



Ministry of Economy
and Infrastructure
of Republic of Moldova

No. 07-7013
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Dear Mr. Kopač,

Hereby, the Ministry of Economy and Infrastructure of the Republic of Moldova, with regard to the country's commitments under Directive 27/2012/EU on energy efficiency and the Ministerial Council decision D/2015/08/MC-EnC, presents its *Second Annual Report under the Energy Efficiency Directive*.

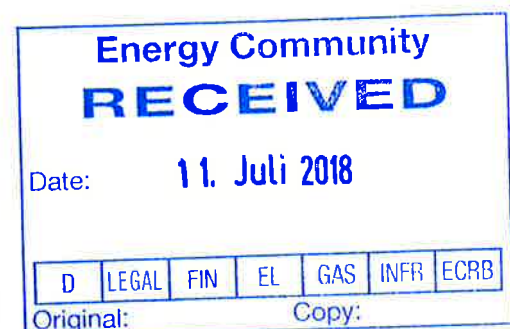
The Ministry of Economy and Infrastructure avails itself of this opportunity to renew to the Energy Community Secretariat the assurances of its highest consideration and looks forward for a further fruitful cooperation.

Yours sincerely,

**Minister
of Economy and Infrastructure**

Chiril GABURICI

**Mr. Janez Kopač,
Director of the Energy Community Secretariat**



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Second Annual Report under the Energy Efficiency Directive

Republic of Moldova

Prepared by:
Ministry of Economy and Infrastructure

July 2018

A. Key statistics and indicators

It is worth mentioning in this chapter that national energy statistics for the period 2010-2016 were changed, the National Bureau of Statistics publishing a revised energy balance at the end of 2016. The reviewing exercise has targeted mainly the biomass consumption in households' sector, resulting in an additional amount of energy with the biomass resources equal to about 350 ktoe (the consumption being increased by almost 15%).

Table 1. Key data and energy statistics for 2016

Estimation of key statistics and indicators in 2016	Value	Unit
Total primary energy consumption (*)	2,796	ktoe
Total final energy consumption (*)	2,525	ktoe
Final energy consumption – Transport (*)	717	ktoe
Final Energy consumption – Industry (*)	203	ktoe
Final energy consumption – Households (*)	1,257	ktoe
Final energy consumption – Services (*)	268	ktoe
Gross value added by sector – Industry (**) http://www.statistica.md/category.php?l=ro&idc=191&	741,914.7	thous. EUR
	16,362,782	thous. MDL
Gross value added by sector – Services (**) http://www.statistica.md/category.php?l=ro&idc=191&	2,732,378	thous. EUR
	60,262,058	thous. MDL
Disposable income of households (**) http://statbank.statistica.md/pxweb/pxweb/ro/30%20Statistica%20sociala/30%20Statistica%20sociala_04%20NIV_NIV010/NIV010200.px/table/tableViewLayout1/?rxid=8ebd14c1-7adf-494b-9840-9cb85498f247	0.0,934	thous. EUR
	2.06	thous. MDL
Gross domestic product (GDP) (**)	6,097,383.67	thous. EUR
	134,476,589	thous. MDL
Electricity generation from thermal power plants (**)	-	ktoe
Electricity generation from combined heat and power (**)	74	ktoe
Heat generation from thermal power generation (**)	-	ktoe
Heat generation from combined heat and power plants, incl. industrial waste heat (***)	165	ktoe
Fuel input for thermal power generation (**)	-	
Fuel input for combined heat and power (**)	291	ktoe
Passenger kilometres (pkm), if available (**)	5,397.1	mil. pkm
Tonne kilometres (tkm), if available (**)	5,484.3	mil. tkm
Combined transport kilometres (pkm + tkm), in case that separate values for pkm and tkm are not available (**)		
Population (**)	3.55	millions
Average exchange rate (MDL/EUR)	22.05	MDL

Table 1: Key energy statistics data.

(*) Energy statistics

(**) State Statistical office

(***) Independent System Operator (ISO), electricity generation companies.

