# ENERGY AND WATER SERVICES REGULATORY COMMISSION OF THE REPUBLIC OF NORTH MACEDONIA

APRIL 2019

# ANNUAL REPORT

# 2018

# ENERGY AND WATER SERVICES REGULATORY COMMISSION OF THE REPUBLIC OF NORTH MACEDONIA

*The Annual Report of the Energy and Water Services Regulatory Commission of the Republic of North Macedonia for 2018 has been prepared in accordance with Article 36 from the Energy Law, which establishes the obligation of the Energy and Water Services Regulatory Commission to submit the Annual Report for its operation during the previous year to the Assembly of the Republic of North Macedonia, not later than 30th of April of the current year.*

*The Annual Report of the Energy and Water Services Regulatory Commission for 2018 contains detailed information on the performance of the competences according to the Energy Law and the Law on Setting Prices of Water Services, as well as information on the material-financial operation.*

*The Energy Law also determines that the Annual Report of the Energy and Water Services Regulatory Commission needs to be submitted to the Government of the Republic of North Macedonia and the Ministry competent for the performance of the assignments within the energy area, so that they could be informed, as well as to the Energy Community Secretariat.*

*The Report contains overview of the activities performed by the Energy and Water Services Regulatory Commission during 2018, with special review of:*

- *State of the energy markets,*
- *State of the prices and tariffs regulation,*
- *Preparing regulatory acts,*
- *International activities and*
- *Financial Statement of the Energy and Water Services Regulatory Commission.*

**Members of the Commission**

Marko Bislimoski, M.Sc., President

Kushtrim Ramadani, M.Sc., Vice-president

Svetlana Janevska, Member

Enver Elmazi, Member

Panche Orcev, Member

Atanasko Tuneski, PhD, Member

Natasha Veljanovska M.Sc. Member

April 2019

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# INTRODUCTION

The Energy and Water Services Regulatory Commission of the Republic of North Macedonia (hereinafter: Energy Regulatory Commission) is an independent, non-profit regulatory body that regulates and controls the manner of performance of the energy activities.

The Energy Regulatory Commission is independent in its operation and decision-making within its competences and has the capacity of a legal entity which is separate, and functionally independent in terms of organization and decision-making from the organs of the state and local government and the providers of energy activities.

The Energy Regulatory Commission, at least annually, reports on its operation to the Assembly of the Republic of North Macedonia as well as to the Government of the Republic of North Macedonia, the Ministry competent for the performance of the operations within the energy area and the Energy Community Secretariat.

The competences of the Energy Regulatory Commission have been regulated with the Energy Law ("Official Gazette of the Republic of Macedonia" no 96/18), the Law on Setting Prices for Water Services ("Official Gazette of the Republic of Macedonia no. 7/16), other by-laws, as well as the Statute and the Rules of Procedure of its operation. The acts of the Energy Regulatory Commission are published in the "Official Gazette of the Republic of North Macedonia" and on the website of the Energy Regulatory Commission www.erc.org.mk.

The Energy Regulatory Commission provides efficient, competitive and smooth functioning of the energy markets in the Republic of North Macedonia, according to the competences determined in Articles 24, 25 and 26 from the Energy Law, whereby the competences for the regulation of the energy activities refer to:

- electricity,
- natural gas,
- oil and oil derivatives, liquid fuels mixtures of fossil origin used for transport with biofuels and
- district heating.

The Energy Regulatory Commission, with the competences prescribed with the Law on Setting Prices of Water Services ("Official Gazette of the Republic of Macedonia" no. 7/16) and regulated with the Energy Law, is competent for setting prices and tariffs of the water services.

In the performance of its competences, the Energy Regulatory Commission cooperates with state bodies, organizations and institutions and especially with the Ministry of Economy, Ministry of Finance, Ministry of Environment and Spatial Planning, Energy Agency of the Republic of North Macedonia, State Market Inspectorate, Customs Administration, Competition Protection Commission, Economic Chamber of Macedonia, Union of Commerce Chambers of Macedonia, Consumer Protection Council, Public Procurement Bureau, Metrology Bureau, State Inspectorate for Environment and the Association of the Units of Local Self-Government. The representatives of the institutions listed above, depending on their competences, are regularly invited for attendance at the Preparatory sessions of the Energy Regulatory Commission.

During 2018 the Energy Regulatory Commission has held 133 Main sessions, 92 Preparatory sessions, as well as large number of expert discussions and other working meetings where more issues within the competence of the Commission were reviewed and discussed. As a result of these activities in the course of 2018, numerous regulations and decisions on specific issues were adopted and licenses for performing energy activities were issued.

# I. ORGANIZATIONAL SETTING OF THE ENERGY REGULATORY COMMISSION

The Energy Regulatory Commission is composed of seven members, one of which is the President. The members and the President of the Energy Regulatory Commission, at a proposal of the Government of the Republic of North Macedonia are appointed and dismissed by the Assembly of the Republic of North Macedonia, by considering the appropriate and equitable representation of all members of the communities.

The organizational setting and competences of the Energy Regulatory Commission are compatible with the regulatory bodies of the countries in the neighborhood and region and correspond to the requirements for complete fulfillment of its obligations, as well as to the degree of development of the energy markets in the Republic of North Macedonia.

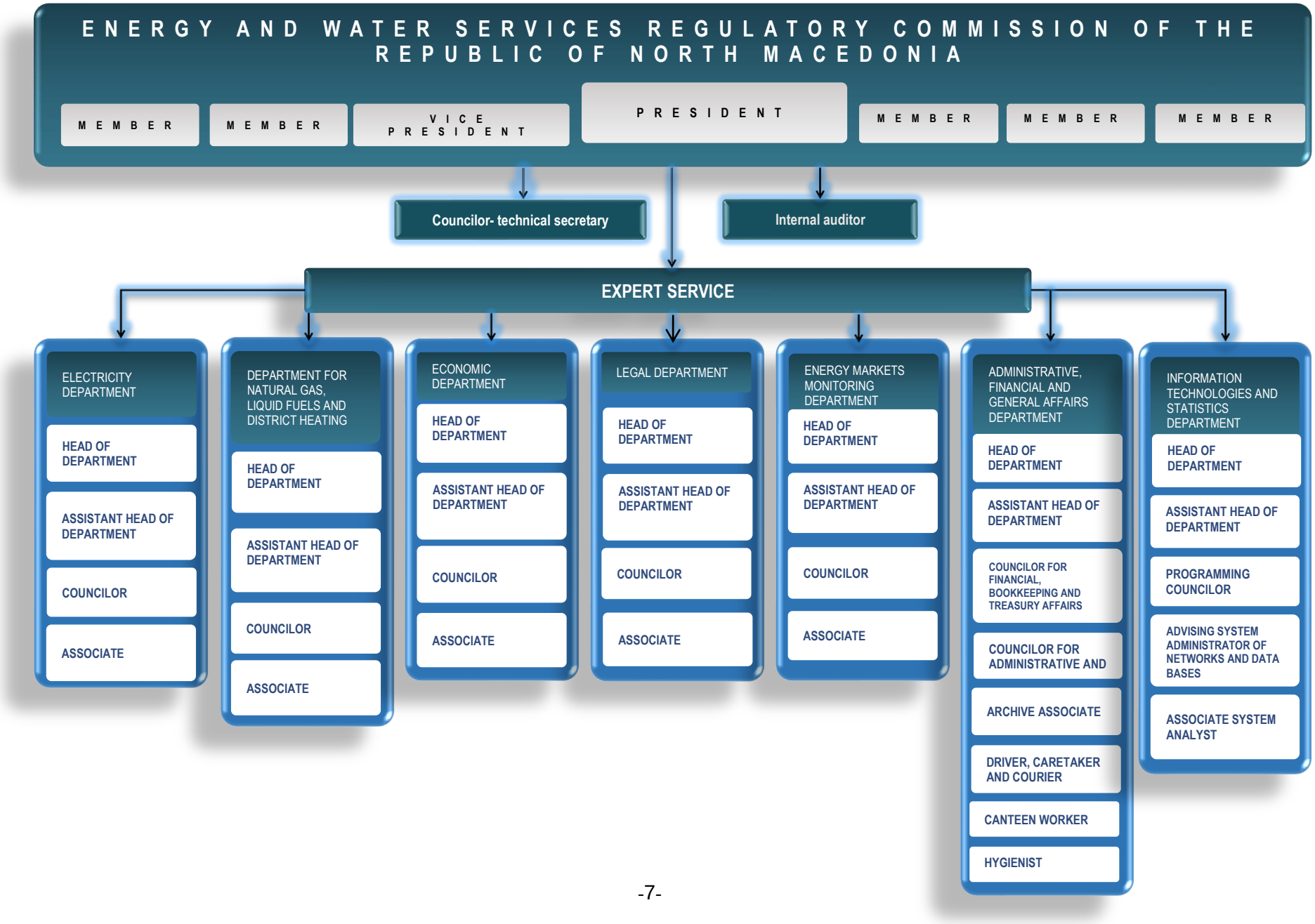
In accordance with the Rulebook on the Organization and Systematization of the Work Posts and Work Assignments of the Employees in the Expert Service of the Energy Regulatory Commission no. 01-1477/1 from 31.07.2015, departments for performance of the expert assignments and tasks for the needs of the Energy Regulatory Commission are the following:

- Electricity Department,
- Department for Natural Gas, Liquid Fuels and District Heating,
- Economics Department,
- Legal Department,
- Energy Markets Monitoring Department,
- Administrative, Financial and General Affairs Department and
- Information Technology and Statistics Department.

The total number of employees, up until and including 31.12.2018, is 29 persons, 7 of which are members of the Energy Regulatory Commission, 19 are employees in the Expert Service and 3 are employed as assistive and technical staff.

The educational structure of the Commission Members and the Expert Service employees, up until and including 31.12.2018 is composed of 11 engineers, 10 economists, 4 lawyers and 1 person with a different kind of higher education.

On 26.06.2018, the Assembly of the Republic of North Macedonia adopted a Decision for appointing a President and three members of the Energy Regulatory Commission with a five-year term in office, no. 08-3994/1, published in the “Official Gazette of the Republic of Macedonia” no. 118/18.


ENERGY AND WATER SERVICES REGULATORY COMMISSION OF THE REPUBLIC OF NORTH MACEDONIA
MEMBER
MEMBER
VICE PRESIDENT
PRESIDENT
MEMBER
MEMBER
MEMBER
Councilor- technical secretary
Internal auditor
EXPERT SERVICE
ELECTRICITY DEPARTMENT
HEAD OF DEPARTMENT
ASSISTANT HEAD OF DEPARTMENT
COUNCILOR
ASSOCIATE
DEPARTMENT FOR NATURAL GAS, LIQUID FUELS AND DISTRICT HEATING
HEAD OF DEPARTMENT
ASSISTANT HEAD OF DEPARTMENT
COUNCILOR
ASSOCIATE
ECONOMIC DEPARTMENT
HEAD OF DEPARTMENT
ASSISTANT HEAD OF DEPARTMENT
COUNCILOR
ASSOCIATE
LEGAL DEPARTMENT
HEAD OF DEPARTMENT
ASSISTANT HEAD OF DEPARTMENT
COUNCILOR
ASSOCIATE
ENERGY MARKETS MONITORING DEPARTMENT
HEAD OF DEPARTMENT
ASSISTANT HEAD OF DEPARTMENT
COUNCILOR
ASSOCIATE
ADMINISTRATIVE, FINANCIAL AND GENERAL AFFAIRS DEPARTMENT
HEAD OF DEPARTMENT
ASSISTANT HEAD OF DEPARTMENT
COUNCILOR FOR FINANCIAL, BOOKKEEPING AND TREASURY AFFAIRS
COUNCILOR FOR ADMINISTRATIVE AND
ARCHIVE ASSOCIATE
DRIVER, CARETAKER AND COURIER
CANTEEN WORKER
HYGIENIST
INFORMATION TECHNOLOGIES AND STATISTICS DEPARTMENT
HEAD OF DEPARTMENT
ASSISTANT HEAD OF DEPARTMENT
PROGRAMMING COUNCILOR
ADVISING SYSTEM ADMINISTRATOR OF NETWORKS AND DATA BASES
ASSOCIATE SYSTEM ANALYST

ENERGY AND WATER SERVICES REGULATORY COMMISSION OF THE REPUBLIC OF NORTH MACEDONIA

# ELECTRICITY

## ANNUAL REPORT

# 2018

# II. ELECTRICITY MARKET

## II.1. General Data on the Power System

The power system in the Republic of North Macedonia is composed of electricity generation plants, electricity transmission system, two electricity distribution systems, consumers who meet the criteria for direct participation in the electricity market, as well as small electricity consumers and households.

### II.1.1. Electricity Generation Plants

The electricity in North Macedonia is generated in different types of plants, including:

- Thermal power plants (TPP),
- Combined heat and power plants (CHPP),
- Hydropower plants (HPP),
- Small hydropower plants (SHPP),
- Photovoltaic power plants (PVPP),
- Wind power plants (WPP) and
- Biogas thermal power plants (BTPP).

*Table II.1. Electricity generation plants in the Republic of North Macedonia*

| PLANT TYPE | 2017 | | | 2018 | | |
|---|---|---|---|---|---|---|
| | Number | Installed capacity | | Number | Installed capacity | |
| | | MW | % | | MW | % |
| TPP | 3 | 1.034,00 | 49,94 | 3 | 1.034,00 | 49,8 |
| CHPP | 3 | 286,99 | 13,86 | 3 | 286,99 | 13,82 |
| HPP | 10 | 586,65 | 28,33 | 10 | 586,65 | 28,26 |
| SHPP | 92 | 101,58 | 4,91 | 96 | 106,32 | 5,12 |
| PVPP | 111 | 17,51 | 0,85 | 116 | 18,49 | 0,89 |
| WPP | 1 | 36,8 | 1,78 | 1 | 36,8 | 1,77 |
| BTPP | 3 | 7 | 0,34 | 3 | 7 | 0,34 |
| Total | **223** | **2.070,54** | **100** | **232** | **2.076,25** | **100** |

The total installed capacity of the electricity generation plants in 2018 is 2076,25 MW and it has been increased for 5,71 MW compared to 2017 when it was 2.070,54 MW. This increase is due to start of operation of several power plants operating on renewable energy sources.

The largest electricity generation company in the Republic of North Macedonia is ELEM JSC Skopje, which is state-owned. With a Decision adopted by the

Government of the Republic of North Macedonia on 19th of March 2019, the name of Power Plants of Macedonia JSC Skopje (ELEM JSC) is changed to Power Plants of North Macedonia JSC Skopje (ESM JSC) and that title will be used in the further text of the present report.

The total installed capacity of the thermal power plants is 1.034 MW, i.e. it represents 49,80% of the total installed capacity of the country. Two thermal power plants are owned by ESM JSC Skopje (TPP REK Bitola and TPP Oslomej), and one thermoelectric power plant is owned by TEC JSC Negotino (TPP Negotino), that is mainly used as delayed cold reserve.

*Table II.2. Thermal power plants in the Republic of North Macedonia*

| Name | Installed capacity (MW) | Predicted annual production (GWh) | Location | Ownership |
|---|---|---|---|---|
| TPP REK Bitola | 699 | 4.600 | Bitola | ESM JSC Skopje |
| TPP Oslomej | 125 | 700 | Kicevo | ESM JSC Skopje |
| TPP Negotino | 210 | reserve | Dubrovo | TEC JSC Negotino |
| **Total** | **1.034** | **5.300** | | |

The total installed capacity for generation of electricity from combined heat and power plants for generation of electricity and thermal energy is 287 MW, i.e. it represents 13,82% of the total installed capacity of the country. Two combined power plants (Energy and KOGEL) are owned by ESM JSC Skopje, while TE-TO JSC Skopje is privately-owned.

*Table II.3. Combined heat and power plants in the Republic of North Macedonia*

| Title | Installed capacity (MW) | Predicted annual generation (GWh) | location | Ownership |
|---|---|---|---|---|
| ESM Energetika | 30 | 500 | Skopje | ESM JSC Skopje |
| TE-TO | 227 | 1.900 | Skopje | TE-TO JSC Skopje |
| KOGEL | 30 | 600 | Skopje | ESM JSC Skopje |
| **Total** | **287** | **3.000** | | |

The total installed capacity of the hydropower plants with single capacity of over 10 MW is 586,65 MW, representing 28,26% of the total installed capacity in the Republic of North Macedonia. This group includes:

- Eight hydropower plants (Kozjak, Globocica, Shpilje, Tikvesh, Vrutok, Vrben, Raven and St. Petka) with total installed capacity of 557,4 MW, owned by ESM JSC Skopje.
- Two hydropower plants (Kalimanci and Matka) with total installed capacity of 29,25 MW, owned by EVN Makedonija Elektrani DOOEL Skopje.

