

**Fourth Annual Report
under the Energy Efficiency Directive**

REPUBLIC OF MOLDOVA

Prepared by:
MINISTRY OF ECONOMY AND INFRASTRUCTURE

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Key statistics and indicators

Table 1. Key energy statistics data

Estimation of key statistics and indicators in [2018]	Value	Unit
Total primary energy consumption (*)	3.087	ktoe
Total final energy consumption (*)	2.786	ktoe
Final energy consumption – Transport (*)	758	ktoe
Final Energy consumption – Industry (*)	251	ktoe
Final Energy consumption – Agriculture (*)	109	ktoe
Final energy consumption – Households (*)	1.385	ktoe
Final energy consumption – Services (*)	283	ktoe
Gross value added by sector – Industry (**)	1.110,70	mil. EUR
Gross value added by sector – Services (**)	6.025,47	mil. EUR
Disposable income of households (**)	0,118	'000 EUR
Gross domestic product (GDP) (**)	9.700,98	mil. EUR
Electricity generation from thermal power plants (**)		ktoe
Electricity generation from combined heat and power (**)	75	ktoe
Heat generation from heat only boilers (**)	85	ktoe
Heat generation from combined heat and power plants, incl. industrial waste heat (**)	170	ktoe
Fuel input for thermal power generation (**)	95	ktoe
Passenger kilometres (pkm), if available (**)	4.886.033	thous. pkm
Tonne kilometres (tkm), if available (**)	5.924.773	thous. tkm
Combined transport kilometres (pkm + tkm), in case that separate values for pkm and tkm are not available (**)	---	---
Population (**)	3,54	millions

(*) Energy statistics

(**) State Statistical office

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

A. Overview of energy consumption trends

The figure 2 below presents the evolution of the primary and final energy consumption, per total and per sector, for the 2015-2017 period.

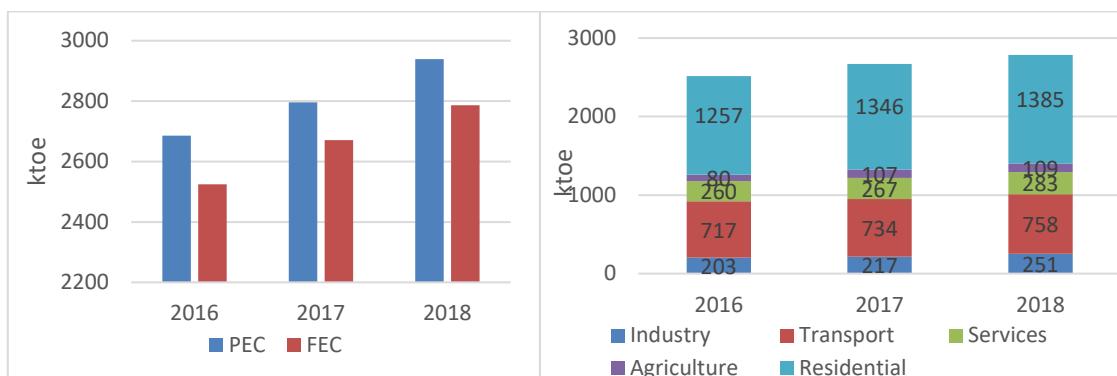


Figure 1. Final and primary energy consumption (left) and final energy consumption per sectors (right) in 2016 – 2018.

The energy consumption of the Republic of Moldova is constantly increasing year by year due to the slightly growth of the national economy. For the 2018, every sector has registered an increase of the energy consumption. However, the major change in the energy consumption profile for 2018 was registered in industry sector, with an increase by 15.7% compared to 2017 level.

A. 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.

TARGETS [ktoe]	2016	2017	2018	2019	2020
EED ARTICLE 3	92.9	107.6	124.6	144.4	167.2
EED ARTICLE 5				0.05	0.1
EED ARTICLE 7				12,23	24,46
GIEC	2839	2871	2903	2936	2968
FEC	2589	2633	2678	2723	2796
FEC - BUILDINGS (residential sector)		46.45	53.81	62.33	72.2
FEC - INDUSTRY		9.63	11.17	12.96	15.0
FEC – TRANSPORT		19.34	22,39	25,92	30,0
FEC – OTHERS (public sector)		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	0.252	0.227	0.204	0.184

Figure 2. National sectorial targets under the EED

With regard to energy savings achieved in 2018, the table below presents all the values/ figures assessed using bottom-up and top-down approaches. Comparing data from figure 2 and 3, it can be noticed that in 2018 the target was achieved at the level of 98.5%.

Achieved energy savings [ktoe]	2018
EED ARTICLE 3	122.79
EED ARTICLE 5	
EED ARTICLE 7	
GIEC	3087
FEC	2786
FEC - BUILDINGS	23,33
FEC - INDUSTRY	67,93
FEC – TRANSPORT	0,59
FEC – OTHERS (public buildings)	27.94

Figure 3. Energy savings achieved in 2018, per sectors, [ktoe]

B. Update of measures implemented in last year

• Legislative measures

In order to promote energy efficiency, the Government has taken the following legislative measures in the 12 months (since the last reporting on EED implementation):

- GD no. 698/2019 on approving the National Energy Efficiency Action Plan 2019-2021;
- GD no. 45/2019 on approving the organization and functioning of the Energy Efficiency Agency;
- GD no. 372/2020 on approving the Program for the renovation of the central government owned and occupied buildings 2018-2020 (art. 5 of the EED);
- Drafting and public consultation of the Regulation on energy auditors and energy audit;
- Drafting and public consultation of the Regulation on conducting energy audits by large enterprises
- Drafting of the Long-term strategy for mobilizing investment in the renovation of the building national stock;
- Updating of the regulation MBN M.01.01: 2016 “Energy Performance of Buildings. Minimum energy performance requirements for buildings”.
- Updating of the Methodology for calculation of energy performance of buildings in Moldova;

Regarding renewable energy development during the year 2019, it should be mentioned that the Ministry of Economy and Infrastructure with the support of IRENA drafted and published the

Renewable Readiness Assessment Report of Republic of Moldova Report, which is also available online.¹ The report identifies key actions to accelerate renewable energy deployment and to cement the existing foundations of the sector.

