

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

REPUBLIC OF MACEDONIA

Prepared by: MINISTRY OF ECONOMY

June 2018

A. Key statistics and indicators

The annual reports referred to in EED Article 24(1) provide a basis for the monitoring of the progress towards national 2020 targets. Contracting Parties shall ensure that the reports include the following minimum information:

Estimation of key statistics and indicators in 2016	Value	Unit
Total primary energy consumption (*)	2 685.196	ktoe
Total final energy consumption (*)	1 854.849	ktoe
Final energy consumption – Transport (*)	24,5	ktoe
Final Energy consumption – Industry (*)	28,3	ktoe
Final energy consumption – Households (*)	23,2	ktoe
Final energy consumption – Services (*)	26,45	ktoe
Gross value added by sector – Industry (**)	/	mil. EUR
Gross value added by sector – Services (**)	/	mil. EUR
Disposable income of households (**)	5766	mil. EUR
Gross domestic product (GDP) (**)	9753	mil. EUR
Electricity generation from thermal power plants (***)	257.4	ktoe
Electricity generation from combined heat and power (***)	49	ktoe
Heat generation from thermal power generation (***)	30.9	ktoe
Heat generation from combined heat and power plants, incl. industrial waste heat (***)	15	ktoe
Fuel input for thermal power generation (***)	869	ktoe
Passenger kilometres (pkm), if available (**)	1 184	mil. pkm
Tonne kilometres (tkm), if available (**)	7 168	mil. tkm
Combined transport kilometres (pkm + tkm), in case that separate values for pkm and tkm are not available (**)	8352	
Population (**)	2 073 702	millions

Table 1: Key energy statistics data.

(*) Energy statistics

(**) State Statistical office

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

B. Overview of energy consumption trends

In sectors where energy consumption remains stable or is growing, Contracting Parties shall analyze the reasons for it and attach their appraisal to the estimates.

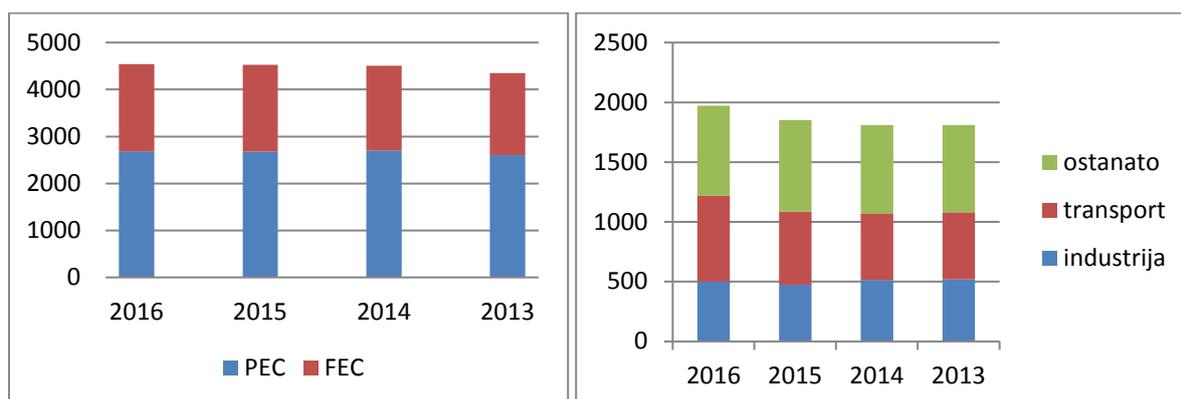


Figure 2: Final and primary energy consumption (left) and final energy consumption per sectors (right) in 2014 – 2016 (example).

C. National energy efficiency targets

The first report shall also include the national target referred to in EED Article 3(1). In the annual reports referred to in EED Article 24(1) Contracting Parties may also include additional national targets. These may be related in particular to the statistical indicators enumerated in point(a) of this Part or combinations thereof, such as primary or final energy intensity or sectoral energy intensities.

