

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

REPUBLIC OF NORTH MACEDONIA

Prepared by: MINISTRY OF ECONOMY

June 2020

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 2018 | Value | Unit |
|--|-----------|----------|
| Total primary energy consumption (*) | 2599 | ktoe |
| Total final energy consumption (*) | 1853 | ktoe |
| Final energy consumption – Transport (*) | 727 | ktoe |
| Final Energy consumption – Industry (*) | 411 | ktoe |
| Final energy consumption – Households (*) | 484 | ktoe |
| Final energy consumption – Other (*) | 231 | ktoe |
| Gross value added by sector – Industry (**) | / | mil. EUR |
| Gross value added by sector – Services (**) | / | mil. EUR |
| Disposable income of households (**) | 4028 | mil. EUR |
| Gross domestic product (GDP) (**) | 10737 | mil. EUR |
| Electricity generation from thermal power plants (**) | 249 | ktoe |
| Electricity generation from combined heat and power (**) | 64,1 | ktoe |
| Heat generation from thermal power generation main activity producer heat plants (**) | 23.5 | ktoe |
| Heat generation from combined heat and power plants, incl. industrial waste heat (**) | 30.1 | ktoe |
| Fuel input for thermal power generation (***) | 48.7 | ktoe |
| Passenger kilometres (inland total) (pkm) , if available (****) | 11800 | mil. pkm |
| Tonne kilometres (tkm), if available (**) | / | mil. tkm |
| Combined transport kilometres (pkm + tkm), in case that separate values for pkm and tkm are not available (**) | / | |
| Population (**) | 2 077 132 | millions |

Table 1: Key energy statistics data.

(*) *Energy statistics / North Macedonia in numbers*

<http://www.stat.gov.mk/PublikaciiPoOblast.aspx?id=27&rbrObl=37>

(**) *State Statistical office / Energy balance*

<http://makstat.stat.gov.mk/PXWeb/pxweb/mk/MakStat/?rxid=051383ff-fe8b-47cd-b974-c652886a4a3e>

(***) *Annual report of the Regulatory Energy Commission*

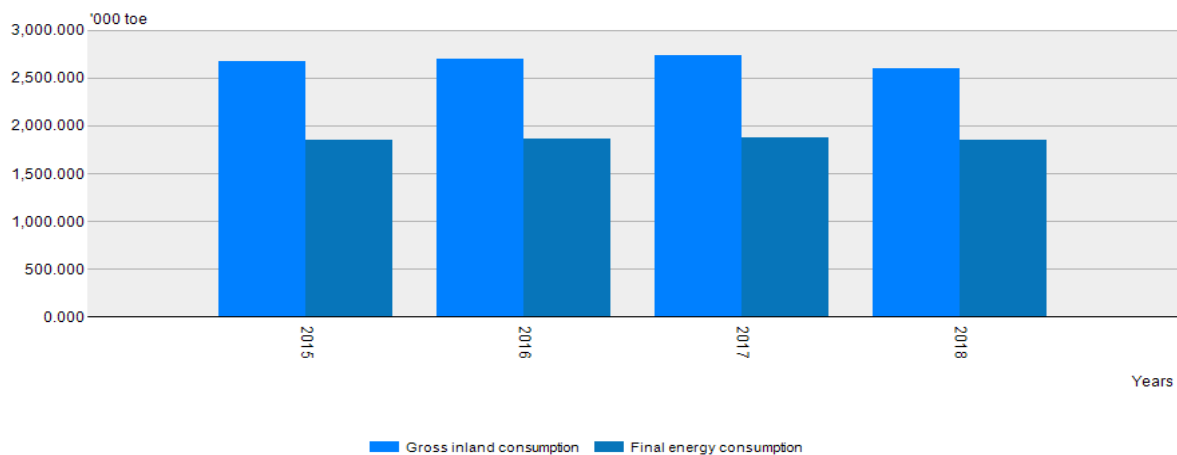
<https://www.erc.org.mk/pages.aspx?id=18>

(****) *OECD Data* (<https://data.oecd.org/transport/passenger-transport.htm>)