To be mentioned that most of the secondary legislation under the RES Law was promoted during the past years.

The table below provides the state of play regarding to the secondary legislation adoption:

Competence of the Ministry of Economy and Infrastructure

Regulation on tenders for providing the status of eligible producer	GD no. 690/2018
Government Decision on approving the capacity limits, capacity caps and renewable energy field categories of capacity till 2020	GD no. 689/2018
Regulation on sustainability criteria for biofuels and the procedure for verifying compliance with sustainability criteria for biofuel production	Regulation has been drafted by the contracted expert in the frame of the EU-aided technical assistance project, STARS. However, the promotion of the regulation has not yet started due to technical aspects related to new provisions of the Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources.
Regulation on the determination of final energy consumption from renewable sources in transport	GD 270/2020
Methodology for calculating the impact of biofuels on greenhouse gas emissions	GD no. 107/2019
Regulation on certification of boilers, boilers or biomass stoves, solar photovoltaic and solar thermal systems, shallow geothermal systems and heat pumps	GD no. 1051/2018

Competence of the NERA

Regulation confirming the status of eligible producer	NERA Decision 251/2019
fixed tariffs and ceiling prices for electricity produced from renewable energy sources by producers who will obtain the status of eligible producer in the year 2020	NERA Decision 54/2020

After the publication by NERA of the fixed tariffs and ceiling prices for electricity produced from renewable energy sources by eligible producers, there has been a significant increase of the number of investors ready to invest in renewable energy sources, especially in photovoltaics and wind, less in biogas and biomass sector.

Taking into consideration that the Government Decision no. 689/2018 on approving the capacity limits and caps for renewable energy projects is in force until the end of 2020, the Ministry of Economy and Infrastructure started the development of a new Decision which will extend the

¹ <https://www.irena.org/publications/2019/Feb/Renewables-Readiness-Assessment-Republic-of-Moldova>

timeframe of the support scheme and also will allocate some more renewable energy capacities, with a clear promotion of rooftop PV units and small scale wind farms (distributed energy), and cogeneration on biogas of different origin (landfill, sewage, manure, etc).

- **Non-legislative measures**

The Energy Efficiency Agency, as the national institution responsible for communication and public awareness, according to National Communication Strategy in energy efficiency and renewable energy sources field, with the support of development partners, organised more than 25 events related to energy efficiency and renewable energy sources during 2019. Among those events, the following initiatives can be mentioned:

- Organisation of the workshop on Local Energy Efficiency Action Plans – as an effective tool for planning and attracting funding for the implementation of energy efficiency projects in districts;
- The inaugural meeting of the Council of the Agency for Energy Efficiency;
- Launch of the “Clean Technology Innovation Program for SMEs and Start-ups in the Republic of Moldova. The objective of the project is promotion and support for the use of technologies in the field of renewable energy in the Republic of Moldova by piloting an Entrepreneurial Accelerator, leading to the development of entrepreneurship, job creation and positive impact on the environment
- Organisation with the support of the Project "Support for the modernization of the energy sector in the Republic of Moldova (STARS)" funded by the European Union, of four Workshops within the District Councils Cimişlia, Edineţ, Ungheni, Soldanesti, with the theme: "Practical stages for the elaboration of the Local energy efficiency Action Plan”;
- Participation in the following forum ”Regional Approach: Energy Partners - Global Expertise, Local Opportunities”. The most discussed topics focused on daily issues: energy efficiency and consumer production, cogeneration, heating-cooling, production of biogas, automation, financing of energy projects, etc;
- Participation at three distinct workshops organised by the Tekwill Academy on „New technologies for renewable energy projects”, „Financing energy efficiency and energy projects” „Renewable Development of the Moldova”;
- Preparation and organization of the Moldova Eco-Energy Award Ceremony, 2019 Edition,etc.

C. Central Government buildings (Article 5)

The Ministry of Economy has promoted the First Programme for renovation of the central government owned and occupied buildings for 2018-2020, approved by the Government Decision no 372/2020.

At this moment the central government buildings stock inventory (CGBSI) contains 215 records (buildings) with total declared useful floor area of the building stock in the amount of 426 056 m². The first programme for renovation of the central government owned and occupied buildings for 2020-2022 targets two priority buildings with total useful area of 10.086 m² which will result in fulfilling the one percent yearly obligation of Article 5 of the EED and Article 14 in national EE Law, which equals to 8.502 m². The total investments for the First programme are evaluated in the amount of 37.950.857 million MDL (about 1,96 M EUR).

D. Energy efficiency obligations (Article 7)

With regard to the EEOS and energy savings to be achieved under art. 7 of the energy efficiency Directive, The Ministry of Economy and Infrastructure, has notified the cumulative target till 2020 of 27.51 ktoe, or 36,68 ktoe without using exemptions.

The analysis done by the MoEI showed that currently there are many ongoing initiatives (projects and programmes that finance the implementation of energy efficiency projects in public buildings, residential, industry, energy sector, etc.) that are contributing to the target set by national authorities, as alternative measures and, implicitly, reducing the need in operationalising the EEOS (at least by 2020). Thus, out of the 28.87 ktoe of notified expected savings, 100% of them are to be delivered by the alternative policy measures (respectively, no need in involving the EEOS mechanism).