*Table II.4. Hydropower plants in the Republic of North Macedonia*

| Title | Installed capacity (MW) | Predicted annual production (GWh) | Location | Ownership |
|---|---|---|---|---|
| HPP Kozjak | 82,00 | 130 | r. Treska | ESM JSC Skopje |
| HPP Globocica | 42,60 | 180 | r. Crn Drim- Struga | ESM JSC Skopje |
| HPP Spilje | 84,00 | 272 | r. Crn Drim- Debar | ESM JSC Skopje |
| HPP Tikvesh | 113,00 | 144 | r. Crna Reka- Kavadarci | ESM JSC Skopje |
| HPP Vrutok | 199,40 | 430 | Mavrovo | ESM JSC Skopje |
| HPP Vrben | | | | |
| HPP Raven | | | | |
| HPP St. Petka | 36,40 | 43 | r. Treska | ESM JSC Skopje |
| HPP Kalimanci | 17,25 | 17 | r. Bregalnica | EVN Makedonija Elektrani DOOEL Skopje |
| HPP Matka | 12,00 | 40 | r. Treska | EVN Makedonija Elektrani DOOEL Skopje |
| **Total** | **586,65** | **1.256** | | |

In 2018 there was production of 96 small hydropower plants with individual installed capacity of under 10 MW and total installed capacity of 106,32 MW, i.e. with share of 5,12% in the total installed capacity in the country. Of those, in 2018, 4 new small hydropower plants were constructed and commissioned, with total installed capacity of 4,74 MW.

Seventeen of the total number of small hydropower plants, with individual capacity of under 10 MW, do not hold status of preferential producer and their total installed capacity is 34 MW. Of those, nine are owned by EVN Makedonija Elektrani DOOEL Skopje with total installed capacity of 29,31 MW, four are owned by JP Strezevo Bitola with total installed capacity of 3,37 MW, while the remaining four are owned by MHPP LUKAR DOOEL Kavadarci, with total installed capacity of 1,32 MW.

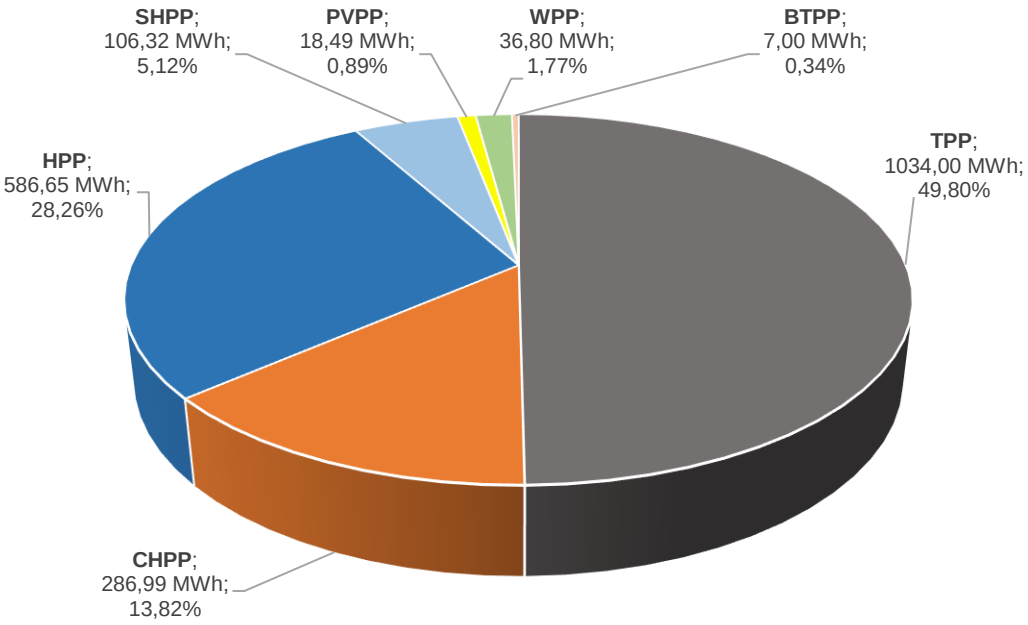
EVN Makedonija Elektrani DOOEL Skopje has 11 hydropower plants in total, with total installed capacity of 58,56 MW.

The remaining 79 small hydropower plants have the status of a preferential producer and their total installed capacity is 72,32 MW.

In 2018, 118 photovoltaic power plants operated actively, with total installed capacity of 18,49 MW, i.e. 0,89% of the total installed capacity in the country. Compared to 2017, last year five new photovoltaic power plants were constructed and commissioned, with total installed capacity of 0,97 MW. Out of the total number of 118 photovoltaic power plants, 102 hold status of preferential producers, while the remaining 16 don't have such status and sell their electricity at the free market. All constructed photovoltaic power plants are privately owned.

The total installed capacity of the wind power plants is 36,8 MW, i.e. 1,77% of the total installed capacity in the country. The wind power plants hold the status of a preferential producer.

The total installed capacity of the biogas thermal power plants is 6,99 MW, whereby their share in the total installed capacity in the country is 0,34%. These biogas thermal power plants hold the status of preferential producers as well.




*Share of the types of power plants in the Republic of North Macedonia per installed capacity in MW*

## II.1.2. Electricity Transmission System

The electricity transmission system operator of the Republic of North Macedonia, the Joint Stock Company for electricity transmission and power system management, state-owned Skopje (the previous title of the company will be used in the present report - MEPSO JSC Skopje) is a state-owned joint stock company that performs the activity of electricity transmission, manages the electricity transmission system, its maintenance, development and connection to the power systems of the neighboring countries.

The electricity transmission system connects the larger generation plants in the Republic of North Macedonia and both electricity distribution systems of the country operated by Elektrodistribucija DOOEL Skopje and ESM JSC, Energetika Subsidiary. The electricity transmission network functions at 400 kV and 110 kV voltage level.

The main pillar of the electricity transmission grid are 400 kV power lines. They form a 400-kV ring that connects the north part of the country where most of the electricity consumers are located with the south part where the number of consumers is significantly lower, but the largest generation facilities are located there.

Also, 400 kV power lines serve the purpose of interconnection with the neighboring power systems.

The electricity transmission system of the Republic of North Macedonia is connected to all electricity transmission systems of the neighboring countries, except with the Republic of Albania, through five 400 kV interconnections:

- Kosovo with 400 kV powerline TS Skopje 5 – TS Ferizaj 2 (Uroshevac);
- Serbia with 400 kV powerline TS Shtip– TS Vranje 4;
- Bulgaria with 400 kV powerline TS Stip– TS Mogila;
- Greece with two 400 kV powerlines TS Bitola 2 – TS Meliti and TS Dubrovo– TS Thessaloniki.

In order to connect our electricity transmission system with the electricity transmission system of the Republic of Albania, the Energy Community adopted a project for construction of a 400-kV powerline Bitola–Elbasan, which is of great significance for the Republic of North Macedonia. With this project the construction of the corridor eight will be finalized, and by so North Macedonia, Bulgaria, Albania, Montenegro and Italy will be connected. The project is expected to be completed until 2023.


*Energy map of the Electricity Transmission System of the Republic of North Macedonia*

The electricity transmission grid of 110 kV is the one that is most expanded and developed and connects the large hydro and thermal power plants, as well as all larger industrial centers connected to the electricity transmission voltage level. The

connection between 400 kV and 110 kV transmission grid is being made through five transformer stations: TS Skopje 4, TS Skopje 5, TS Bitola 2, TS Dubrovo and TS Stip.

A small number of direct consumers that are directly connected to the system are supplied with electricity through the electricity transmission system at 110 kV level, while the electricity distribution systems connect the smaller generation capacities, as well as the consumers connected to the electricity distribution systems.

In 2018 MEPSO JSC Skopje holds a license for performing the activity of electricity transmission and a license for performance of the activity of organizing and managing the electricity market.

*Table II.5. Length of the electricity transmission system by voltage levels*

| **Voltage level (kV)** | **400 kV** | **220 kV** | **150 kV** | **110 kV** | **35 kV** |
|---|---|---|---|---|---|
| **Length (km)** | 577 | 38 | 23 | 1.601 | 7,8 |

*Table II.6. Number of transformer stations*

| **Voltage level (kV)** | **TS 400/110 kV/kV** | **TS 220/110 kV/kV** | **TS 110/35 kV/kV** | **TS 110/35/(20)10 kV/kV/kV** | **TS 110/(20)10 kV/kV/kV** | **TS 110/6 kV/kV** | **RP 110 kV** |
|---|---|---|---|---|---|---|---|
| **Number** | 5 | 1 | 5 | 30 | 17 | 1 | 49 |

## II.1.3. Electricity Distribution Systems

There are two separate electricity distribution systems in the Republic of North Macedonia, one of which is owned by Elektrodistribucija DOOEL Skopje, while the other is owned by ESM JSC Skopje, Energetika Subsidiary.

The electricity distribution system operator EVN Elektrodistribucija Skopje changed the title in Elektrodistribucija DOOEL Skopje near the end of 2018.

The total length of the electricity distribution grid is 28.288 km, of which 28.128 km (99,43%) is owned by Elektrodistribucija DOOEL Skopje, while 170 km (0,57%) is owned by ESM JSC Skopje, Energetika Subsidiary.

Elektrodistribucija DOOEL Skopje, in 2018, constructed 240 km of new electricity distribution grid at 35 kV voltage level - 16 km, at 10 kV voltage level- 39 km, at 0,4 kV voltage level - 185 km. Elektrodistribucija DOOEL Skopje, in 2018, also constructed 45 new transformer stations TS 10/0.4 kV/kV.

*Table II.7. Number of transformer stations owned by Elektrodistribucija DOOEL Skopje*

| **Voltage level (kV)** | **110/xx kV/kV (jointly owned with MEPSO JSC)** | **110/xx kV/kV** | **35/ (20)10 kV/kV** | **10/0,4 kV/kV** |
|---|---|---|---|---|
| **Number of TS** | 45 | 13 | 76 | 7.295 |

*Table II.8. Length of the electricity distribution grid by voltage levels owned by Elektrodistribucija DOOEL Skopje*

| Voltage level (kV) | 110 kV above ground | 35kV above ground | 35kV cable | 20(10) kV above ground | 20(10) kV cable | 0,4 kV above ground | 0,4 kV cable |
|---|---|---|---|---|---|---|---|
| **length (km)** | 188 | 916 | 141 | 7.594 | 2.933 | 12.211 | 4.145 |

*Table II.9. Share of the above-ground and cable grid by voltage levels owned by Elektrodistribucija DOOEL Skopje*

| Voltage level (kV) | 110kV above ground | 35 kV above ground | 35 kV Cable | 20(10) kV above ground | 20(10) kV cable | 0,4 kV above ground | 0,4 kV cable |
|---|---|---|---|---|---|---|---|
| **%** | 100 | 86,67 | 13,33 | 72,14 | 27,86 | 75,54 | 24,46 |

*Table II.10. Metering points of the electricity distribution system operated by Elektrodistribucija DOOEL Skopje*

| Total number of measuring sites | Large consumers-qualified | Small consumers-qualified | Small consumers-tariff | Households- tariff |
|---|---|---|---|---|
| 741.867 | 8.784 | 12.714 | 61.682 | 658.687 |

The total number of connected metering points of the electricity distribution grid operated by Elektrodistribucija DOOEL Skopje, up until and including 31.02.2018 is 741.867. In 2018, 21.498 metering points of qualified consumers were supplied with electricity at the liberalized market, while 720.369 metering points of households and small consumers were supplied with electricity by EVN MAKEDONIJA JSC with regulated prices.

According to the new Energy Law, as of the beginning of 2019, the electricity market has been fully liberalized, whereby all electricity consumers gained the right to choose electricity supplier at the free market.

## II.2. State of the Electricity Market

The electricity market is an organized manner of electricity purchase and sale based on the supply and demand, by applying conditions prescribed on the grounds of the Energy Law. The electricity market is composed of two segments, regulated and liberalized electricity market.

In 2018, at the regulated electricity market, purchase and sale of electricity and power was done through prices and under conditions approved by the Energy Regulatory Commission.

Regulated electricity market participants in 2018 were:

- the electricity producer whose license determines the public service liability, ESM JSC Skopje (it will perform this function until 30$^{th}$ of June 2019),
- the preferential electricity producers,

- the electricity supplier of last resort,
- the electricity supplier for tariff consumers, EVN Makedonija JSC Skopje (it will perform this function until 30th of June 2019)
- the electricity transmission system operator for providing ancillary services, operative reserve and balancing, MEPSO JSC Skopje and
- the electricity market operator for purchasing and sale of the generated electricity from the preferential electricity producers, MEPSO JSC Skopje, OPEE Subsidiary.

Purchase and sale of electricity at the liberalized market is made by prices and under conditions which have been freely agreed between the purchaser and seller, by own choice, at own risk and cost.

Liberalized electricity market participants can be:

- the electricity producer whose license determined the public service liability, in conditions of electricity excess sale in accordance with the excess sale rules,
- electricity producers,
- electricity suppliers,
- electricity traders,
- the electricity transmission system operator when purchasing electricity for covering losses in the electricity transmission system, based on market conditions in a transparent and non-discriminatory manner,
- the electricity transmission system operator when purchasing ancillary services and adequate operative reserve, based on market conditions, in a transparent, non-discriminatory and competitive manner,
- the electricity distribution system operator when purchasing electricity for covering losses in the distribution network, based on market conditions, in a transparent, non-discriminatory and competitive manner and
- the qualified electricity consumers.

In the following part there is an overview of data and indicators for 2018 that refer to the generation and purchase of electricity, electricity consumption, purchase of electricity for covering grid losses, purchase and prices of electricity for the tariff and small consumers, as well as trends in the liberalized electricity market.

## II.2.1. Electricity Generation, Sales and Purchase

Electricity volume demanded for satisfying total electricity needs in the country for 2018 was provided by ESM JSC Skopje, TE-TO JSC Skopje, EVN Elektrani DOOEL Skopje, as well as the rest of the small hydropower plants, photovoltaic power plants and biogas thermal power plants connected to the electricity distribution system, as well as from imports.

## Electricity Generation

The following table provides an overview of the domestic electricity generation in the period from 2016 to 2018. In 2018 there is an increase of the total domestic electricity generation for 1,29% compared with 2017 i.e. 1,17% compared with 2016.