B. Overview of energy consumption trends

The diagrams shown below present the evolution of the primary (gross inland) and final energy consumption of the Republic of Moldova. A 2.3%/yr. increase of primary consumption and 3.5%/yr. increase of final energy consumption is being noticed for the period analyzed.

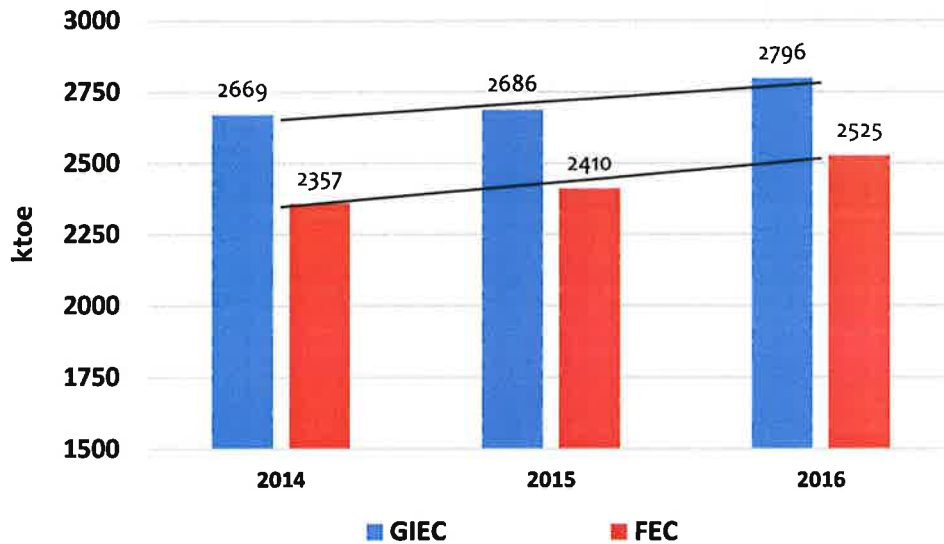


Figure 1. Primary and final energy consumption trends, 2014-2016

With regard to the structure of the final energy consumption, the diagram presented below shows its evolution for the last three years for which official statistics are available – from 2014 to 2016. As it can be noticed, a major change in the FEC structure happened in the transport sector, registering a growth of 8.3% in 2016 comparatively to 2015. The residential sector is the biggest energy-consuming sector with a share of 49.7% in the FEC. The only sector with a reduced energy consumption is the industry, which can be explained by the drop of the industrial production index in extractive sub-sector by 15.6%, comparatively to 2015, and those energy efficiency measures and energy management implemented by Moldovan businesses.

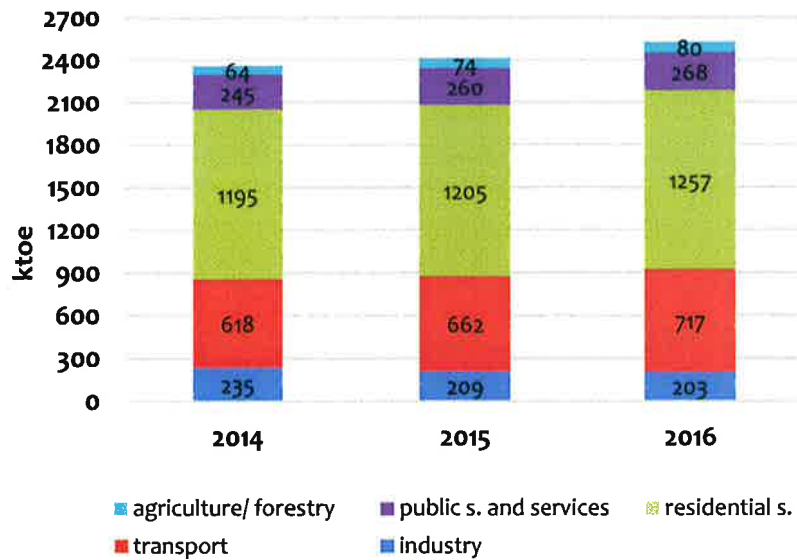


Figure 2. Brakedown of the final energy consumption, 2014-2016

It is worth mentioning that during 2017-2018, along with the EED transposition into national legislation, Moldovan authorities have revised its forecast for the both trends - primary and final energy consumption. Thus, Government's vision on the country's energy consumption until 2020 is presented below.