R. M. TARGETS	2015	2016	2017	2018	2019	2020
BUILDINGS [ktOE]	18,90	23,2		34,28		
INDUSTRY [ktOE]	22,20	28,3		41,37		
TRANSPORT [ktOE]	19,52	24,5		42,67		
OTHER [ktOE]	20,35	26,45		30,38		
ARTICLE 3 [ktOE]	80,97	102,5		148,72		226,27
ARTICLE 5 [ktOE]	7,94	1,8		10,65		
ARTICLE 7 [ktOE]	0,00		6,3	12,60	21,4	30,20
FEC [ktOE]	1.851,00	1854,00		1.944,00		2.093,00
PEC [ktOE]	2.678,00	2685,00		2.800,00		3.014,00

Figure 1: Division of targets per sectors and per different articles of EED (example)

D. Update of measures implemented in last year

Updates on major legislative and non-legislative measures implemented in the previous year which contribute towards the overall national energy efficiency targets for 2020

• Legislative measures

The process of transposition of the Energy Efficiency Directive has been started. Namely, in cooperation with the Secretariat of the Energy Community, a new approach has been adopted to develop a new Law on Energy Efficiency. For this purpose, the Secretariat prepared a model of a new Law on energy efficiency in English and submitted it to the Ministry of economy. The same in cooperation with USAID has been translated. For the purposes of transposition of the Directive into the new law, the Ministry of Economy established a working group composed of representatives from the competent ministries, the Energy Agency, the Energy Regulatory Commission and representatives from the donor institutions. The working group in October 2017 began to hold meetings. For the purposes of transposition of this Directive, the Ministry uses technical assistance from the following donors: UNIDO-GEF, REC for the transposition of Articles 7, 8 and 16, IME- Swiss Agency of Cooperation for Article 18 and USAID - for the transposition of the remaining Articles and the adoption of by-laws.

Also a letter of request(TA) to the EBRD for the Project Western Balkan Regional Energy Efficiency Programme(REEP Plus) Policy Dialogue Assistance "Review of Primary Energy Efficiency Law and Article 7 Policy" was signed by the Minister of Economy in May 2018.

The aim of this assignment is to assist the Ministry through the REEP plus assistance programme to:

- Draft a new EE Law which will properly incorporate all aspects of the EED and EPBD and
- Develop various analyses necessary to draft and implement Article 7 of the EED including proposal and recommendations for selection of the most adequate and cost-effective approach to implementation of requirements from this article (in terms of financial, administrative, procedural, legal and institutional implications).

Completion of all works is expected to be achieved by end December 2018.

Through the IME project - the Swiss Cooperation Agency, an Analysis of the technical and legal barriers for the establishment of the Energy Services Agreements in the Republic of Macedonia and model of Energy Services Agreements was developed in September 2017. These outputs were presented in May on the Macedonian Energy day where were presented projects for EE un public sector, municipalities and business sector suitable for financing by ESCO model and available financial instruments of the IFIs.

Final reports with analysis concerning the transposition of the art. 7, 8 of the EED were also prepared by GEF-UNIDO and submitted to the ministry in May 2018. These outputs were presented in the premises of the Ministry of Economy on a working group composed of representatives from the competent ministries, the Energy Agency, the Energy Regulatory Commission, the representatives from the donor institutions and the supply&distribution energy companies.

The Energy Performance of Buildings Directive is partially transposed in the existing Energy Law, the Rulebook on Buildings and the Rulebook on Energy Audits. The Ministry of Economy plans to request technical assistance through the Energy Community Secretariat for the call from REEP + for the completion of the Rules for Buildings.

- **Non-legislative measures**

In October 2016, the Government adopted a Programme for reimbursement of the costs for purchased and installed solar thermal collector systems in households and for reimbursement of the cost of purchased and installed PVC or aluminium windows in households for 2017, with financial support from the State Budget in the amount of 52,000,000,00 denars (EUR 845.000). Around 2472 request were submitted to the Ministry of Economy for the thermal solar systems, of which 1794 persons have been reimbursed. Around 2401 requests were submitted to the Ministry for installation of PVC or aluminium windows with total window area of 10.000m², of which around 1327 persons have been reimbursed .