*Table II.11. Domestic electricity generation for 2016, 2017 and 2018*

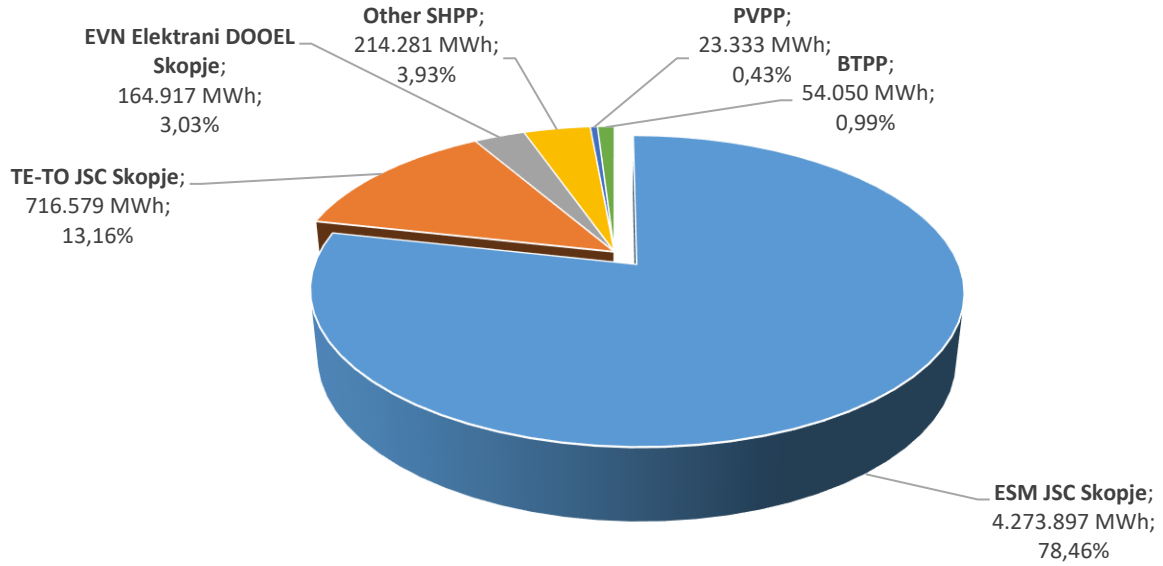
| | Generation (MWh) | 2016 | 2017 | 2018 | 2018/2016 % difference | 2018/2017 % difference |
|---|---|---|---|---|---|---|
| **1.** | **ESM JSC Skopje** | **4.382.207** | **4.228.861** | **4.273.897** | **-2,47** | **1,06** |
| **1.1** | **TPP Generation** | **2.777.217** | **3.289.985** | **2.703.379** | **-2,66** | **-17,83** |
| | TPP Bitola 1 | 594.256 | 958.037 | 951.037 | 60,04 | -0,73 |
| | TPP Bitola 2 | 922.624 | 1.230.990 | 762.055 | -17,40 | -38,09 |
| | TPP Bitola 3 | 1.229.176 | 1.026.650 | 890.506 | -27,55 | -13,26 |
| | TPP Oslomej | 31.161 | 74.308 | 99.781 | 220,21 | 34,28 |
| **1.2** | **HPP Generation** | **1.494.279** | **820.003** | **1.460.297** | **-2,27** | **78,08** |
| | HPP Globochica | 233.234 | 97.422 | 232.065 | -0,50 | 138,21 |
| | HPP Kozjak | 143.253 | 71.313 | 157.805 | 10,16 | 121,28 |
| | HPP ST. PETKA | 63.114 | 34.465 | 67.253 | 6,56 | 95,13 |
| | HPP Raven | 53.304 | 39.814 | 40.567 | -23,89 | 1,89 |
| | HPP Shpilje | 354.308 | 158.369 | 379.250 | 7,04 | 139,47 |
| | HPP Tikvesh | 145.593 | 63.505 | 153.504 | 5,43 | 141,72 |
| | HPP Vrben | 54.512 | 29.477 | 39.507 | -27,53 | 34,02 |
| | HPP Vrutok | 446.961 | 325.638 | 390.346 | -12,67 | 19,87 |
| **1.3** | **CHPP Generation** | **1.228** | **8.393** | **12.882** | **949,09** | **53,50** |
| | TE-TO Energetika | 1.228 | 8.393 | 12.882 | 949,09 | 53,50 |
| | TE-TO Kogel *(Owned by ESM JSC Skopje from 2018)* | **3.697** | **7.003** | 0 | -100,00 | -100,00 |
| **1.4** | **WPP Generation** | **109.483** | **110.480** | **97.338** | **-11,09** | **-11,90** |
| | WPP Bogdanci | 109.483 | 110.480 | 97.338 | -11,09 | -11,90 |
| **2.** | **TE-TO JSC Skopje** | **550.119** | **794.654** | **716.579** | **30,26** | **-9,83** |
| | TE-TO Skopje | 550.119 | 794.654 | 716.579 | 30,26 | -9,83 |
| **3.** | **EVN Elektrani DOOEL Skopje** | **184.902** | **119.826** | **164.917** | **-10,81** | **37,63** |
| | HPP BABUNA | 1.308 | 996 | 1.379 | 5,43 | 38,50 |
| | HPP BELICA | 620 | 297 | 560 | -9,58 | 88,49 |
| | HPP DOSNICA | 21.697 | 21.458 | 22.317 | 2,86 | 4,00 |
| | HPP KALIMANCI | 42.049 | 14.342 | 31.665 | -24,69 | 120,79 |
| | HPP MATKA | 35.879 | 21.782 | 36.721 | 2,35 | 68,58 |
| | HPP PENA | 15.621 | 11.394 | 14.520 | -7,05 | 27,43 |
| | HPP PESOCANI | 17.538 | 11.378 | 13.362 | -23,81 | 17,44 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | HPP POPOVA SAPKA | 28.271 | 22.204 | 23.777 | -15,90 | 7,08 |
| | HPP SAPUNCICA | 13.736 | 10.822 | 13.017 | -5,24 | 20,28 |
| | HPP TURIJA | 1.122 | 640 | 817 | -27,17 | 27,60 |
| | HPP ZRNOVCI | 7.061 | 4.512 | 6.782 | -3,95 | 50,31 |
| **4.** | **Other SHPP** | **203.470** | **151.937** | **214.281** | **5,31** | **41,03** |
| **5.** | **PVPP** | **23.717** | **23.921** | **23.333** | **-1,62** | **-2,46** |
| **6.** | **BTPP** | **36.033** | **51.551** | **54.050** | **50,00** | **4,85** |
| **7.** | **TOTAL** | **5.384.146** | **5.377.754** | **5.447.057** | **1,17** | **1,29** |

The largest domestic producer ESM JSC Skopje in 2018 increased the production for 1.06% compared with the previous 2017, while compared to 2016 there was a decrease by 2,47%.

The general mark of the total electricity generation in 2018 compared with the dry 2017 is the significant increase of electricity generation from hydropower plants, while generation from coal thermal power plants and the combined co- generative production decreased compared to 2017 and 2016.

The electricity generation from renewable sources decreased in the wind power plants in 2018 compared with 2017 and 2016, while the electricity generation from PV power plants has been stable in the last three years. There has been an increase in the electricity generation from biogas thermal power plants and the small hydropower plants.




*Structure of domestic electricity producers in 2018 (in MWh and % share)*

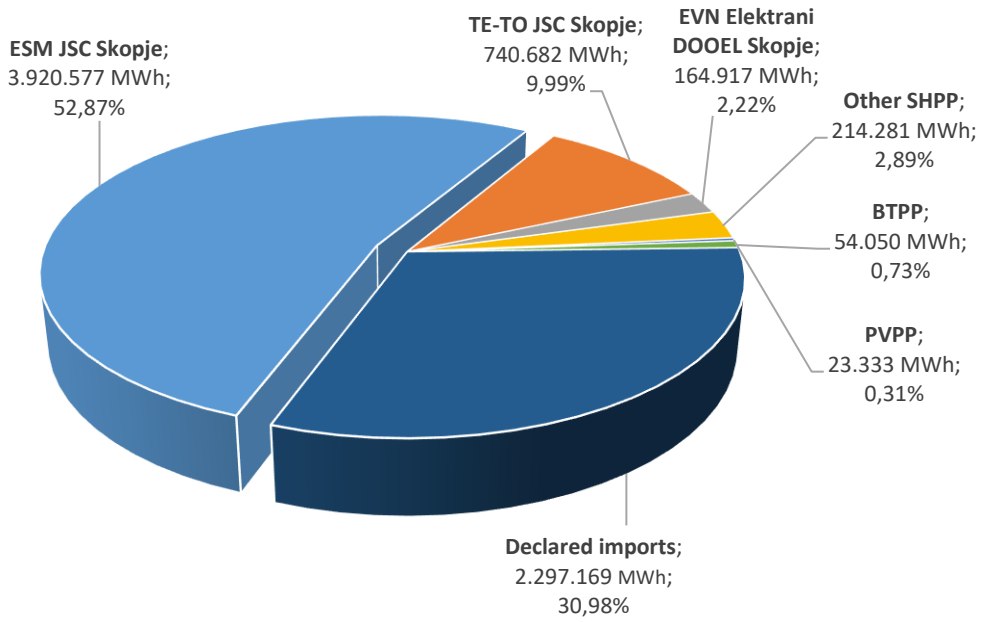
The structure of domestic electricity producers clearly shows that ESM JSC Skopje is the dominant domestic electricity producer with a 78,45% share in the domestic generation, next is TE-TO JSC Skopje with 13,16% share, EVN Elektrani DOOEL Skopje with 3,03%, rest of the small hydropower plants with 3,93%, biogas thermal power plants with 0,99 % and the PV power plants with 0,43%.

## Sale and purchase of electricity

*Table II.12. Sale and purchase of electricity for 2016, 2017 and 2018 (in MWh)*

| Ord. No. | Description | 2016 | 2017 | 2018 | 2018/2016 % difference | 2018/2017 % difference |
|---|---|---|---|---|---|---|
| **1. (2+3)** | **Total sale from domestic producers (domestic market and exports)** | **5.384.146** | **5.377.754** | **5.447.057** | 1,17 | 1,29 |
| **1.1** | **ESM JSC Skopje** | 4.382.207 | 4.228.861 | 4.273.897 | -2,47 | 1,06 |
| **1.2** | **TE-TO JSC Skopje** | 550.119 | 794.654 | 716.579 | 30,26 | -9,83 |
| **1.3** | **EVN Elektrani DOOEL Skopje** | 184.902 | 119.826 | 164.917 | -10,81 | 37,63 |
| **1.4** | **Other SHPP** | 203.470 | 151.937 | 214.281 | 5,31 | 41,03 |
| **1.5** | **PVPP** | 23.717 | 23.921 | 23.333 | -1,62 | -2,46 |
| **1.6** | **TPP Biogas** | 36.033 | 51.551 | 54.050 | 50,00 | 4,85 |
| **2.** | **Sale from domestic generation at the domestic market** | **5.224.293** | **5.066.728** | **5.117.840** | -2,04 | 1,01 |
| **2.1** | **ESM JSC Skopje** | 4.374.807 | 4.225.051 | 3.920.577 | -10,38 | -7,21 |
| **2.2** | **TE-TO JSC Skopje** | 401.364 | 494.442 | 740.682 | 84,54 | 49,80 |
| **2.3** | **EVN Elektrani DOOEL Skopje** | 184.902 | 119.826 | 164.917 | -10,81 | 37,63 |
| **2.4** | **Other SHPP** | 203.470 | 151.937 | 214.281 | 5,31 | 41,03 |
| **2.5** | **PVPP** | 23.717 | 23.921 | 23.333 | -1,62 | -2,46 |
| **2.6** | **TPP Biogas** | 36.033 | 51.551 | 54.050 | 50,00 | 4,85 |
| **3.** | **Exports from domestic generation** | **159.853** | **311.026** | **377.423** | 136,11 | 21,35 |
| **4.** | **Declared imports** | **2.190.606** | **2.293.571** | **2.297.169** | 4,86 | 0,16 |
| **5. (2+4)** | **Total volume of sold electricity at regulated and free market** | **7.414.899** | **7.360.299** | **7.415.009** | 0,00 | 0,74 |
| **6.** | **% participation of imports** | 29,54 | 31,16 | 30,98 | - | - |

It is significant to point out that in 2018 there has been an increase of the electricity exports from domestic production for 21,35% compared with 2017 and increase for 136,11% compared to 2016.




*Structure of available electricity for covering needs of the consumers in the Republic of North Macedonia in 2018 (in MWh and % share)*

The domestic electricity generation in 2018 supplied 69,02% of the total electricity demand of the country, while 30,98% of the electricity needs were supplied through imports.

In the total available electricity volume for covering needs of the consumers in the Republic of North Macedonia for 2018:

- ESM JSC Skopje share is 52,87%,
- TE-TO JSC Skopje share is 9,99%,
- EVN Elektrani DOOEL Skopje share is 2,23%
- share of the rest of the small hydropower plants is 2,89%
- share of the PV power plants is 0,31%
- share of the biogas thermal power plants is 0,73% and
- electricity imports cover 30,98%.

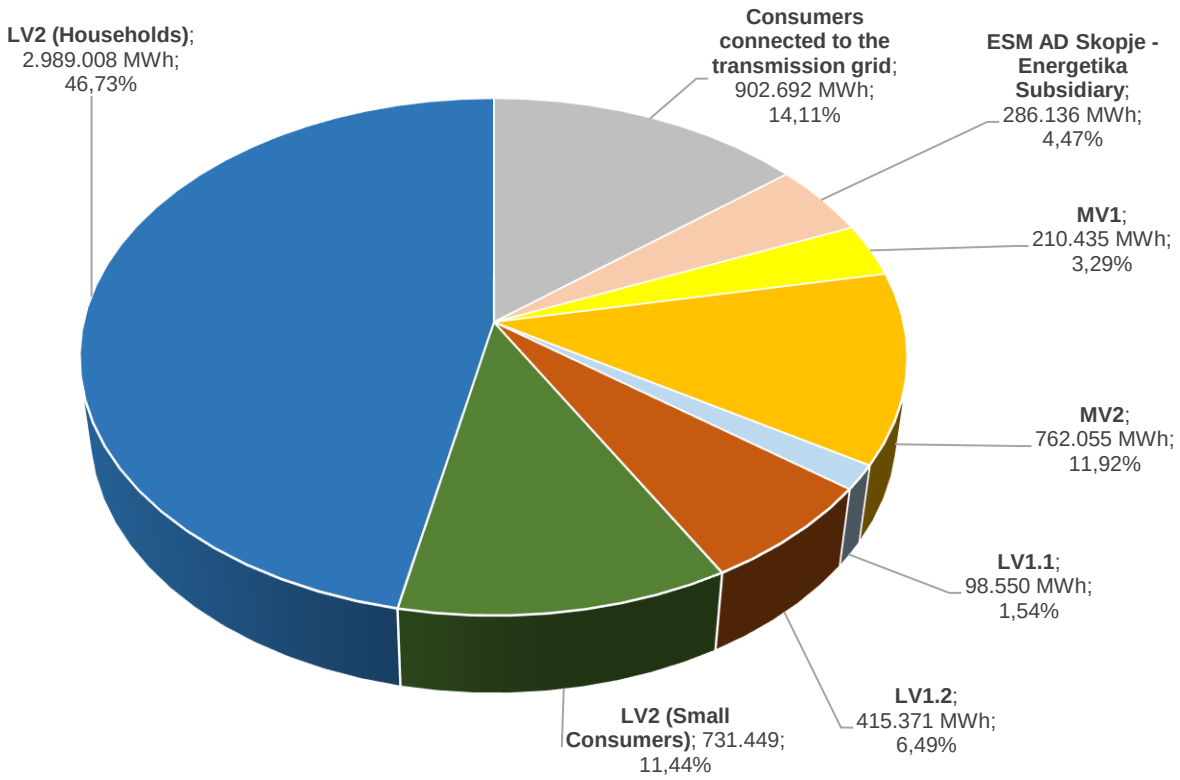
## II.2.2. Electricity Consumption

Total electricity consumption in the Republic of North Macedonia in 2018 was 6.365.196 MWh which represents a decrease of 0,19% compared with the consumption in 2017.

*Table II.13. Electricity consumption per consumer categories in 2016, 2017 and 2018*

| Ord. No. | Consumers | 2016 | 2017 | 2018 | 2018/2016 | 2018/2017 |
|---|---|---|---|---|---|---|
| | | (MWh) | (MWh) | (MWh) | (%) | (%) |

| | | | | | | |
|---|---|---|---|---|---|---|
| **1.** | **Connected to the transmission grid (110kV)** | **1.327.568** | **1.127.163** | **1.158.327** | **-12,75** | **2,76** |
| 1.1 | Yugohrom Feroalloys | 226.969 | 2.156 | 1.631 | -99,28 | -24,35 |
| 1.2 | USJE Cement Factory | 97.432 | 99.840 | 102.630 | 5,33 | 2,79 |
| 1.3 | Macedonian Railroads Transport | 12.599 | 12.240 | 12.500 | -0,79 | 2,12 |
| 1.4 | TE-TO JSC Skopje (own consumption) | 2.749 | 2.207 | 2.814 | 2,34 | 27,50 |
| 1.5 | Buchim | 119.088 | 116.246 | 112.771 | -5,30 | -2,99 |
| 1.6 | Feni Industry | 425.735 | 304.895 | 374.805 | -11,96 | 22,93 |
| 1.7 | Octa | 6.337 | 6.076 | 5.040 | -20,47 | -17,05 |
| 1.8 | Kompleks Energetika | 215.045 | 291.404 | 285.140 | 32,60 | -2,15 |
| 1.9 | ESM JSC Skopje (mines and own consumption) | 217.517 | 287.973 | 257.490 | 18,38 | -10,59 |
| 1.10 | WPP Bogdanci (own consumption) | 295 | 317 | 367 | 24,46 | 15,77 |
| 1.11 | TPP Negotino (own consumption) | 3.801 | 3.810 | 3.140 | -17,38 | -17,58 |
| **2.** | **Losses in the transmission grid** | **116.080** | **111.058** | **125.269** | **7,92** | **12,80** |
| **3.** | **Connected to the distribution system** | **5.127.643** | **5.250.091** | **5.206.869** | **1,55** | **-0,82** |
| 3.1 | MV1 | 145.756 | 193.204 | 210.435 | 44,37 | 8,92 |
| 3.2 | MV2 | 715.720 | 709.081 | 762.055 | 6,47 | 7,47 |
| 3.3 | LV1.1 | 101.209 | 97.300 | 98.550 | -2,63 | 1,28 |
| 3.4 | LV1.2 | 462.455 | 419.917 | 415.371 | -10,18 | -1,08 |
| 3.5 | LV2 | 3.702.504 | 3.830.590 | 3.720.457 | 0,48 | -2,88 |
| 3.5.1 | LV2 (other) | 645.049 | 734.010 | 731.449 | 13,39 | -0,35 |
| 3.5.2 | LV2 (households) | 3.057.454 | 3.096.580 | 2.989.008 | -2,24 | -3,47 |
| **4.** | **Losses in the distribution system** | **889.582** | **893.360** | **868.549** | **-2,36** | **-2,78** |
| **5.** | **Total electricity consumption (1+3)** | **6.455.211** | **6.377.254** | **6.365.196** | **-1,39** | **-0,19** |




*Structure of the consumer categories in the total electricity consumption in 2018 (in MWh and % share)*

Regarding the changes in the electricity consumption in 2018 compared to 2017, there is an increase of consumption among the consumers connected to the transmission grid (110kV) for 2,76%, while the electricity consumption of the consumers connected to distribution grid of Elektrodistribucija has slightly decreased for 0,82%.