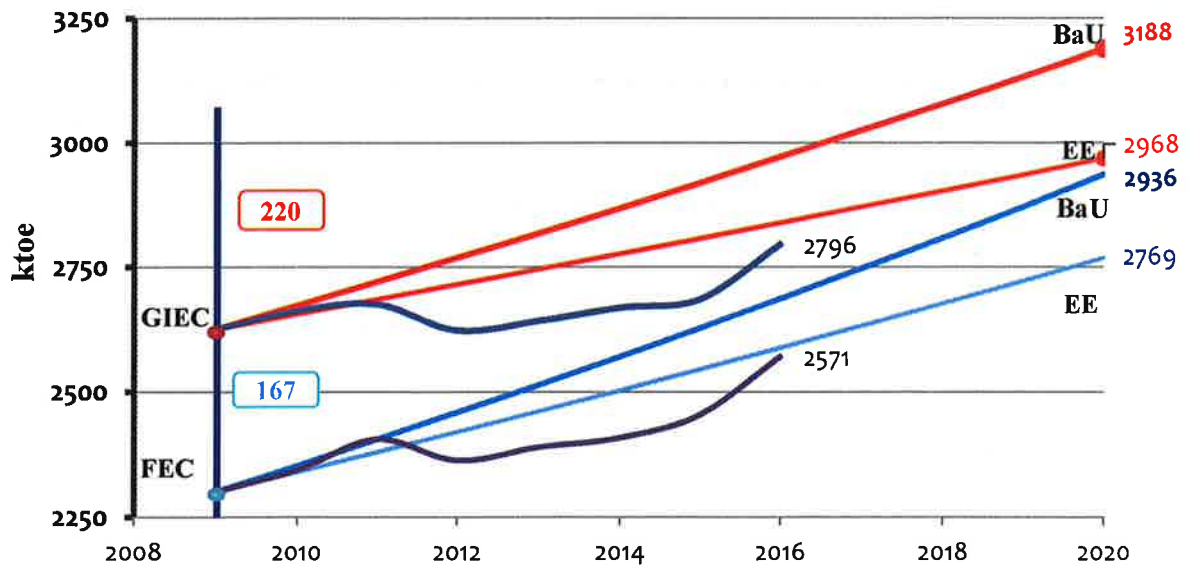


Figure 3. Energy consumption forecasts by 2020

This diagram graphically presents the existing evolution of the energy consumption by the whole country for the period 2010-2016 (with revised biomass consumption), as well as the expected trends for primary and final energy consumption. Moreover, the energy efficiency scenarios are also shown in this diagram, representing country's national objectives by 2020 in absolute values.

C. National energy efficiency targets

The EED transposition into national legislation was accompanied by a revision of country's national objectives, including by a review of different sectorial targets, as it is shown in the table below.

Table 2. National and sectorial energy efficiency targets by 2020

TARGETS	2016	2017	2018	2019	2020
EED ARTICLE 3 [ktoe]	92.9	107.6	124.6	144.4	167.2
EED ARTICLE 5 [ktoe]			0.21	0.42	0.64
EED ARTICLE 7 [ktoe]		7.10	14.21	24.15	34.10
GIEC [ktoe]	2796	2723	2802	2884	2968
FEC [ktoe]	2525	2511	2594	2680	2769
FEC - BUILDINGS [ktoe]		46.45	53.81	62.33	72.2
FEC - INDUSTRY [ktoe]		9.63	11.17	12.96	15.0
FEC - TRANSPORT [ktoe]		19.34	22,39	25,92	30,0
FEC - OTHERS [ktoe]		32.20	37.29	43.18	50.0
PRIMARY ENERGY INTENSITY [ktoe/mil. EUR]	0.45	0.27	0.24	0.22	0.19
FINAL ENERGY INTENSITY [ktoe/mil. EUR]	0.41				