In November 2017, the City of Skopje, in order to encourage citizens to use renewable energy sources to heat their homes, which minimally polluting the air and the soil and do not affect climate change, implemented the measure to subsidize or provide a refund of part of the spent funds for pellet stoves to the exhaustion of the budget for that purpose 10 million denars (around 166.000EUR) approximately 340 persons will be reimbursed .

In the Budget of the Ministry of Economy for 2018, a total of 50,000,000.00 MKD were approved for the realization of Program for subsidies for purchasing and installing of solar collector systems, PVC windows and pellet stoves for households for 2018. The Ministry of Economy prepared and submitted to the Government of the Republic of Macedonia a Programme for Promotion of Renewable Energy Sources and Encouraging Energy Efficiency in Households for 2018, which foresees the following:

- reimbursement of part of the costs for purchased and installed solar thermal collector systems in the households up to 30%, but not more than 300 Euros in Denar equivalent per household for 2018 in the amount of 6,000,000 MKD

- reimbursement of part of the costs for purchased and installed PVC or aluminum windows in the households up to 50%, but not more than 500 Euros in Denar equivalent per household for 2018 in the amount of 30,000,000 MKD

- reimbursement of part of the purchase costs of pellet stoves up to 50%, but not more than 500 Euros in Denar equivalent per household for 2018 in the amount of 14,000,000 MKD.

According to the Programme, on January 31, 2018, the Ministry of Economy published a Public Announcement for reimbursement of part of the cost of buying pellet stoves in households for 2018. The other two announcements will be announced in March 2018.

Within the Project for investment in clean energy, trainings on procedures for investment in renewable energy sources for municipalities were conducted. These trainings are very important for municipalities since they are the direct implementers of policies and procedures in the field of investment in renewable energy.

Horizon 2020 - Framework programme for research and innovation 2014-2020

1. The Cool Heating project promotes the implementation of "small modular renewable heating and cooling grids" for communities in South-Eastern Europe.

The objective of Cool Heating is to support the implementation of "small modular renewable heating and cooling grids" for communities in South-Eastern Europe. Cool Heating transfers knowledge from partners in countries where renewable district heating and cooling examples exist.

The main goal of multi EE is to improve the consistency and quality of the planning and implementation of the energy efficiency policy through innovative monitoring and verification schemes, as well as through improved coordination between the various administrative levels.

In order to achieve this goal, two sub-goals will have to be achieved:

- Introduction of innovative monitoring and verification schemes (M & V). These schemes are based on bottom-up data to ensure that the impact of energy efficiency measures is properly evaluated and usable for future energy efficiency planning.
- Improvement of the vertical coordination between the administrative levels. The goal is to exploit the full potential of integrated M & V schemes developed in multEE and improve overall quality of energy efficiency planning.

A step-by-step approach has been accepted to achieve both goals. Initially, the best European practices will be mapped and analyzed. Thereafter, the model of best practice examples will be developed and adapted to the specific needs of each partner country. At the same time, the necessary capacities will be built, given the transferability of the results to all interested countries.

The MVP system was transferred to the servers of the Ministry of Economy. The further activities for establishing the sustainability of the tool, organization of training for beneficiaries, as well as preparation of by-laws for use, are in the negotiations that should be undertaken by GIZ ORF EE.

E. Central Government buildings (Article 5)

The total building floor area of the buildings with a total useful floor area over 500 m² and as of 01 January 2019, over 250 m² owned and occupied by the Contracting Parties' central government that, on 1 January of the year in which the report is due, did not meet the energy performance requirements referred to in EED Article 5(1).

The total building floor area of heated and/or cooled buildings owned and occupied by the Contracting Parties' central government that was renovated in the previous year referred to in EED Article 5(1) or the amount of energy savings in eligible buildings owned and occupied by their central government as referred to in EED Article 5(6).

The total building floor area of the buildings with a total useful floor area over 500 m² and as of 01 January 2019, over 250 m² owned and occupied by the Contracting Parties' central government that, on 1 January of the year in which the report is due, did not meet the energy performance requirements referred to in Article 5(1).