The electricity volume for covering losses in the electricity transmission grid in 2018, compared to 2017 has increased for 12,8% due to the increased transit, while the electricity volume for covering losses in the electricity distribution grid has decreased for 2,78%.

The losses percentage in the electricity transmission grid for 2018 is 1,8% and is by far lower than the maximum allowed 3%. The losses percentage in the electricity distribution grid for 2018 is 14,2% and is higher than the maximum allowed 13,4%.

### II.2.3. Electricity Purchase for Covering Grid Losses

MEPSO JSC Skopje, as transmission system operator, purchased electricity for covering electricity transmission losses in 2018 at the liberalized electricity market.

Data on the electricity purchases are presented in the following table.

*Table II.14. Electricity purchase for covering electricity transmission system losses in 2018 by MEPSO JSC Skopje*

| Ord. No. | Name of trader/ producer | Volume (MWh) | Price (€/MWh) | Value (€) |
|---|---|---|---|---|
| 1 | DANSKE KOMODITIS DOOEL SKOPJE | 10.075 | 49,69 | 500.627 |
| 2 | EDS DOO Skopje | 16.296 | 50,43 | 821.807 |
| 3 | GEN-I PRODAZBA NA ENERGIJA DOOEL Skopje | 95.986 | 49,97 | 4.796.420 |
| **4** | **TOTAL** | **122.357** | **50,01** | **6.118.854** |

MEPSO JSC Skopje in 2018 didn't purchase electricity for black start purposes.

Elektrodistribucija DOOEL Skopje in 2018 purchased electricity for covering electricity distribution system losses at the free electricity market from traders and distributed producers, stated in the following table, for the following prices:

*Table II.15. Purchase of electricity for covering electricity distribution system losses in 2018 by Elektrodistribucija DOOEL Skopje*

| Ord. No. | Name of trader/ producer | Volume (MWh) | Price (€/MWh) | Value (€) |
|---|---|---|---|---|
| 1. | ESM JSC Skopje | 14.712 | 52,84 | 777.435 |
| 2. | ALPIK ENERGIJA DOOEL Skopje | 109.024 | 49,44 | 5.389.626 |
| 3. | DANSKE KOMODITIS DOOEL Skopje | 79.792 | 52,30 | 4.173.461 |
| 4. | ENERGY FINANCING TEAM DOOEL Skopje | 98.452 | 59,57 | 5.865.170 |
| 5. | ENERGY WIND DOOEL Strumica | 9.280 | 45,22 | 419.631 |
| 6. | GEN-I PRODAZBA NA ENERGIJA DOOEL Skopje | 325.912 | 57,49 | 18.736.148 |
| 7. | GREEN ENERGY TRADING DOOEL Skopje | 3.720 | 59,80 | 222.438 |
| 8. | HSE MAK ENERGY DOOEL Skopje | 42.052 | 47,65 | 2.003.919 |
| 9. | INTERENERGO MAKEDONIJA DOOEL Skopje | 22.080 | 65,54 | 1.447.130 |
| 10. | MVM PARTNER DOOEL Skopje | 2.240 | 53,14 | 119.037 |
| 11. | PETROL ENERGETIKA DOOEL Skopje | 3.744 | 47,92 | 179.408 |
| 12. | TETRA ENERGETIKA DOOEL Skopje | 9.164 | 50,79 | 465.452 |

| | | | | |
|---|---|---|---|---|
| 13. | EVN Elektrani DOOEL Skopje | 164.917 | 56,38 | 9.298.432 |
| 14. | Other small distributed producers | 11.978 | 49,30 | 590.541 |
| **15.** | **TOTAL** | 897.066 | 55,39 | 49.687.826 |

Elektrodistribucija DOOEL Skopje used 868.549 MWh of the total purchased electricity in 2018 for covering electricity distribution grid losses, while the rest of 28.517 MWh were sold to EVN Makedonija JSC Skopje to meet the needs of the tariff and small consumers at the regulated market.

## II.2.4. Electricity Purchase and Prices for Tariff and Small Consumers

EVN Makedonija JSC Skopje, in the capacity of electricity supplier for tariff consumers and electricity supplier of last resort, in accordance with the obligations set in the Energy Law, purchased most of the required electricity from ESM JSC Skopje. The rest of the electricity was purchased from the preferential producers from renewable energy sources, small portion of the unused electricity of Elektrodistribucija DOOEL Skopje purchased at the free market for covering grid losses, as well as from several electricity traders at the free electricity market.

*Table II.16. Purchase of electricity for the needs of the tariff and small electricity consumers in 2018 from EVN Makedonija JSC Skopje*

| Ord. No. | Producer/ Operator/ Trader | Volume (MWh) | Price (€/MWh) | Value (€) |
|---|---|---|---|---|
| 1. | ESM JSC Skopje | 3.484.704 | 40,37 | 140.693.035 |
| 2. | OPEE- Preferential producers | 241.730 | 100,14 | 24.207.120 |
| 3. | Elektrodistribucija DOOEL Skopje | 28.517 | 55,71 | 1.588.724 |
| 4. | ALPIK ENERGIJA DOOEL Skopje | 7.776 | 62,41 | 485.336 |
| 5. | DANSKE KOMODITIS DOOEL Skopje | 15.360 | 50,46 | 775.129 |
| 6. | ENERGY FINANCING TEAM DOOEL Skopje | 13.808 | 70,33 | 971.140 |
| 7. | GEN-I PRODAZBA NA ENERGIJA DOOEL Skopje | 45.008 | 71,46 | 3.216.246 |
| 8. | GREEN ENERGY TRADING DOOEL Skopje | 1.680 | 43,69 | 73.401 |
| 9. | HCE MAK ENERGY DOOEL Skopje | 7.776 | 62,43 | 485.450 |
| 10. | INTERENERGO MAKEDONIJA DOOEL Skopje | 24.912 | 61,66 | 1.536.090 |
| **11.** | **TOTAL** | **3.871.270** | **44,95** | **174.031.672** |

ESM JSC Skopje in 2018 provided 90% of the total purchased electricity by EVN Makedonija JSC Skopje for the needs of the tariff and small consumers, 6,24% were purchased from the preferential producers from renewable energy sources,

0,74% from Elektrodistribucija DOOEL Skopje, while the remaining 3,02% were purchased at the free electricity market.

EVN Makedonija JSC Skopje, for the needs of the tariff and small consumers, in 2018 purchased 116.320 MWh electricity at the free market worth 7.542.792 €, on average price of 64,85 €/MWh, which is 9,4% lower compared to 2017 when it was 71,58 €/MWh.

ESM JSC Skopje, in 2018, sold excess electricity in the country and abroad, which is presented in the following table:

*Table II.17. Sales of excess electricity by ESM JSC Skopje in 2018*

| Ord. No. | Name of company | Volume (MWh) | Price (€/MWh) | Value (€) |
|---|---|---|---|---|
| 1. | Elektrodistribucija DOOEL Skopje (for losses) | 14.712 | 54,60 | 803.323 |
| 2. | ESM JSC Skopje, Energetika Subsidiary (for losses) | 996 | 40,62 | 40.437 |
| 3. | Other buyers at the free market | 3.140 | 40,48 | 127.094 |
| 4. | Export | 353.320 | 59,58 | 21.050.398 |
| **5.** | **TOTAL** | **372.168** | **59,17** | **22.021.646** |

EVN Makedonija JSC Skopje, in the capacity of electricity supplier for tariff and small consumers and supplier of last resort, in accordance with the obligations determined under the Energy Law, in 2018 purchased 241.730 MWh of electricity from the preferential producers worth 24.207.120 €, for an average price of 100,14 €/ MWh.

The purchased electricity from the preferential producers by EVN Makedonija JSC Skopje in 2018 have increased for 8,49% compared to 2017, when it was 222.804 MWh, while the cost for purchasing electricity from the preferential electricity producers in 2018 increased for 1,67% compared to 2017 when it was 23.810.682 €.

During 2018 EVN Makedonija JSC Skopje supplied electricity to the tariff and small consumers by average prices presented in the following table.

*Table II.18. Average prices for the categories of tariff and small consumers connected to the distribution system of Elektrodistribucija DOOEL Skopje in 2016, 2017 and 2018*

| Small and tariff consumer categories | 2016 | 2017 | 2018 | 2018/2016 | 2018/2017 |
|---|---|---|---|---|---|
| | den /kWh | den /kWh | den /kWh | % | % |
| 35 kV | 5,53 | 6,30 | 5,12 | -7,47 | -18,71 |
| 10(20) kV | 5,19 | 6,12 | 6,05 | 16,47 | -1,15 |
| I degree | 6,02 | 6,59 | 6,93 | 15,10 | 5,07 |
| II degree | 8,74 | 8,70 | 8,68 | -0,75 | -0,26 |
| Households | 4,27 | 4,23 | 4,08 | -4,45 | -3,55 |
| Public lightning | 5,58 | 5,58 | 5,56 | -0,43 | -0,33 |
| **Average price** | **5,00** | **4,93** | **4,72** | **-5,64** | **-4,18** |

The average price of electricity for all tariff and small categories in 2018 is lower for 4,18% compared to 2017 i.e. lower for 5,64% compared to 2016.

### II.2.5. Trends at the Liberalized Electricity Market

The electricity market liberalization process in 2018 progressed in accordance with the dynamics envisaged with the previous Energy Law.

Namely, the electricity market operator (MEPSO JSC Skopje, OPEE Subsidiary), on 18.04.2018, published on its website the list of consumers who will participate at the electricity market, based on the data provided by the Central Register of the Republic of North Macedonia for 2017, whereby a total of 301 consumers which have over 50 employees and total annual income or total assets of over 10 million euro in denar equivalent, meet their electricity needs at the electricity market with unregulated bilateral agreements, from electricity suppliers by mutually agreed (unregulated) prices. This category of consumers, according to the valid regulations in 2018, were not entitled to be supplied by the electricity supplier of last resort and the electricity supplier of tariff and small consumers.

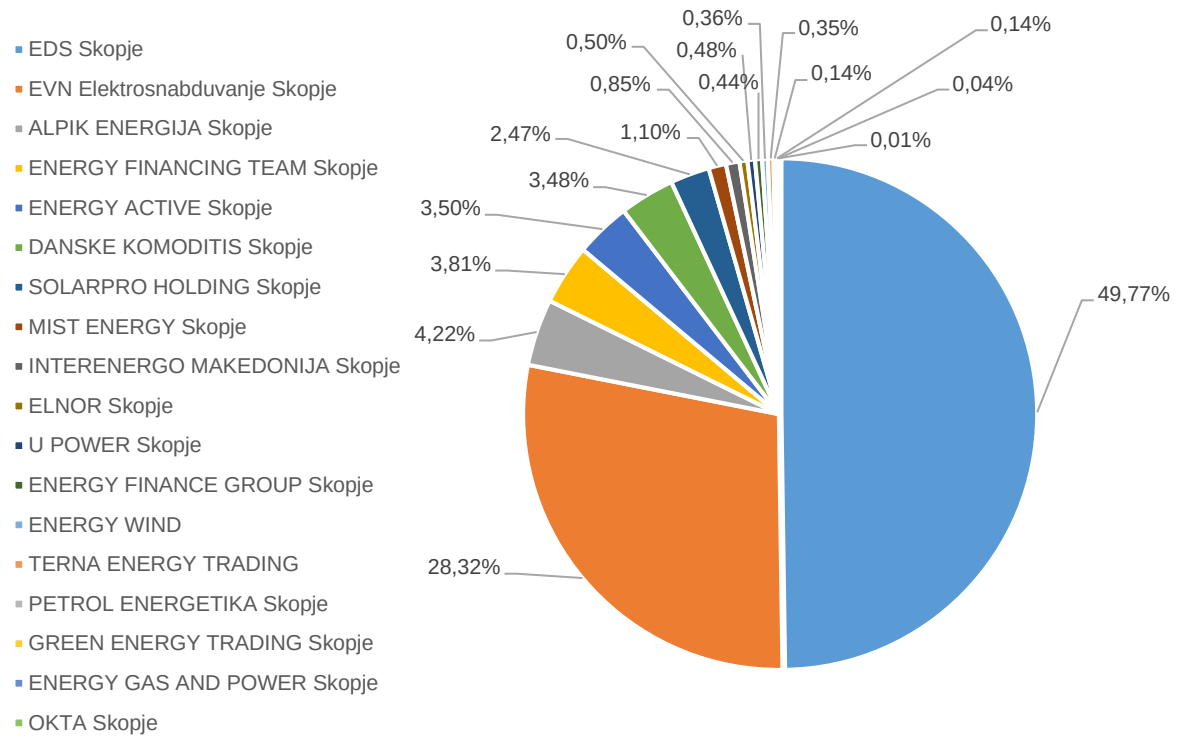
Also, the electricity market operator, in cooperation with the electricity transmission system operator (MEPSO JSC- Skopje) and the electricity distribution system operator (Elektrodistribucija DOOEL Skopje) on 18.04.2018 published on its website the list of small consumers with electricity consumption of over 100 MWh for 2017, whereby additional 1226 consumers acquired the right to purchase needed electricity at the liberalized market.

The electricity market real liberalization percentage in 2018 was 47,26%, considering that the electricity losses are supplied at the free electricity market by the grid operators since 01.01.2012. The electricity market liberalization process in 2018 compared to 2017 (39,75%) increased due to the growth of consumption by the consumers connected to the transmission grid, as well as decrease of the tariff and small consumers consumption on the regulated market, primarily as a result of switching of a significant group of small consumers from the regulated to the liberalized electricity market.

In 2018 there have been supplier switches for 4.344 metering points, which is 20,13% of the total number of metering points of the consumers that were supplied at the liberalized electricity market and is a 31,68% increase compared to the number of supplier switches in 2017 (3.299).

These indicators confirm the continued trend of development and functionality of the free segment of the electricity market in the Republic of North Macedonia, especially if compared to the rest of the contracting parties of the Energy Community.

The consumers at the free market, during 2018, were supplied from 18 active electricity suppliers and traders and their market share is presented in the following chart and table.




*Market share of suppliers and traders at the free electricity market in 2018*

*Table II.19. Market share of the sales on the free market (large and small electricity consumers) in 2018*

| Ord. No. | Supplier/ Vendor | Sold volume (MWh) | Market share (%) |
|---|---|---|---|
| 1. | EDS Skopje | 1.286.535 | 49,77 |
| 2. | EVN Elektrosnabduvanje Skopje | 732.010 | 28,32 |
| 3. | ALPIK ENERGIJA Skopje | 109.024 | 4,22 |
| 4. | ENERGY FINANCING TEAM Skopje | 98.452 | 3,81 |
| 5. | ENERGY ACTIVE Skopje | 90.572 | 3,50 |
| 6. | DANSKE KOMODITIS Skopje | 89.867 | 3,48 |
| 7. | SOLARPRO HOLDING Skopje | 63.969 | 2,47 |
| 8. | MIST ENERGY Skopje | 28.529 | 1,10 |
| 9. | INTERENERGO MAKEDONIJA Skopje | 22.080 | 0,85 |
| 10. | ELNOR Skopje | 13.015 | 0,50 |
| 11. | U POWER Skopje | 12.320 | 0,48 |
| 12. | ENERGY FINANCE GROUP Skopje | 11.445 | 0,44 |
| 13. | ENERGY WIND | 9.280 | 0,36 |

| | | | |
|---|---|---|---|
| 14. | TERNA ENERGY TRADING | 9.164 | 0,35 |
| 15. | PETROL ENERGETIKA Skopje | 3.744 | 0,14 |
| 16. | GREEN ENERGY TRADING Skopje | 3.720 | 0,14 |
| 17. | ENERGY GAS AND POWER Skopje | 996 | 0,04 |
| 18. | OKTA Skopje | 133 | 0,01 |
| **19.** | **TOTAL** | **2.584.854** | **100,00** |

The average price for which the supplier, i.e. electricity traders supplied the consumers at the free electricity market in 2018 is 3,46 den/kWh, i.e. 56,73 €/MWh and it is 14.57% higher than the average price in 2017 (3,02 den/kWh, i.e. 49,07 €/MWh).