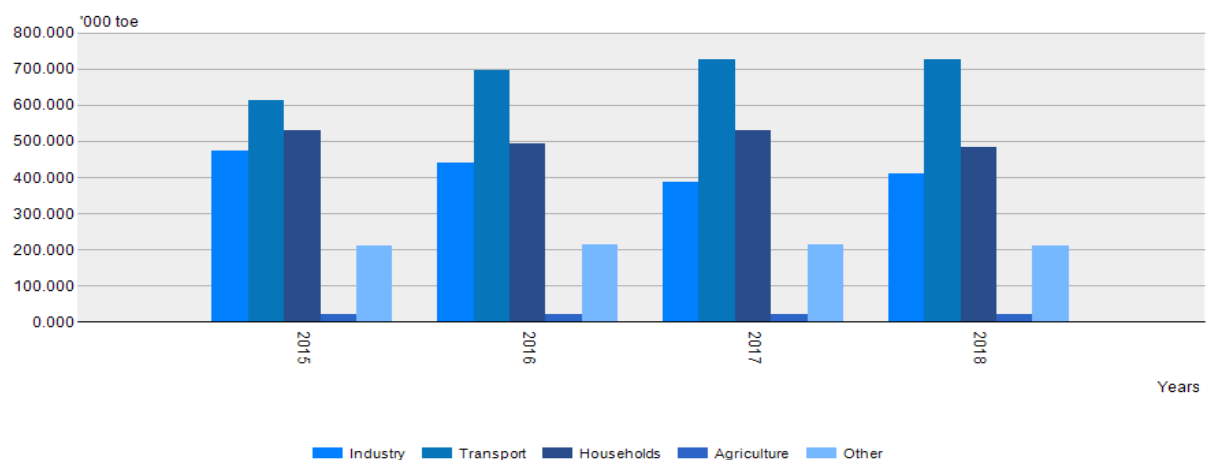
B. Overview of energy consumption trends

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.

Total energy balances, in '000 tonnes of oil equivalent ('000 toe), by years



Total energy balances, in '000 tonnes of oil equivalent ('000 toe), by years



C. National energy efficiency targets

The forth 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. MACEDONIA SAVINGS | 2016 | 2017 | 2018 | 2019 | 2020 |
|----------------------|-------|-------|---------|---------|--------|
| BUILDINGS [ktoe] | 44.4 | 63.3 | 83.27 | 146.7 | |
| INDUSTRY [ktoe] | 34.4 | 42.6 | 53.10 | 58.1 | |
| TRANSPORT [ktoe] | 22.5 | 27.0 | 31.21 | 44.0 | |
| OTHER [ktoe] | 9.5 | 11.0 | 12.70 | 17.6 | |
| ARTICLE 3 [ktoe] | | | 148.72 | | 226.27 |
| ARTICLE 5 [ktoe] | | | | | |
| ARTICLE 7 [ktoe] | | | | | |
| FEC [ktoe] | 110.8 | 143.9 | 180.28 | 266.4 | |
| PEC [ktoe] | | | 185.74* | 278.67* | |

Revision has been made according the new measures included in the draft forth NEEAP

*cumulative for the period 2016-2018/2019

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 Law for energy efficiency, in which the Energy Efficiency Directive, the Energy Performance of Buildings Directive and the Regulation for establishing a framework for labelling of energy consumption, has been transposed, was adopted in February, 2020 year.

The Ministry of economy has already started with the process of preparation of the secondary legislation within the timeframe provided in the Law for Energy Efficiency. A technical assistance was provided from GIZ for the process of development of the Forth Energy Efficiency Action Plan which currently is under preparation, and it is expected to be adopted until the end of 2020y.

A Strategy for Energy Development until 2040 year was adopted this year. This strategy includes a separate dimension for energy efficiency. In parallel with the strategy, a technical assistance from GIZ was provided for the process of development of the National Energy and Climate Plan, where the manner of achieving the targets, set out in the Strategy for Energy Development until 2040 year, according the chosen scenario, are going to be

determined. The draft National Energy and Climate Plan was realised and the same is expected to be adopted before the end of 2020 year.

The process of development of the Rulebook on MVP is ongoing with technical assistance which has been provided by GIZ. The first draft of the MVP Rulebook has been released. In parallel the trainings for the municipalities to use the MVP tool, in order to fulfil the obligation from the Law on Energy Efficiency have been launched in the end of 2019 year and all of those were completed by the end of January 2020.

The Ministry of Economy has submitted request to UNOPS for technical assistance for preparation of the Rulebook for energy audits of the large enterprises which was officially approved.