The total building floor area of heated and/or cooled buildings owned and occupied by the Contracting Parties' central government that was renovated in the previous year referred to in Article 5(1) or the amount of energy savings in eligible buildings owned and occupied by their central government as referred to in Article 5(6).

Article 5 of EED provides the choice between two different options in expressing the targets regarding this article. Contracting Parties should express which option has been chosen and to provide data accordingly.

EED offers a choice of two methods to meet the obligations of Article 5. The main obligation is laid down in Article 5(1) as 'default' and the 'alternative' approach/obligation in Article 5(6). The fulfillment of either obligation is expected to lead to an equivalent targeted improvement in the energy performance of buildings and the chosen approach will mainly determine only the manner in which this target is reached.

In the next coming period the Macedonian government will decide which approach will be followed pursuant to the provisions in the EE Law. However, the recommendation will be given for the preparation of the inventory of the central governmental buildings.

If Macedonia chooses to use standard values for the calculation of the 'alternative' energy saving target as foreseen in Article 5(6) second subparagraph the elements provided by the EPBD and the associated cost-optimal methodology will be used, such as:

- Types of reference buildings,
- Reference values for energy consumption of each type of reference building before renovation,
- Reference values for cost-optimal energy consumption of each type of reference building with the defined energy efficiency measures applied.

Connecta “Public Building Inventory in WB6 countries”

The overall objective of the project Public Building Inventory in WB6 countries is to assist the beneficiary countries to fulfill their obligations of reporting m2 and fuel consumption for Central Government buildings to the ECS in accordance with the EED.

The Inception phase will include MoM of meetings with all beneficiaries to gain their consent to the proposed phased approach and identify any specific interest from the beneficiaries to join the project.

The Inception / Scoping phase will last around 6 months and provide more detailed insight in:

- building definition, central government / municipal;
- existing and ongoing EE projects within each country;
- sources for detailed building and energy data;

Connecta will shortly submit an Inception Report with a request that the beneficiaries send their approval. This would cover the confirmation of the interest from the beneficiaries to participate in the project.

F. Energy efficiency obligations (Article 7)

Energy savings achieved through the national energy efficiency obligation schemes referred to in EED Article 7(1) or the alternative measures adopted in application of Article 7(9).

Energy savings achieved through the national energy efficiency obligation schemes referred to in Article 7(1) or the alternative measures adopted in application of Article 7(9).

Article 7 of EED allows using the energy efficiency obligations schemes, alternative measures or any combination. In this section the elaboration of functioning of the EEO or explanation of categories of alternative measures which lead to corresponding savings.

No obligation has been placed to date on energy companies regarding reducing final end-use energy consumption in Macedonia. At this stage the indicative target of cumulative energy savings by 2020 will be provided, based on the Macedonian energy balances for years 2012, 2013 and 2014. Within this section, the simplified analysis (NEEAP) is conducted for preliminary estimation of electricity price increase in case that the all obligations arising from the Article 7 are implemented via utility obligation schemes.

Based on the data on implemented projects since December 2008, it is estimated that Macedonia fulfills this criterion and that the targets may be set according to paragraph 2. Instead of fixed 0.7% target in four years' period, mentioned in the first paragraph, Macedonia will opt for the 0.5% targets in years 2017 and 2018, and 0.7% targets in years 2019 and 2020.

Also the GEF-UNIDO Project, as part of its policy component, organized and held a Workshop on art. 7, 8 and 16 of the EED in April 2017; in the next period, the project staff got continuously engaged and provided input to the Working Group, with the aim to develop an energy efficiency law that is effective and feasible to implement by Macedonian institutions and other stakeholders, including industry.

Following the receipt of the framework Energy Efficiency Law, the GEF-UNIDO project has been asked by the Ministry of Economy to continue its support and technical assistance to the Ministry of Economy in the EED transposition process as part of the work under its policy component, which covers policy and institutional frameworks for the promotion and implementation of energy management systems in line with ISO 50001 standard in industry and possibly in commercial and public sectors.

Final reports with analysis concerning the transposition of the art. 7 of the EED were prepared by GEF-UNIDO and submitted to the ministry in May 2018.