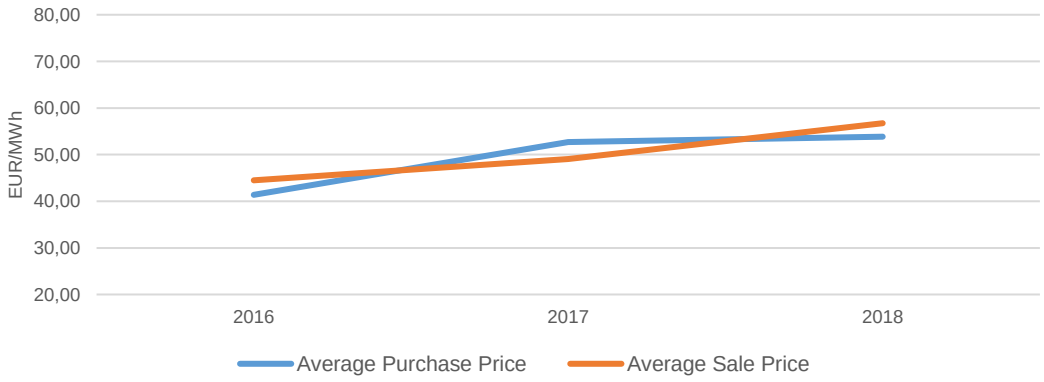
In addition, in 2018 the large consumers were supplied for an average price of 3,53 den/kWh, i.e. 57,36 €/MWh, which is 12,42% higher than the average price in 2017 (3,14 den/kWh, i.e. 51,10 €/MWh).

On the other hand, the small consumers in 2018 were supplied for an average price of 3,42 den /kWh, i.e. 55,55 €/MWh and that price is 23,91% higher than the average price they were supplied by in 2017 (2,76 den /kWh, i.e. 44,92 €/MWh).

It should be mentioned that these prices do not include the tariffs for transmission and distribution of electricity and those services are paid separately by the consumers.

The additional aspects of functionality and competitiveness at the retail electricity market can be analyzed through the correlations of the average sale prices with the average purchase prices by which the suppliers and traders active at the retail market procured electricity in 2016, 2017 and 2018.

As displayed in the following chart, it can be concluded that if in 2016 the sales margin was 3,11 €/MWh, in 2017 we have an almost opposite situation, where the average sale price is 3,65 €/MWh lower than the purchase price of electricity, so that in 2018 the suppliers and traders returned back to the positive zone with average sales margin of 2,89 €/MWh.




*Correlation of the average annual electricity purchase and sale prices (in €/MWh)*

The analysis shows that the market forces in 2018, aside to the strong competition at the free retail electricity market, stabilize the market compared to 2017, which is significant for the noticeable decrease of the bankruptcy risks of the active

electricity suppliers and traders, thereby providing greater security in the supply of the consumers themselves.

In 2018 there were 24 electricity traders active at the wholesale electricity market, which resulted with more balanced market share compared to 2017. The traded electricity volume in 2018 have increased for 49,6% compared to 2017 which is an indicator for increased liquidity and competitiveness at the free electricity market.

*Table II.20. Market share in the wholesale electricity market in 2018*

| Ord. No. | Supplier/ Trader | Traded quantities (MWh) | Share (%) |
|---|---|---|---|
| 1. | GEN-I PRODAZBA NA ENERGIJA DOOEL Skopje | 1.043.498 | 32,31 |
| 2. | EVN TRADING Skopje | 682.366 | 21,13 |
| 3. | TE-TO Skopje | 446.083 | 13,81 |
| 4. | PAN INTERTRADE Skopje | 419.579 | 12,99 |
| 5. | ENERGY WIND | 208.140 | 6,45 |
| 6. | ALPIK ENERGIJA Skopje | 78.635 | 2,44 |
| 7. | HSE MAK ENERGY Skopje | 49.830 | 1,54 |
| 8. | INTERENERGO MAKEDONIJA Skopje | 48.387 | 1,50 |
| 9. | EDS Skopje | 46.599 | 1,44 |
| 10. | DANSKE KOMODITIS Skopje | 34.694 | 1,07 |
| 11. | GREEN ENERGY TRADING | 33.990 | 1,05 |
| 12. | PETROL ENERGETIKA Skopje | 28.939 | 0,90 |
| 13. | TERNA ENERGY TRADING | 19.362 | 0,60 |
| 14. | ENEKOD Skopje | 18.906 | 0,59 |
| 15. | ENERGY FINANCING TEAM- Skopje | 13.865 | 0,43 |
| 16. | ENERGY FINANCE GROUP Skopje | 13.779 | 0,43 |
| 17. | SOLARPRO HOLDING | 10.607 | 0,33 |
| 18. | POWER ENERGY SYSTEMS SKOPJE | 10.205 | 0,32 |
| 19. | MIST ENERGY Skopje | 9.489 | 0,29 |
| 20. | ENERGY SUPPLY EM Skopje | 8.647 | 0,27 |
| 21. | MVM PARTNER Skopje | 2.240 | 0,07 |
| 22. | ENERGY GAS AND POWER Skopje | 1.126 | 0,03 |

| | | | |
|---|---|---|---|
| 23. | ENERGY ACTIVE export- import DOOEL Skopje | 170 | 0,01 |
| 24. | EZPADA Skopje | 50 | ~ 0,00 |
| **25.** | **TOTAL** | **3.229.185** | **100%** |

The increase trend of the prices is also noticeable at the wholesale electricity market, where the average sale price in 2018 is 3,35 den/kWh, i.e. 54,41 €/MWh and is 13,95% higher than the comparing average sale price in 2017 (2,94 den/kWh, i.e. 47,75 €/MWh).

## II.2.6. Electricity Quality

In the subsection Electricity quality voltage quality, continuity of supply and commercial quality are analyzed.

The voltage quality is prescribed with the Macedonian standard EN 50160:2010, which has been fully implemented in the Grid Transmission Rules, as well as the Grid Rules for Electricity Distribution approved by the Energy Regulatory Commission.

The Energy Regulatory Commission monitors the electricity quality through the market monitoring system, whereby the electricity distribution system operators are obliged to submit monthly reports on the outages by voltage levels, scheduled and unscheduled outages, voltage disproportion, flickers, voltage distortions as well as supply continuity parameters SAIDI (System Average Interruption Duration Index per consumer) and SAIFI (System Average Interruption Frequency Index – per consumer). In 2018 was provided data only on outages per voltage levels, as well on scheduled and unscheduled outages.

In the electricity transmission system, there were 548 disconnections in 2018, with total duration of 13.949 hours. Most of them (529) were due to malfunctions or other problems in the electricity transmission system, while the remaining 19 were scheduled disconnections due to regular inspections or maintenance.

Total number of outages in the electricity distribution system of Elektrodistribucija DOOEL Skopje in 2018 was 41.194, with total duration of 84.199 hours. Compared to 2017, the number of outages increased for 11,61%, while their duration decreased for 27,76%. The average duration of an outage was 122 minutes, i.e. almost 2 hours.

Within the electricity distribution system of ESM JSC Skopje Energetika Subsidiary there was only one outage at medium voltage level, with duration of 14.400 minutes.

*Table II.21. Scheduled outages in the electricity transmission system of MEPSO JSC Skopje in 2018*

| Ord. No. | Scheduled disconnections | Un (kV) | Number of outages | Outage duration (h) |
|---|---|---|---|---|
| 1. | Powerlines | 400 | 1 | 1 |
| 2. | | 110 | 17 | 30 |
| 3. | | contact field | / | / |

| | | | | |
|---|---|---|---|---|
| 4. | | measuring filed | / | / |
| 5. | Transformer stations | 400/110 | 1 | 18 |
| **6.** | **TOTAL** | | **19** | **49** |

*Table II.22. Unplanned disconnections in the electricity transmission system of MEPSO JSC Skopje in 2018*

| Ord. No. | Unscheduled outages | Un (kV) | Number of outages | Outage duration (h) |
|---|---|---|---|---|
| 1. | Powerlines | 400 | 57 | 13.073 |
| 2. | | 110 | 447 | 1.956 |
| 3. | | contact field | / | / |
| 4. | | measuring filed | / | / |
| 5. | Transformer stations | 400/110 | 25 | 13.900 |
| **6.** | **TOTAL** | | **529** | **28.929** |

*Table II.23. Outages in the electricity distribution system of Elektrodistribucija DOOEL Skopje in 2018*

| Ord. No. | Event | 35 kV voltage level | 20,10 и 6 kV voltage level | 0,4 kV voltage level | Total |
|---|---|---|---|---|---|
| 1. | Total number of scheduled outages | 106 | 3.225 | - | 3.331 |
| 2. | Total duration of scheduled outages (min) | 24.187 | 682.188 | - | 706.375 |
| 3. | Total number of unscheduled outages | 589 | 10.577 | 26.697 | 37.863 |
| 4. | Total duration of unscheduled outages (min) | 54.623 | 1.532.722 | 5.051.916 | 6.639.261 |
| **5.** | **Total number of outages** | **695** | **13.802** | **26.697** | **41.194** |
| **6.** | **Total duration of outages (min)** | **78.810** | **2.214.910** | **5.051.916** | **7.345.636** |

*Table II.24. Outages in the electricity distribution system of ESM JSC Skopje, Energetika branch- office in 2018*

| Ord. No. | Event | 35 kV и 6 kV voltage level | 0,4 kV voltage level | Total |
|---|---|---|---|---|
| 1. | Total number of scheduled outages | 1 | - | 1 |
| 2. | Total duration of scheduled outages (min) | 14.400 | - | 14.400 |
| 3. | Total number of unscheduled outages | - | | - |
| 4. | Total duration of unscheduled outages (min) | - | | - |
| **5.** | **Total number of outages** | **1** | | **1** |
| **6.** | **Total duration of outages (min)** | **14.400** | | **14.400** |

Total number of telephone calls in the Consumer Relations Center of EVN Makedonija JSC Skopje in 2018 was 539.288, which compared to 2017 (624.614 telephone calls), is a 13,66% decrease. Similar correlations occur with the number of complaints delivered by e-mail, where in 2018 their number was 52.107, which compared to 2017 (55.570 e-mail complaints) is a 6,23% decrease.

In 2018 there have been 269.877 consumer visits in the Consumer Relations Center on various grounds.

The number of disconnected consumers due to unpaid invoices for consumed electricity in 2018 was 73.727, which compared to 2017 (77.909 disconnections due to unpaid invoices), is a 5,37% decrease.

In 2018 there were 34.040 complaints from tariff customers on electricity supply issues. From the total number, 27.352 were further processed, while 6.822 were discarded. Average response time per complaint in 2018 was 48 days.

## II.2.7. Switching Connection Category

Elektrodistribucija DOOEL Skopje, as an electricity distribution system operator, in 2018 to the Energy Regulatory Commission submitted 10 requests for switch of connection category. The Energy Regulatory Commission, acting upon the requests, adopted 10 Decisions for approval of the connection category switches, for which the following table provides an overview.

*Table II.25. Overview of approved connection category switches*

| Total number of submitted requests | from LV 2 in LV 1.2 | from LV 2 in LV 1.1 | from LV 1.2 in MV 2 | from MV 2in LV 1.2 |
|---|---|---|---|---|
| | requested/ approved | requested/ approved | requested/ approved | requested/ approved |
| 10 | 6 | 2 | 1 | 1 |

## II.2.8. Development and Investment Plans

The Energy Regulatory Commission, with the decisions that refer to the prices for electricity for 2018, approved investments for ESM JSC Skopje, MEPSO JSC Skopje, Elektrodistribucija DOOEL Skopje as shown in the following table:

*Table II.26. Approved investments for ESM JSC Skopje (in denars)*

| Ord. No. | ESM JSC Skopje | 2018 | 2017 |
|---|---|---|---|
| **1.** | Hydropower plants | 453.794.181 | 153.927.152 |
| **2.** | Total REK Bitola | 3.109.969.437 | 2.955.263.064 |
| 2.1 | TPP Bitola | 1.071.469.437 | 638.034.064 |
| 2.2 | Mines Bitola | 2.038.500.000 | 2.317.229.000 |
| **3.** | Total REK Oslomej | 737.748.114 | 52.819.865 |
| 3.1 | TPP Oslomej | 737.748.114 | 52.819.865 |
| 3.2 | Oslomej mine | 0 | 0 |
| **4.** | **TOTAL** | **4.301.511.732** | **3.162.010.081** |

*Table II.27. Approved investments for* MEPSO JSC Skopje *(in denars)*

| Ord. No. | MEPSO JSC Skopje | 2018 | 2019 | 2020 |
|---|---|---|---|---|
| 1. | For electricity transmission | 2.223.857.319 | 2.416.521.322 | 1.491.975.432 |
| 2. | For electricity market operation | 61.500.000 | - | - |

*Table II.28. Approved investments for* Elektrodistribucija DOOEL Skopje *(in denars)*

| Ord. No. | Elektrodistribucija DOOEL Skopje | 2018 | 2019 | 2020 |
|---|---|---|---|---|
| 1 | For electricity distribution | 2.159.308.155 | 2.246.772.726 | 2.221.392.749 |

MEPSO JSC Skopje development plan for the period 2019-2023 is presented in the following table:

*Table II.29. MEPSO JSC Skopje Development Plan for the period 2019-2029*

| Ord. No. | Projects | Realization funds (millions in denars) | | | | | Total value (millions in denars) |
|---|---|---|---|---|---|---|---|
| | | 2019 | 2020 | 2021 | 2022 | 2023 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | Interconnections | 166,05 | 647,60 | 607,62 | 381,30 | - | 1.802,57 |
| 2 | New powerlines and transformer stations | 104,55 | 530,75 | 423,12 | 258,30 | 79,95 | 1.396,67 |
| 3 | Revitalization/ reconstruction of 110 kV powerlines | 638,06 | 598,09 | 215,25 | 67,65 | 18,45 | 1.537,50 |
| 4 | Revitalization/ reconstruction of transformer stations | 87,33 | 87,33 | 87,33 | 87,33 | 87,33 | 436,65 |
| 5 | Revitalization of TS Skopje 4 | 71,96 | 82,41 | 123,00 | - | - | 277,37 |
| 6 | Revitalization of TS Dubrovo | 85,49 | 13,53 | - | - | - | 99,02 |
| 7 | Revitalization of TS Bitola 2 | 160,52 | 18,45 | 25,83 | - | - | 204,80 |
| 8 | Revitalization of TS Valandovo | 16,61 | 26,45 | - | - | - | 43,05 |
| 9 | Revitalization of TS in TEC Oslomej | 14,76 | 20,30 | - | - | - | 35,06 |
| 10 | Revitalization of TS in HPP Tikvesh | 4,31 | 2,46 | - | - | - | 6,77 |
| 11 | Revitalization of TS in HPP Vrutok | 7,38 | 6,77 | - | - | - | 14,15 |
| 12 | Revitalization of TS in HPP Globochica | 4,31 | 2,46 | - | - | - | 6,77 |
| 13 | Revitalization of TS in HPP Shpilje | 4,31 | 2,46 | - | - | - | 6,77 |
| 14 | Revitalization of TS Prilep 1 | 40,59 | 27,68 | - | - | - | 68,27 |
| 15 | Revitalization of TS Shtip 1 | 1,23 | 0,00 | - | - | - | 1,23 |
| 16 | Revitalization of TS Kavadarci 1 | 5,54 | 6,15 | - | - | - | 11,69 |
| 17 | Revitalization of TS Veles (Bashino Selo) | 8,00 | 12,30 | - | - | - | 20,30 |
| 18 | Installation of DC Equipment | 1,23 | 0,00 | - | - | - | 1,23 |
| 19 | Modernization of the electricity transmission system | 150,06 | 142,68 | 75,03 | 37,52 | 9,23 | 414,51 |
| 20 | Research on the electricity transmission system | 50,55 | 6,15 | 3,69 | - | - | 60,39 |
| **21** | **TOTAL** | **1.622,80** | **2.233,99** | **1.560,87** | **832,10** | **194,96** | **6.444,71** |

In accordance with the Investment Plan of Elektrodistribucija DOOEL Skopje for the period 2019-2023, following investments are planned in the electricity distribution system:

*Table II.30. Investment plan of Elektrodistribucija DOOEL Skopje for the period 2019-2023*

| Ord. No. | Description | Plan 2019 | Plan 2020 | Plan 2021 | Plan 2022 | Plan 2023 | Plan 2019 - 2023 |
|---|---|---|---|---|---|---|---|
| | | (000) denars | (000) denars | (000) denars | (000) denars | (000) denars | (000) denars |
| 1. | High voltage equipment and transformer stations | 480.509 | 524.911 | 563.287 | 539.388 | 499.338 | 2.607.434 |
| 2. | IT and telecommunication projects | 100.954 | 171.827 | 228.085 | 151.571 | 127.632 | 780.070 |
| 3. | Metering Devices | 456.849 | 533.662 | 508.063 | 509.790 | 503.191 | 2.511.556 |
| 4. | Buildings and vehicles | 121.833 | 76.924 | 60.353 | 91.720 | 89.488 | 440.319 |
| 5. | Work safety and environment protection | 27.838 | 18.161 | 9.680 | 25.841 | 9.696 | 91.216 |
| 6. | Grid legalization investments | 0 | 0 | 0 | 0 | 0 | 0 |
| 7. | Medium voltage grid | 151.515 | 123.922 | 123.922 | 123.922 | 123.922 | 647.205 |
| 8. | Medium voltage TS | 19.985 | 12.300 | 12.300 | 12.300 | 21.525 | 78.410 |
| 9. | Low voltage grid | 23.443 | 12.300 | 12.300 | 12.300 | 24.600 | 84.943 |
| 10. | Dislocation of meters | 157.536 | 218.325 | 218.325 | 218.325 | 218.325 | 1.030.836 |
| 11. | New users' projects | 498.000 | 430.500 | 430.500 | 430.500 | 442.800 | 2.232.300 |
| 12. | Investments by client's request | 101.317 | 39.975 | 39.975 | 39.975 | 39.975 | 261.217 |
| 13. | Unplanned projects | 61.500 | 61.500 | 61.500 | 61.500 | 86.100 | 332.100 |
| **14.** | **TOTAL** | 2.201.279 | 2.224.808 | 2.268.291 | 2.217.134 | 2.186.594 | 11.097.606 |

The approval of these investments will significantly improve the operative safety of the total power system of the Republic of North Macedonia.