Note: Legal framework of the Republic of Moldova does not establish any targets/ objectives regarding the reduction of the primary or final energy intensity, those indicators being monitored by the Ministry of Economy and Infrastructure and Energy Efficiency Agency

Moldovan primary legislation sets the national objectives for the gross inland and final energy consumption by 2020, establishing the “caps” at a level of:

- 2968 ktoe for the gross inland consumption, and
- 2796 ktoe for the final energy consumption,

while the NEEAP has the role of setting sectorial targets and also providing clarity on the calculations related to the energy efficiency obligation schemes (EEOS, art. 7 of the EED) and the obligation to rehabilitate central public authorities buildings (art. 5 of the EED).

D. Update of measures implemented in last year

• Legislative measures

Observations on selected topics and state of compliance

In order to promote the efficient use of energy, the Government has implemented the following legislative measures:

- drafting of the new Law on Energy Efficiency, which fully transposes the Directive 27/2012/EU on energy efficiency. Moreover, the Ministry of Economy and Infrastructure has initiated the elaboration of the secondary legislation, to be promoted and approved by the end of the year;
- adoption of the Government Decision that comes to complete the GD no. 750 of 13.06.2016 approving the ecodesign requirements applicable to energy-related products, by adding additional eco-design requirements for seven energy related products, as follows:
 - ecodesign requirements for fans driven by motors with an electric input power between 125 W and 500 kW;
 - ecodesign requirements for household refrigerating appliances;
 - ecodesign requirements for televisions;
 - ecodesign requirements for glandless standalone circulators and glandless circulators integrated in products;
 - ecodesign requirements for standby and off mode electric power consumption of electrical and electronic household and office equipment;
 - ecodesign requirements for simple set-top boxes;
 - ecodesign requirements for no-load condition electric power consumption and average active efficiency of external power supplies.
- drafting and promotion of the draft GD to complete the GD no. 1003/ 2014 on approving the energy labelling requirements applicable to energy-related products, which comes to transpose three delegated regulations on energy labelling for the following energy related groups of products:
 - vacuum cleaners;
 - water heaters, hot water storage tanks and packages of water heater;
 - solar device and space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar device.
- drafting and promotion of the GD on approving the regulation on tyre labelling which transposes the Regulation (EC) No 1222/2009 of the European Parliament and of the Council of 25 November 2009 on the labelling of tyres with respect to fuel efficiency and other essential parameters.

With regard to renewable energy, during 2017, the Ministry of Economy and Infrastructure has promoted an amendment to the Law 10/2016 which was adopted by the Parliament in March, 2018. By the the Law no. 34 of 26.03.2018, country's primary legislation on renewable energy has been aligned with the provisions of the new Law on electricity (Law 107/2016) and country's commitments under the EnC Treaty – especially to the Guidelines on State aid for environmental protection and energy 2014-2020.

During the same period, most of the secondary legislation under the RES Law was drafted and consulted with the main interested parties. The table below provides the state of play regarding to the secondary legislation adoption:

Competence of the Ministry of Economy and Infrastructure

Regulation on the calculation of final consumption of energy from renewable sources in transport	Regulation being drafted by the contracted technical assistance
Government Decision on the designation of the central electricity supplier	Approved by Government Decision no. 885 of 01.11.2017
Regulation on tenders for providing the status of eligible producer	Regulation to be approved soon, July 2018
Regulation on sustainability criteria for biofuels and the procedure for verifying compliance with sustainability criteria for biofuel production	Regulation being drafted by the contracted technical assistance
Methodology for calculating the impact of biofuels on greenhouse gas emissions	Regulation being drafted by the contracted technical assistance
Regulation on the organization and operation of the institution responsible for EE and RES policies implementation	Promotion to be resumed upon approval of the new Law on energy efficiency (July 2018)
Regulation on certification of boilers, boilers or biomass stoves, solar photovoltaic and solar thermal systems, shallow geothermal systems and heat pumps	Regulation to be approved soon (expected by the end of July)

Competence of the ANRE

Regulation on guarantees of origin	Approved by Energy Regulator Agency Decision No. 376/ 2017
Regulation confirming the status of eligible producer	Regulation to be approved soon, July 2018
The methodology for calculating the price caps and fixed tariffs for each type of technology	Approved by Energy Regulator Agency Decision No. 375/ 2017

- **Non-legislative measures**

All other measures which indirectly or directly lead to the achievement of energy savings should be listed.