The Energy Performance of Buildings Directive has been partially transposed into the existing Energy Efficiency Law, the Rulebook on Energy Performance of Buildings and the Rulebook on Energy Audits. . Under the 'Policy Window' of the Regional Energy Efficiency Program (REEP Plus) the Ministry of Economy has requested from EBRD a consultancy for preparation of the package by-laws for buildings arising from the Energy Efficiency Law, which was officially approved as well. In addition, there are ongoing activities for preparation of the secondary legislation in the part of energy consumption labeling and eco design with technical assistance provided from USAID.

A technical assistance by HABITAT was provided for development of the Typology for buildings in accordance with the TABULA methodology, which will be base during the development of the Strategy to 2030 for the Reconstruction of Housing, Public and Commercial Buildings.

- **Non-legislative measures**

During 2019, the Government adopted a Program for Promotion of Renewable Energy Sources and Promotion of Energy Efficiency in Households for 2019 ("Official Gazette of the Republic of North Macedonia" No.15 / 2019). In 2019, 763 households were subsidized, out of a total of 1306 applicants who purchased and built solar collectors, and 10.000.000, 00 MKD were allocated from the Budget, 1503 households, out of a total of 2471 applicants are subsidized and provided with a refund of the funds they have spent on purchased and installed PVC or aluminum windows, and 39.700.000, 00 MKD were paid from the Budget. And from 932 households, out of a total of 1863 applicants who purchased pellet stoves in their homes, they were subsidized with 30.000.000, 00MKD from the Budget.

The Government of the Republic of North Macedonia, on the proposal of the Ministry of Economy, has adopted the Program for Promotion of Renewable Energy Sources and Promotion of Energy Efficiency in Households for 2020, which envisages the implementation of the above-mentioned measures and for the first time introduces the measure of reimbursement part of the costs for the purchase of inverter air conditioners in the households. For the realization of this Program in the Budget ,a total of 54,000,000 denars have been provided. Due to the unforeseen situation with the pandemic - Covid-19, at the beginning of 2020 a public announcement was published to reimburse part of the costs for purchasing pellet stoves in households, while the funds provided for other measures were reallocated to the Fund for assistance and support to deal with the crisis caused by KOVID-19.

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 in amount of 70%, from the spent funds but not more than 30,000 denars including personal income tax per household. About 550 requests were received after the announcement of the call.. For 2018 and 2019, the City of Skopje awarded a total of 7,255 subsidies to

citizens who bought a bicycle and a total of 313 subsidies to citizens who bought an electric scooter. The same call was announced for 2020 year.

Due to the big pollution in our county, the most polluted cities Skopje and Tetovo announced public call for reimbursement approximately 100% of the costs for purchase inverter air conditioners. The main condition to be eligible applicant is to not be able to connect to the district heating system and to return the old heating stove.

The United Nations Development Program (UNDP) together with the City of Skopje and the Ministry of Environment and Physical Planning has announced a call for selection of households from the Lisice, one of the most polluted parts of City of Skopje that will be supported by a grant of up to \$ 10,000 to introduce measures to increase energy efficiency in their homes and thus contribute to reducing air pollution. The main focus is putted on the heating systems.

It is necessary to create favourable conditions (economic, technical and legal) for effectuation of energy services agreements in order for ESCO companies to be able to guarantee for the achieved savings by applying energy efficiency measures. The implementation of the project "Creating conditions for the implementation of ESCO projects", in amount of 5 million euros, funded by the Regional Energy Efficiency Program (REEP), is aimed at supporting energy efficiency projects for street lighting and small distribution systems for heating in the municipalities. The ESCO Model or so called The Energy Performance Agreement as well as the tender documentation has been prepared with technical assistance under this program. This project has so far covered eight municipalities with energy efficiency projects for public street lighting,. The second phase of the project will continue, covering municipalities with energy efficiency projects in small distribution heating systems. In addition, the Ministry of Economy has expressed interest, together with the EBRD team of consultants, for preparation of feasibility study for EE and ESCO financing for increasing the energy efficiency in the building of the Ministry of Economy through Public Private Partnership.

The Residential Energy Efficiency project in the Western Balkans was launched in February 2020 as part of the Economic Resilience Initiative-Infrastructure Technical Assistance (ERI-ITA) project, funded by the European Investment Bank (EIB).The project promoter is Habitat for Humanity International (HfHI), in coordination with the EIB. The countries involved in the project are North Macedonia and Bosnia and Herzegovina.