## II.3. Regulations

The Energy Regulatory Commission in 2018 adopted and approved 10 acts in the electricity area. The process of their preparation has been implemented through cooperation with the Secretariat of the Energy Community and was supported by the technical assistance provided by USAID.

### II.3.1. Tarrif System for Electricity Sales to Consumers Supplied by the US and SoLR

On 3rd of September 2018, the Energy Regulatory Commission adopted a Tariff System for Electricity Sales to Consumers Supplied by the Universal Supplier and the

Supplier of Last Resort ("Official Gazette of the Republic of Macedonia" no. 164/18). This Tariff system regulates the manner of calculation of the prices for the delivered electricity to the small consumers and households that chose to be supplied by the universal supplier, as well as the manner of calculation of the price for the delivered electricity of the consumers supplied by the supplier of last resort.

### II.3.2. Rules for Electricity Purchase for the Universal Supplier

On 7th of September 2018 the Energy Regulatory Commission adopted the Rules for Electricity Purchase for the Universal Supplier ("Official Gazette of the Republic of Macedonia", no. 172/18). These Rules regulate the manner and procedure for supplying the electricity intended to supply the consumers from the household and small consumer category supplied by the selected, i.e. designated universal supplier.

### II.3.3. Electricity Supply Rules

On 7th of September 2018 the Energy Regulatory Commission adopted the Electricity Supply Rules ("Official Gazette of the Republic of Macedonia" no. 172/18). These rules regulate the general conditions and the manner of supply of electricity, as well as the mutual rights and obligations of the suppliers, the universal supplier and the supplier of last resort, the electricity consumers, the electricity transmission system operator, the electricity distribution system operators and the closed distribution systems operators.

### II.3.4. Electricity Market Rules

On 11th of September 2018 the Energy Regulatory Commission adopted the Electricity Market Rules ("Official Gazette of the Republic of Macedonia" no. 173/18 and 222/18).

The objective of the Electricity Market Rules is to provide a transparent and non-discriminatory manner of organization and market management in order to provide efficient, competitive and sustainable market. Electricity Market Rules shall be applied by all market participants, as well as entities that participate in procedures and take actions.

The application of these market rules will commence on the day of application of the Balancing Rules adopted by the electricity transmission system operator by previous approval from the Energy Regulatory Commission. The Balancing Rules are in the final harmonization stage and are expected to be approved by the end of May 2019. Up until the adoption of the Balancing Rules , the Electricity Market Rules ("Official Gazette of the Republic of Macedonia no.38/14, 42/14, 57/14, 194/14, 190/16, 80/17, 172/17, 197/17, 115/18 and 241/18), which were twice amended by the Energy Regulatory Commission in 2018, will apply.

### II.3.5. Rules for Electricity Purchase for Covering Losses in the Distribution Grid of Elektrodistribucija

The Energy Regulatory Commission, on third of October 2018, adopted the Rules for Electricity Purchase for Covering the Losses in the Electricity Distribution Grid of Elektrodistribucija DOOEL Skopje. These Rules enable Elektrodistribucija DOOEL Skopje to continue procuring electricity for covering losses in the electricity distribution grid through electronic auctions.

### II.3.6. Rules for Allocation of Cross-Border Transmission Capacities

The Energy Regulatory Commission, on eight of November 2018, approved the Rules for Allocation of the Cross-Border Transmission Capacities at the Border Macedonia-Serbia for 2019 and the Rules for Allocation of Cross-Border Transmission Capacities at the Border Macedonia-Bulgaria for 2019.

### II.3.7. Elektrodistribucija DOOEL Skopje Compliance Program

The Energy Regulatory Commission, on 16th of November 2018, approved the Compliance Program of the activities of Elektrodistribucija DOOEL Skopje due to provision of objectivity, transparency and prevention of discriminatory behavior in the performance of the activity of electricity distribution. On 11th of December 2018 the Energy Regulatory Commission approved the appointment of the compliance officer of Elektrodistribucija DOOEL Skopje competent to monitor the compliance of the operation of the electricity distribution system operator with the Program.

### II.3.8. Rules for Electricity Purchase for Covering the Losses in the Electricity Transmission System

The Energy Regulatory Commission on 23rd of November 2018 approved the Rules for Supply of Electricity to Cover the losses in the Electricity Transmission System. These Rules regulate the conditions, manner and procedure for supply of electricity by MEPSO JSC Skopje to cover the losses in the electricity transmission grid in order to provide safe and reliable functioning of the electricity transmission system by market conditions in a transparent and non- discriminatory manner, in accordance with the Energy Law.

### II.3.9. Rules for Compensation of Damage Caused to the Producers and Consumers of Electricity

On 11th of December 2018 the Energy Regulatory Commission adopted the Rules on Determination of Compensation of Damages Caused to the Producers and Consumers of Electricity (“Official Gazette of the Republic of Macedonia” no. 231/18). These Rules shall regulate the manner, conditions and procedure for determination of compensation of damages caused to the producers and consumers connected to the electricity transmission and electricity distribution system, by the operator of the respective system.

## II.4. Certification of the Electricity TSO

The Energy Law envisages separation of ownership of the electricity transmission system operator, as well as its certification in accordance with the Third Interior Energy Market Legislation Package of the European Union.

On 1st of August 2018 the energy Regulatory Commission adopted a Rulebook for Certification of an Electricity Transmission System and Natural Gas Transmission System ("Official Gazette of the Republic of Macedonia" no. 146/18). The Certification Rulebook regulates documents, information and data referring to the manner and form of their submitting and the procedure for determination of the electricity and natural gas transmission system operator's operation compliance with the requirements determined under the Energy Law.

In order to meet the provisions from the Energy Law that refer to the separation of ownership of the performers of energy activities, a procedure has been administered for transfer of ownership of the shares of MEPSO JSC Skopje. In accordance with Article 237 paragraph (1) of the Energy Law, the Government as a single owner of the shares of MEPSO JSC Skopje and ESM JSC Skopje, on 24th of July adopted the Decision no.44-6841/1 for transfer of the shares of MEPSO JSC Skopje from the Government ownership to the ownership of the Ministry of Transport and Communications, according to which the separation of ownership of MEPSO JSC Skopje as the electricity transmission system operator was made, i.e. the Government was no longer the sole owner of the company that produces, supplies and trades electricity and the company that transmits electricity. The Ministry of Transport and Communications owns MEPSO JSC Skopje as of 01st of August 2018.

In accordance with Article 74, paragraph (5) from the Energy Law, the Energy Regulatory Commission approves the conditions regulating the term and employment conditions of the compliance officer, including the duration of their term or employment in order to provide independence, as well as all necessary conditions for exercising their authorizations and performance of their duties. The Energy Regulatory Commission, on 31st of August 2018, adopted a Decision for approval of the conditions regulating the term and conditions for employment of the compliance officer of MEPSO JSC Skopje. The Energy Regulatory Commission, on 17th of December 2018, approved the appointment of the compliance officer of MEPSO JSC Skopje.

The performer of the activity of electricity transmission must be certified as an electricity transmission system operator. Due to that, on 27th of November 2018, based on Article 75 of the Energy Law and Article 3 of the Certification Rulebook, MEPSO JSC Skopje submitted a certification request for the electricity transmission system operator to the energy Regulatory Commission.

The Energy Regulatory Commission prepared a draft- certification decision for the electricity transmission system operator within 4 months as of the day of receipt of the Certification Request and submits it immediately to the Secretariat of the Energy Community along with all data and information. The Secretariat of the Energy Community submits an opinion on the draft- decision and within 60 days as of the receipt of the opinion from the Secretariat of the European Community, the Energy Regulatory Commission adopts a certification decision.

The Energy Regulatory Commission submitted a Draft- Certification Decision to the Secretariat of the Energy Community.

In accordance with the Energy Law, MEPSO JSC Skopje, as holder of the license for electricity transmission cannot hold licenses and be included in the performance of the activities of production, distribution, trade and supply of electricity, and can also not hold a license to organize and manage the electricity market. In order to meet this legal provision and considering that MEPSO JSC Skopje holds a license to organize and manage the electricity market, on 8th of October 2018 MEPSO JSC Skopje established and owns the company MEMO DOOEL Skopje which is to be licensed as an electricity market operator.

On 2nd of November 2018 MEPSO JSC Skopje adopted a Statutory Decision amending the MEPSO JSC Skopje Statute, stating that after the Energy Regulatory Commission issues the License for the performance of the activity of electricity market organization and management to MEMO DOOEL Skopje, the activity of electricity market organization and management is to be deleted from the MEPSO JSC Statute's scope of operation. Also, the Energy Regulatory Commission, by official duty, shall adopt a Decision to terminate the MEPSO JSC Skopje license for the performance of the activity of electricity market organization and management.

## II.5. Licenses

In accordance with the Energy Law and the Rulebook on Licenses for the Performance of Energy Activities, the Energy Regulatory Commission issues, amends, prolongs, transfers, suspends and confiscates the licenses and monitors the performance of the obligations of the license holders.

In accordance with the Rulebook on Licenses for the performance of energy activities ("Official Gazette of the Republic of Macedonia" no. 143/11, no. 78/13, no. 33/15 and 207/16), within the period from 01.01.2018 to 05.06.2018 the Energy Regulatory Commission adopted a total on 31 license decisions in the electricity area. Some of the decisions refer to the issuance, modification and prolongation of the period for the performance of the energy activities in the electricity area such as:

- 2 decisions for issuance of licenses for the performance of the energy activity of electricity trading,
- 3 decisions for amendment of license for the performance of the energy activity of electricity trading,
- 1 decision for prolongation of the period for amendment of the license for the performance of the energy activity of electricity trading,
- 2 decisions on the issuance of licenses for the performance of the energy activity of electricity supply,
- 2 decisions for amendment of license for the performance of the energy activity of electricity supply,
- 17 decisions for issuance of licenses for the performance of the energy activity of electricity production from renewable energy sources (3 of which with used permit and 14 decisions without used permit, in line with Article 39 paragraph (1) of the Energy Law),
- 3 decisions for modification of licenses for the performance of the energy activity of electricity production.

- 1 decision for issuance of temporary licenses for the performance of the energy activity of electricity production from renewable energy sources for trial operation and without used permit according to Article 40 from the Energy Law and
- 1 decision for prolongation of the period of temporary licenses for the performance of the energy activity for electricity production from renewable energy sources for trial operation and without used permit according to Article 40 from the former Energy Law.

The Energy Regulatory Commission, during the period from 05.06.2018 to 31.12.2018 adopted a total of 23 decisions for issuance, modification and prolongation of the period for the performance of energy activities in the electricity area such as:

- 2 decisions for issuance of licenses for the performance of the electricity activity trading,
- 1 decisions for issuance of licenses for the performance of the energy activity of electricity supply,
- 11 decisions for issuance of temporary licenses for the performance of the energy activity of electricity production from renewable energy sources
- 8 decisions for licenses for facilities that own used permit and
- 1 decisions for modification of licenses for the performance of the energy activity of electricity production from renewable energy sources.

Within the period from 2004 to 31st of December 2018 the Energy Regulatory Commission issued a total of 268 licenses:

- 171 licenses for the performance of the energy activity of electricity production,
- 2 licenses for the performance of the energy activity of combined production of electricity and thermal energy with used permit,
- 1 license of the performance of the energy activity of electricity transmission,
- 1 license for the performance of the energy activity of electricity market organization and management,
- 2 licenses for the performance of the energy activity of electricity distribution and electricity distribution system management,
- 2 licenses for the performance of the energy activity of electricity supply for tariff consumers,
- 2 licenses for the performance of energy activity of electricity supply of last resort,
- 26 licenses for the performance of the energy activity of electricity supply and
- 61 licenses for the performance of the energy activity of electricity trading.

## II.6. Approval of Electricity Tariffs and Prices

### Electricity tariffs and prices adopted with the Decisions from 29.06.2018, i.e. 30.07.2018, applying from 01.07.2018, i.e. 01.08.2018

In May 2018, ESM JSC Skopje, MEPSO JSC Skopje, ESM JSC Skopje, Energetika Subsidiary and TEC JSC Negotino submitted requests for approval of regulated maximal revenues, prices and tariffs for electricity. On 29.06.2018, Energy Regulatory Commission adopted 6 decisions upon companies requests and published them in the "Official Gazette of the Republic of Macedonia" no. 120/18.

*Table II.31. Overview of the electricity prices and tariffs for the periods from 01.07.2016, 01.07.2017 and 01.07.2018*

| Description | price from 01.07.2016 (den/kWh) | price from 01.07.2017 (den/kWh) | price from 01.07.2018 (den/kWh) | 2018/2016 (%) | 2018/2017 (%) |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | (4=3/1) | (5=3/2) |
| ESM JSC Skopje generation price | 2,5239 | 2,5251 | 2,4396 | -3,34 | -3,39 |
| MEPSO JSC Skopje transmission tariff | 0,2315 | 0,2169 | 0,2053 | -11,32 | -5,35 |
| Electricity market organization and management tariff of MEPSO JSC Skopje | 0,0089 | 0,0018 | 0,0018 | -79,78 | 0,00 |
| Distribution tariff of EVN-Elektrodistribucija DOOEL Skopje | 1,4589 | 1,3729 | 1,4084 | -3,46 | 2,59 |
| Average supply price for tariff and small consumer (EVN Makedonija JSC Skopje) | 4,9777 | 4,9828 | 4,8771 | -2,02 | -2,12 |
| Distribution tariff of ESM JSC Skopje, ENERGETIKA Subsidiary | 0,3331 | 0,3332 | 0,2258 | -32,21 | -32,23 |
| Average supply price for small consumer (ESM JSC Skopje, ENERGETIKA Subsidiary) | 5,5277 | 5,6917 | 5,7672 | 4,33 | 1,33 |

Price elements for electricity supply of the tariff and small consumers connected to the electricity distribution grid of EVN Elektrodistribucija DOOEL Skopje in 2018 decreased for 2,12% on average, compared to 2017.

The decisions that refer to ESM JSC Skopje, Energetika Subsidiary were adopted by the Energy Regulatory Commission on 30$^{th}$ of July 2018 and were published in the "Official Gazette of the Republic of Macedonia" no. 142/18. Average prices for electricity supply of the small consumers connected to the distribution grid of ESM JSC Skopje increased for 1,33% compared to 2017.