The topics of energy efficiency and renewable energy are the ones of the biggest interest for private companies, utilities and most of all, for the final consumers.

The Energy Efficiency Agency, as the national institution responsible for communication and public awareness, according to National Communication Strategy in energy efficiency and renewables field, with the support of development partners, organised more than 30 events related to energy efficiency and Renewable energy sources during 2017. Among those events the following initiatives can be mentioned:

- Workshop on strengthening local energy auditing capacities;
- Workshop on opportunities for development and implementation of energy efficiency projects;
- Workshop “The local market availability for using RE for heating and hot water preparation”;
- Informative Campaign "Together we learn to save energy and money”;

- Presentation of the Wind Energy Resources Atlas of the Republic of Moldova;
- European Union Sustainable Energy Week (a full week of workshops and open air events);
- „Sun Dă-i Fest,, live concert powered by solar energy with an outdoor exhibition of environmentally responsible technologies;
- „Moldova Eco Energetica Week,, contest for awarding the best projects and practices in the field of energy efficiency and renewable energy, etc.

E. Central Government buildings (Article 5)

National authorities of the Republic of Moldova decided to rely on buildings renovation (according to the draft Law on energy efficiency) in order to fulfil with its commitments under art. 5, while alternative measures, like awareness raising campaigns, green public procurements, etc., remain at the Government disposal to be used for generating additional savings.

At the end of 2017, the process of drafting the Programme on renovation of buildings occupied by the central governmental institutions has started.

In this context, an inventory of the building stock (with the useful area over 250 m²) rented or occupied by central public institutions was performed, the final list containing a number of 215 buildings with a total surface of 425.156 m².

Respectively, the obligation to renovate 1%/yr. of the public buildings stock identified and selected under this exercise equals to 4.260 m², which can require an investment assessed to 0.5 million EUR and generate about 43 toe of energy savings yearly. The energy audits to be performed in this respect will provide more accurate data in terms of the investment effort needed and its impact.

F. Energy efficiency obligations (Article 7)

With regard to the EEOS and energy savings to be achieved under art. 7 of the energy efficiency Directive, zero (0) kWh saved can be reported at this chapter, at the end of 2017 . All mechanism and procedures related to this specific provision shall be described and introduced in national legislation by new Law on energy efficiency (approved in the 1st reading by the Parliament in April, 20). The law shall enter into force in 2018, while the EEOS mechanisms shall become operational starting with January, 1, 2019.

However, in order to ensure that the needed secondary framework will be promoted right after the new Law is published, the Ministry of Economy and Infrastructure has started drafting the necessary acts, one of which is the Program on the energy efficiency obligation schemes. Table shown below present the result of calculations made in order to assess the energy savings target to be reached in 2019 and 2020.

Average 2013-2015, ktoe			1,746.67	
year	annual % savings	annual energy savings		total annual savings
2019	0.70%	12.227		12.227
2020	0.70%	12.227	12.227	24.453
total cumulative savings 2017 - 2020				36.680

As a general comment for the table shown above, it is worth mentioning that national authorities committed to reach 12,2 ktoe of energy savings each year during 2019-2020 period or, a total amount of 36 ktoe of cumulative savings for the same timeframe.

As an option to the EEOS, Government is also advancing in the dialogue with country's Development Partners on developing new financing instruments and mechanisms for Moldovan consumers – public and private. The total amount of project proposals developed by the parties involved exceeds 300 million EUR, their further exploration being a matter of the country's readiness to borrow. All the resources to be mobilized under these initiatives fit perfectly the “alternative measures” concept, which enactment is in the Government responsibility.