The main objective of this project is to develop a feasibility study for financing energy efficient projects in the residential sector in the Western Balkans.

There is credit line in three of our commercial banks from EBRD through the (GEFF) Green Energy Support Program that endorses green technology that contributes to a better environment.

The loans are intended for citizens and housing associations who plan investments in improving the energy efficiency of residential buildings such as: investments in new heat or geothermal pumps, purchase of efficient stoves, windows, and installation of solar panels, insulation on walls, roof or floors, investments in hot water collectors and the like.

With loans supported through the GEF program, citizens obtain the right to apply for a grant of up to 20% of the total amount of the investment.

A Project for energy efficiency in the residential sector in amount of 25 million euros is under implementation. The funds will be provided by the European Investment Bank as loan. The project will be implement in cooperation with Habitat-Macedonia.

Individual and collective households are eligible. With this project it is expected to be covered around 25.000 households.

It will be considered the possibility for ESKO companies to be included in this project as well as additional grant funds in amount of up to 20% from the total investment, provided by the municipalities.

E. Central Government buildings (Article 5)

According the draft Law for Energy Efficiency the total building floor area of the buildings with a total useful floor area over 250 m² owned and occupied by the Contracting Parties' central government that, did not meet the energy performance requirements referred to in EED Article 5(1).

The Ministry, in co-operation with the Office of General and Common Affairs of the Government, prepare a draft plan for annually reconstruction of at least 1% of the total useful floor area of buildings, published in the list of buildings with a total useful floor area of over 250m² that do not meet the minimum energy performance requirements, owned and occupied by public sector entities at the state level.

On going projects in public buildings

The preparations are under way for launching a 25m-euro through the Public Sector Energy Efficiency Project, which is part of the new four-year Strategy of the International Bank for Reconstruction and Development - World Bank for Partnership with our country for the period 2019-2023. The main objectives of the project are to reduce energy consumption in the public sector and to support the establishment and operationalization of a sustainable mechanism for financing energy efficiency in the public sector. In order to obtain the necessary funds from the International Bank for Reconstruction and Development - World Bank for this project, it is envisaged to conclude a Loan Agreement between the International Bank for Reconstruction and Development - World Bank and the Republic of North Macedonia. The precondition for concluding this agreement is the adoption of the Law on Debt by the Parliament of the Republic of North Macedonia, which was adopted by the Government on February 2020 and is currently in Parliamentary procedure. This project is expected to be complement with potential grant from 10 million dollars from Green Climate Fond which would be added to the Project to help increase the start-up capital of the proposed EE Fund, and thus extend the potential client base and investment portfolio of the Fund. Additional €3 million EU Grant funds are also expected to be added towards this project.

A project is under way to rehabilitate state student dormitories, in particular increasing energy efficiency and providing basic living conditions. The project will focus on state student dormitories in the following cities: Skopje, Prilep, Bitola, Ohrid and Stip. The overall implementation of the Project is expected to be completed in 54 months, i.e construction work to be completed in the second quarter of 2024, plus a 12 month defect determination period. The total investment value of the Energy Efficient Rehabilitation Project for student dormitories in the Republic of North Macedonia amounts to approximately EUR 25 million. The financial structure provides funding from two sources: a loan from the Government of the Federal Republic of Germany, via KfW, in the amount of EUR 20 million and a grant from the EU in the amount of EUR 4,785 million. As a precondition for concluding of the abovementioned agreements with the Credit Bank for Reconstruction - KfW, a Law on Debt was adopted by the Parliament of the Republic of North Macedonia.

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).

According to the draft Law for Energy Efficiency The Government, shall adopt a decree establishing a binding energy efficiency scheme for the purpose of achieving savings in final energy consumption, which distribution system operators and / or suppliers energy markets are obliged to apply it.

During December 2019, the Ministry of Economy has officially requested from the European Bank for Reconstruction and Development a consultancy under the 'Policy Window' of the Regional Energy Efficiency Program (REEP Plus) for the preparation of the Regulation setting out the binding energy efficiency scheme and the manner and measures for achieving the target referred to in Article 7 of the Energy Efficiency Directive which was approved. The activities for development on this decree are on-going and currently the working group under the guidance of the selected consultant is working on the draft Policy report on 2017-2020 target.