ENERGY AND WATER SERVICES REGULATORY COMMISSION OF THE REPUBLIC OF NORTH MACEDONIA


# NATURAL GAS

## ANNUAL REPORT

# 2018

# III. NATURAL GAS MARKET

## III.1. General Data on the Natural Gas Sector


The energy infrastructure in the natural gas sector of the Republic of North Macedonia enables:

- natural gas import;
- transmission and management of the natural gas transmission system;
- natural gas distribution and
- natural gas supply.

The Republic of North Macedonia does not have own natural gas sources and at this point is connected with only one main gas pipeline. The total volume of natural gas is imported from Russia through the International Corridor 8 that passes through Ukraine, Moldova, Romania and Bulgaria. The magistral gas pipeline enters in the Republic of North Macedonia at Deve Bair by the border with Bulgaria and extends through Kriva Palanka, Kratovo and Kumanovo to Skopje, with a total length of 98,197 km. Gas pipeline grid from the magistral pipeline to the cities of Kriva Palanka, Kratovo, the Technological and Industrial Development Zone - Skopje (Bunardzik) and the City of Skopje has a total length of 32 km. The city gas pipeline grid has a total length of 50,93 km (in Kriva Palanka, Kratovo, Kumanovo and Skopje). The transmission system is composed of GMS (main measuring station) at the entrance of the Republic of North Macedonia, six GMRS (main measuring and regulatory stations) set at the entrances of the cities of Kriva Palanka, Kratovo, Kumanovo, two in Skopje – Skopje North and Skopje South and one in the Technological and Industrial Development Zone Skopje, 52 MRS (measuring and regulatory stations) and 3 MS (measuring stations).

The total capacity of the natural gas transmission system is 800 million $nm^3$/annually, with an operational pressure of 54 bar and diameter of the magistral pipeline of 530 mm. The capacity may be increased to 1.200 million $nm^3$/annually with the construction of the compression station at the initial part of the magistral pipeline. The maximal flow of the magistral pipeline is 180.000 $nm^3$/per hour.

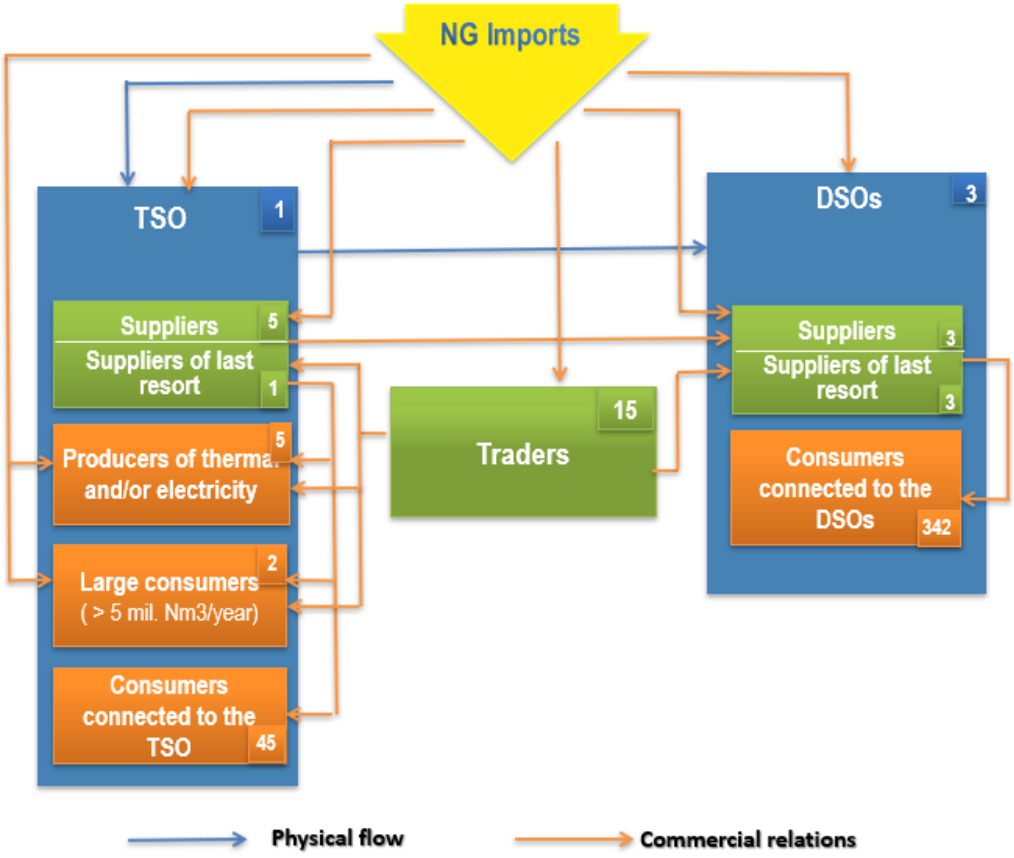
In the Republic of North Macedonia, the following natural gas distribution systems have been constructed:

- in the Technological and Industrial Development Zone TIR 3 Skopje 1 and Skopje 2 at the village of Bunardzik with a 5.200 m distribution grid length,
- in the city of Kumanovo with a 13.140 m distribution grid length and
- in the city of Strumica with a 28.500 m distribution grid length.

The gas delivery is performed to the stated natural gas distribution systems for the needs of the industry, the commercial consumers, public institutions and households.

## III.2. State of the Natural Gas Market

The natural gas market in the Republic of North Macedonia is fully liberalized as of 01.01.2015. Until 2018 it has been 4 years of its full liberalization, whereby no natural gas disruptions have been noticed.




*Overview of the natural gas market in the Republic of North Macedonia in 2018*

During 2018 the following natural gas market participants independently took part in purchasing natural gas through imports:

- traders and
- thermal energy and electricity producers from combined plants.

The natural gas distribution systems are constantly developing and upgrading and therefore there is a noticeable expansion of the natural gas distribution grid, as well as new connections and use of the natural gas in individual buildings (households).

The Energy Regulatory Commission regulates the following activities:

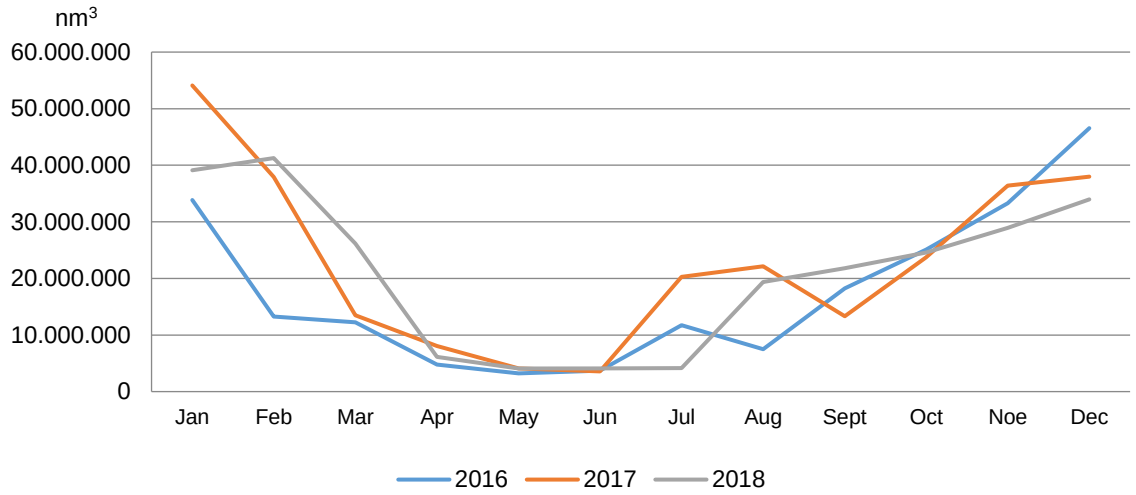
- natural gas transmission,
- natural gas distribution and
- natural gas supply of last resort.

According to the data submitted by GA-MA JSC Skopje, as a license holder for transmission and management of the natural gas transmission system, the total natural gas volume in the Republic of North Macedonia transmitted to the natural gas consumers in 2018 is 253.628.089 $nm^3$.

In 2018 there are 7,79 % less transmitted natural gas volume compared to 2017 which is the year of highest natural gas consumption in the country. Compared to 2016, the transmitted natural gas volume in 2018 increased for 18,84 %.

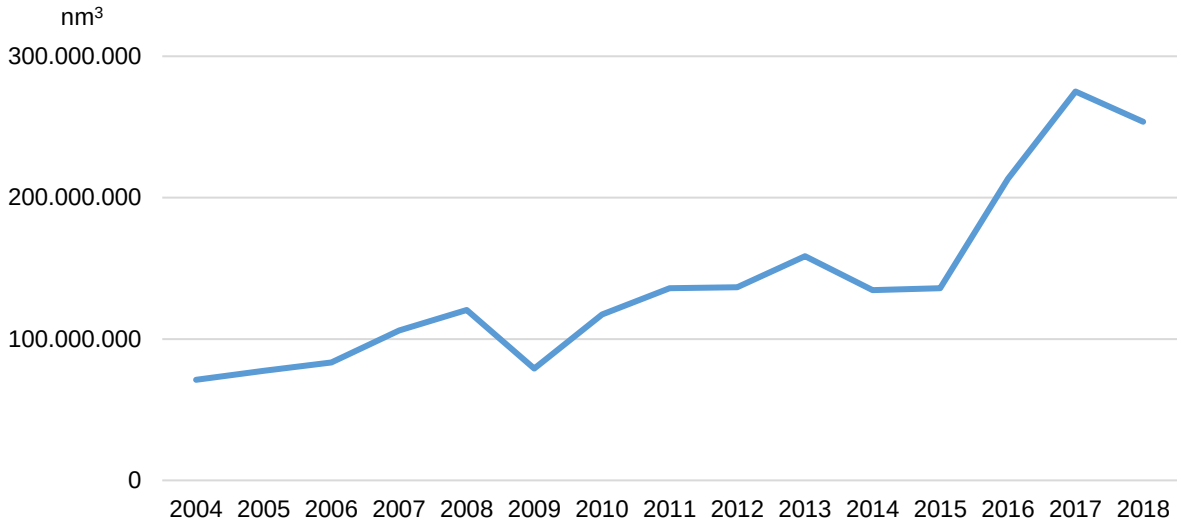
*Table III.1. Overview of transmitted natural gas volume (in $nm^3$) for 2016, 2017 and 2018*

| Month | 2016 | 2017 | 2018 | 2018/2016 (%) | 2018/2017 (%) |
|---|---|---|---|---|---|
| January | 33.877.675 | 54.094.284 | 39,135,873 | 15.52 | -27.65 |
| February | 13.233.198 | 37.899.734 | 41,263,024 | 211.81 | 8.87 |
| March | 12.222.533 | 13.495.158 | 26,141,728 | 113.88 | 93.71 |
| April | 4.748.604 | 8.058.045 | 6,152,732 | 29.57 | -23.64 |
| May | 3.220.104 | 4.109.473 | 4,082,727 | 26.79 | -0.65 |
| June | 3.713.956 | 3.564.617 | 4,097,401 | 10.32 | 14.95 |
| July | 11.752.002 | 20.283.288 | 4,127,965 | -64.87 | -79.65 |
| August | 7.500.905 | 22.129.804 | 19,344,371 | 157.89 | -12.59 |
| September | 18.265.539 | 13.319.169 | 21,802,853 | 19.37 | 63.70 |
| October | 25.083.296 | 23.718.588 | 24,577,370 | -2.02 | 3.62 |
| November | 33.268.371 | 36.415.314 | 28,925,564 | -13.05 | -20.57 |
| December | 46.553.335 | 37.985.185 | 33,976,481 | -27.02 | -10.55 |
| **TOTAL** | **213.439.518** | **275.072.659** | **253,628,089** | **18.84** | **-7.79** |




*Monthly transmission of natural gas on national level in 2016, 2017 and 2018*

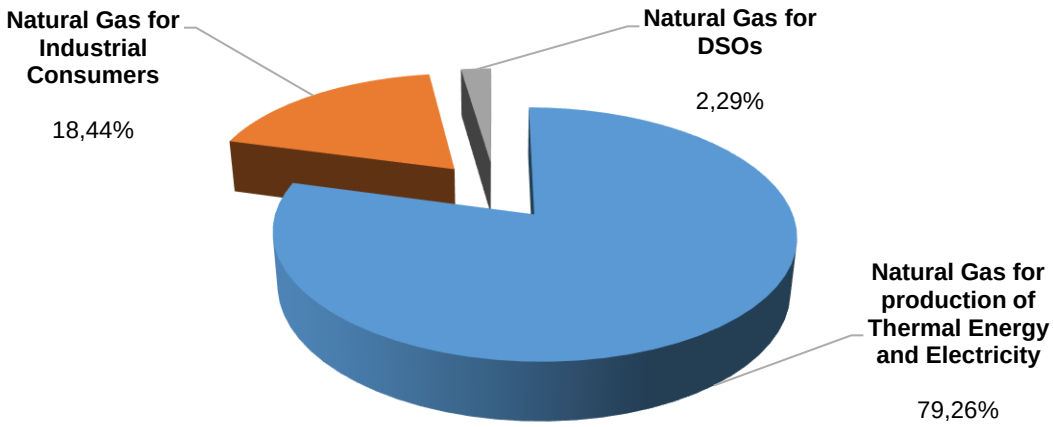
The largest consumption of natural gas occurs during winter months, which is expected considering that the natural gas is mostly used for production of thermal energy. The gas-fired power plant TE-TO JSC Skopje influences greatly on the consumption profile. As it can be seen from the chart, during the summer months of July and August there is a consumption deflection which is due to the operation of TE-TO JSC Skopje in these months, followed by significant increase in the winter period when the thermal power plants and the co-generative power plants operate in full capacity. The industrial consumers which are using natural gas for their processes and operate all year round are defining the minimal consumption in the summer period.




*Natural gas consumption on national level in the period 2004-2018*

From the presented chart it can be concluded that during previous years there has been a significant increase in the consumption of natural gas in the Republic of North Macedonia. The annual natural gas consumption until ten years ago has been under 100 million $nm^3$, while in 2017 it reaches its peak with 275 million $nm^3$. The previous 2018 also marks high natural gas consumption of 253.628.089 $nm^3$.

The transmission gas pipeline grid has a nominal capacity of 800.000.000 $nm^3$ annually with operative pressure of 40 bar. Considering the difference in the natural gas consumption dynamics between the winter and summer months, the utilization of the system varies during the year, whereby in the summer months it is very low and ranges from 5% to 15%, while in the winter months, during the high natural gas consumption season, it is significantly greater and ranges from 50% to 80% utilization of the natural gas transmission system daily.

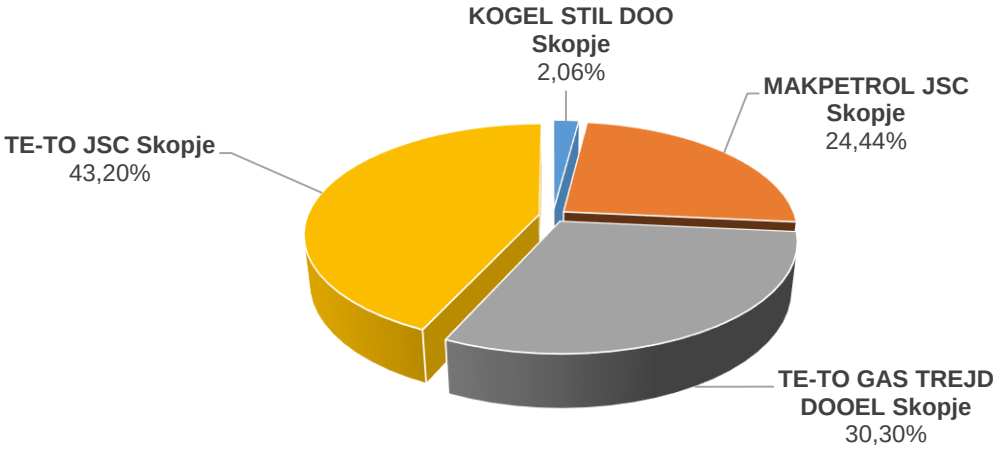



*Natural gas consumption by consumers type in 2018*

The natural gas consumption in the Republic of North Macedonia is dominated by the producers of electricity and thermal energy, i.e. the combined plants for production of electricity and thermal energy and the thermal power plants. Their portion in the final natural gas consumption for 2018 is 79,26%.

