	√	
9. Development or improvement of other incentive mechanisms, e.g., customs duty exemption, which support all RES technologies, if applicable	√	√	√	√	√	
10. Development or improvement of primary legislation on EE to establish clear and transparent incentives for improving EE	√	√	√	√		√
11. Development or improvement of legislation on minimum energy performance of new and renovated buildings	√	√		√	√	√
12. Development or improvement of legislation on a mandatory energy labelling scheme	√	√	√	√	√	√
13. Development or improvement of other EE incentives, e.g., obligatory energy audits, ESCO legislation, adoption of a model EPC contract, etc.	√	√	√	√	√	√
14. Elimination of cross subsidies and establishment of clear and transparent support schemes for vulnerable consumers	√	√	√		√	√
15. Improvement of a tariff menu for end-users to provide clear signals for improving energy efficiency	√	√	√	√	√	