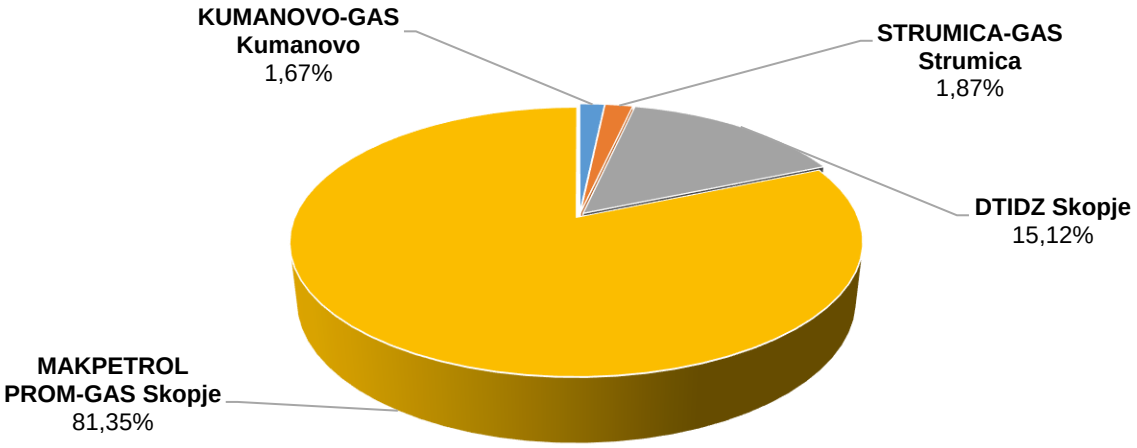
Next are the industrial consumers with 18,44% market share, where dominant role belongs to the metal industry. At the end are the distribution companies whose share in the final natural gas consumption is 2,29%.

The market share of the traders and suppliers at the wholesale natural market is displayed below.




*Market share of traders/suppliers at the wholesale natural gas market in 2018*

TE-TO JSC Skopje dominated wholesale natural gas market in 2018 with 43,20% market share, followed by their daughter company TE-TO Gas Trade with 30,30% and Makpetrol JSC Skopje with 24,44% market share, while KOGEL STIL DOO Skopje had the smallest market share of 2,06 %. Natural gas imported by TE-TO JSC Skopje and TE-TO Gas Trade was used for combined production of electricity and thermal energy, as well as production of thermal energy only.




*Market share of the suppliers at the retail natural gas market for 2018*

MAKPETROL PROM-GAS DOOEL Skopje dominates the retail natural gas market in 2018 with 81,35% market share, followed by DTIDZ Skopje with 15,12% and STRUMICA GAS and KUMANOVO GAS with 1,87% and 1,67% respectively.

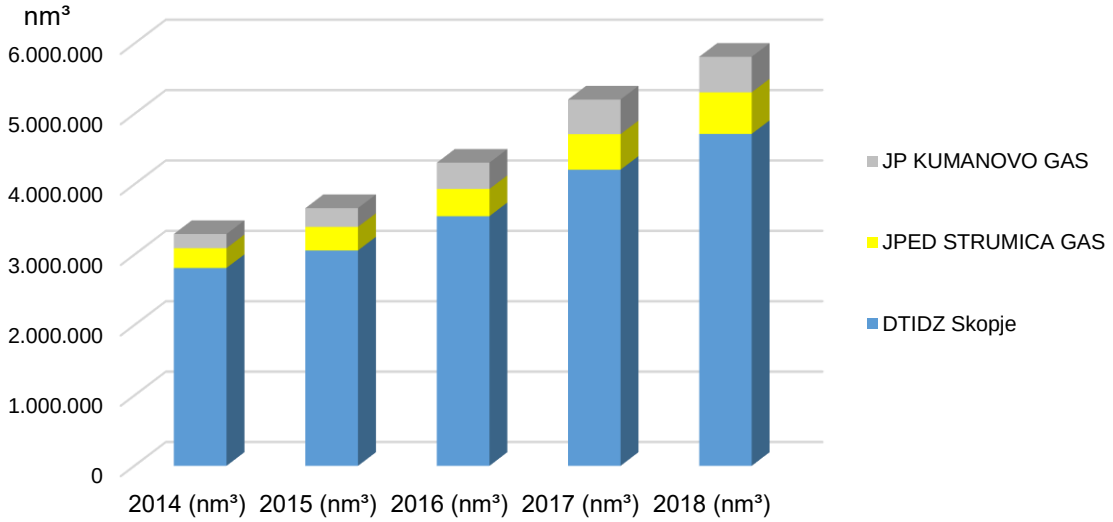
MAKPETROL PROM-GAS supplies natural gas to consumers connected to the gas transmission system, while DTIDZ Skopje, KUMANOVO GAS and STRUMICA GAS supply natural gas to consumers of the gas distribution systems respectively. DTRIZ Skopje and Kumanovo Gas purchase natural gas from MAKPETROL PROM-GAS.

A table overview is shown below regarding the natural gas distribution systems containing the natural gas volume distributed in them.

*Table III.2. Distributed natural gas volume in 2016, 2017 and 2018 in the distribution grids of JP Kumanovo Gas, JPED Strumica Gas and the Directorate for Technology and Industrial Development Zones Skopje (DTIDZ)*

| Ord. No. | Distribution grid | 2016 (nm³) | 2017 (nm³) | 2018 (nm³) | 2018/2016 (%) | 2018/2017 (%) |
|---|---|---|---|---|---|---|
| 1. | Directorate for Technology and Industrial Development Zones Skopje | 3.547.077 | 4.207.423 | 4,715,736 | 32.95% | 12.08% |
| 2. | JP Strumica Gas-Strumica | 386.212 | 504.108 | 590,737 | 52.96% | 17.18% |
| 3. | JP Kumanovo Gas-Kumanovo | 373.684 | 492.748 | 505,043 | 35.15% | 2.50% |

The natural gas distribution systems are still developing. Distributed natural gas volume in their systems is minor, although there is noticeable ongoing growth during the years. The largest portion of distributed gas is in the DTIDZ where there are several industrial consumers using the natural gas in the production processes, as well as for heating.




*Natural gas quantities in the distribution systems by years and companies*

From the data shown on the chart, it can be concluded that the natural gas volumes in the distribution gas pipelines systems are constantly growing.

Data on the structure and number of consumers in the distribution gas pipeline grids are given below.

*Table III.3. Number of consumers by consumer category in 2018 in the distribution grids of JP Kumanovo Gas, JPED Strumica Gas and the Directorate for Technology and Industrial Development Zones Skopje (DTIDZ)*

| Distribution grid | Households | Other | Total |
|---|---|---|---|
| DTIRZ | 0 | 10 | 10 |
| JP KUMANOVO GAS- Kumanovo | 42 | 27 | 69 |
| JPED STRUMICA GAS- Strumica | 230 | 33 | 263 |
| **Total** | **272** | **106** | **382** |

Strumica Gas has the largest number of consumers in 2018 (263 consumers), out of which 230 are households. Next is Kumanovo Gas with 69 consumers, while DTDIZ Skopje has only 10 industrial consumers.

### III.2.1 Development and Investment Plans

The development and investment plans are aimed to provide a safe and continuous transmission, distribution and supply with natural gas, increased efficiency of the systems with proper planning, construction and maintenance of the gas pipelines, metering and regulatory stations and other equipment by careful

management and supervision of the transmission grid and control over all actions in the protective region of the gas pipeline.

The joint stock company for performing energy activities – Macedonian Energy Resources- Skopje, state owned (MER JSC), in 2018 continued the construction of the magistral gas pipelines from phase 1 directed toward:

- Stip – Negotino– Bitola and
- Skopje– Tetovo– Gostivar (due in 2020).

With a decision adopted on 19.03.2019 by the Government of the Republic of North Macedonia, the new title of MER JSC Skopje is: Joint Stock Company for the Performance of Energy Activities-National Energy Resources Skopje state owned (NER JSC Skopje) and that title shall be used in the present report.

The following are the projects that NER JSC Skopje plans to realize within stage 2:

- Magistral gas pipeline, section Gostivar– Kichevo (due in 2022),
- Magistral gas pipeline, section Kichevo- Ohrid (due in 2025).

The initiatives for construction of two interconnection gas pipelines connecting the Republic of North Macedonia with Greece and Bulgaria are currently present.

The section “Stip- Hamzali- Stojakovo” - Interconnection with Greece is an interconnective pipeline for natural gas transmission connecting the Republic of North Macedonia with the Republic of Greece, enabling delivery of additional volumes of natural gas from another source of supply. The project realization, for which there is a feasibility study prepared, is within the competence of NER JSC Skopje.

The second interconnection pipeline is to connect the Republic of North Macedonia with the Republic of Bulgaria. Ministry of Energy of the Republic of Bulgaria and the Ministry of Economy of the Republic of North Macedonia have signed a Memorandum of Understanding and Cooperation in the area of natural gas, and an agreement has been signed between NER JSC Skopje and Bulgartransgaz EAD for feasibility study execution.

Also, interconnection pipelines are planned between:

- The Republic of North Macedonia and the Republic of Serbia (The Memorandum of Cooperation is underway),
- The Republic of North Macedonia and the Republic of Kosovo (The Memorandum of Cooperation is underway) and
- The Republic of North Macedonia and the Republic of Albania (The Memorandum of Cooperation is underway).

### Plan for development and expansion of the natural gas transmission system in the period from 2019 to 2023

In order to provide development and renewal of the natural gas transmission system, as well as development and expansion of the gas transmission pipeline grid the following activities are planned for the period from 2019 to 2023:

- expansion of the city gas pipeline network in Skopje in order to connect new consumers,

- rounding up the gas pipeline ring along with distribution lines for connecting interested consumers, in order to increase the consumption of natural gas and decrease the emission of harmful gases in the City of Skopje,
- construction of a new connection to the magistral gas pipeline for the needs of TE-TO JSC Skopje in order to increase the efficiency of the operation of the combined producer,
- implementation of the system for observation, monitoring and discovering of a gas leakage from the gas pipeline grid in order to decrease the losses in the transmission gas pipeline system, through installation of 3 stations for data transmission into the central unit in Skopje and installation of an appropriate software for discovering and reporting losses and system balancing,
- implementation of a telemetric system and SCADA system in order to perform remote measuring and administering the main measuring station Zhidilovo, all main measuring and regulatory stations through a single central dispatching center.

*Table III.4. Development and investment plan of GA-MA JSC Skopje*

| **Investments** | **2019** | **2020** | **2021** | **2022** | **2023** |
|---|---|---|---|---|---|
| **denars** | 275.000.000 | 197.000.000 | 159.000.000 | 106.000.000 | 131.000.000 |

During 2019 the Directorate for Technological and Industrial Development (DTIDZ) planes construction of a line in TIDZ Skopje 1 from the internal gas pipeline grid, as well as new connections for two new consumers/ users, as well as extension of the pipeline to the new construction lot and installation of a connection.

During 2019 DTIDZ planes construction of a pipeline in TIDZ Skopje 2 from the main internal gas pipeline grid, as well as connections for new users/ consumers.

The development of the new gas pipeline distribution system depends mainly on the number of users in the zone and their needs. DTIDZ is prepared to respond to the needs of all current and future TIDZ Skopje users.

*Table III.5. Development and investment plan of DTIDZ for TIDZ Skopje (denars)*

| Description | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|
| Equipment supply | 2.000.000 | 4.000.000 | 4.000.000 | 4.000.000 | 4.000.000 |
| Constructing pipe for connecting new users in “TIDZ Skopje1” | 10.000.000 | / | / | / | / |
| Constructing pipe for connecting new users in “TIDZ Skopje2” | 25.000.000 | / | / | / | / |

DTIDZ plans to provide the necessary investment funds from the Budget of the Republic of North Macedonia, as well as from the funds collected from the self-funding activities of the Directorate.

Development plan of the gas pipeline distribution system of JP Kumanovo Gas- Kumanovo for the next five years envisages construction of a secondary gas pipeline with a total length of 30km that could supply approximately 3.000 users, 5% of which are companies and institutions and 95% are households. The number of connections until 2021 is expected to be about 1.500.

The distribution system of JP Strumica Gas- Strumica is not connected to the natural gas transmission system of the Republic of North Macedonia and the natural gas is taken from a decompression station. This distribution system is a so called virtual gas pipeline system, i.e. system for compression of the natural gas in transportation modules, bottles with pressure of 200 to 250 bar, module transport, as well as decompression of the natural gas at 4 bar pressure, appropriate for use in the distribution grid.

During 2018, 2,43 km of new distribution grid and 52 connections in the household category and three connections in the industrial category have been constructed. For 2019 there is a planned construction of 7 km secondary gas pipeline distribution grid, while for the next five year there is a planned construction of a secondary gas pipeline distribution grid with a total length of 45 km. The value of the planned investments during 2019 is about 80.000.000 denars.

## III.3. Regulations

The Energy Regulatory Commission, during 2019, adopted 4 acts in the natural gas area. The process of their preparation was executed through cooperation with the Secretariat of the Energy Community.

### III.3.1. Amendments on the Rulebook for Natural Gas TSO and DSOs Tariffs

The Energy Regulatory Commission, on 31st of July 2018, adopted a Rulebook Amending the Rulebook on the Manner and Conditions for Regulation of the Tariffs for Transmission and Management of the Natural Gas Transmission and Distribution Systems (“Official Gazette of the Republic of Macedonia” no. 142/18).

This rulebook enables, within the period from 1st of August to 15th of October 2018, the natural gas system operator to decrease the tariffs for natural gas transmission and management of the natural gas transmission system up to 50% of the determined ones in the respective Decision for 2018, for the gas volumes consumed by the licensed companies for combined production of electricity and thermal energy.

### III.3.2. Rulebook for Natural Gas TSO, DSOs and Market Operator Tariffs

The Energy Regulatory Commission, on 24th of December adopted the Rulebook on the Determination of the Regulated Maximal Income and Regulated Average Tariffs for Natural Gas Transmission, Organization of the Natural Gas Market and Natural Gas Distribution (“Official Gazette of the Republic of Macedonia” no. 245/18).

This Rulebook determines the manner and conditions for establishment, approval and control of the tariffs with which the regulated maximal income is being acquired for the performance of the following activities:

1) natural gas transmission,
2) organization and management of the natural gas market and
3) natural gas distribution.

The provisions of the Rulebook refer to the legal entities performing the regulated activities based on licenses issued by the Energy Regulatory Commission.

### III.3.3. Natural Gas Transmission and Market Operations Tariff System

The Energy Regulatory Commission, on 24th of December 2018, adopted a Tariff System for Natural Gas Transmission and Organization and Management of the Natural Gas Market ("Official Gazette of the Republic of Macedonia" no. 245/18).

This Tariff system determines the manner of calculation of the charges that the consumers are to pay for using the natural gas transmission system, as well as the manner and conditions for calculation and determination of the tariffs for organization and management of the natural gas market.

The Tariff for natural gas transmission shall be calculated by applying the Methodology contained in Appendix 1 of the Tariff system. The Tariff system introduces charges per capacity and the entry/exit concept. A transition period has been envisaged from charges by volume to charges by capacities staring from 2020.

### III.3.4. Natural Gas Distribution Tariff System

The Energy Regulatory Commission, on 24th of December 2018, adopted a tariff system for natural gas distribution system ("Official Gazette of the Republic of Macedonia" no.245/18).

The Tariff system for natural gas distribution regulates the manner of establishment of the tariffs that are to be paid by the consumers for using the natural gas distribution system.

## III.4. Licences

In 2018 the Energy Regulatory Commission adopted a total of 4 decisions for licenses in the natural gas area:

- 1 decision for issuance of a license for performance of the energy activity of natural gas supply and
- 3 decisions for issuance for the performance of the energy activity of natural gas trading.

The energy activity of natural gas transmission system management ceased to exist with the new Energy Law from 2018.

In the period from 2004 to 31st of December 2018, the Energy Regulatory Commission has issued a total of 41 licenses in the natural gas area, 32 of which are active and those are the following:

| Energy activity | Natural gas transmission | Natural gas transmission system management | Natural gas distribution | Natural gas supply | Natural gas supply of last resort | Natural gas trade | Total |
|---|---|---|---|---|---|---|---|
| No. of active licenses | 1 | 1 | 3 | 8 | 4 | 15 | 32 |

## III.5. Approval of Natural Gas Tariffs

### III.5.1. Tariffs for Natural Gas TSO for 2019 of GA-MA JSC Skopje

GA-MA JSC Skopje, in accordance with the Rulebook on the Manner and Conditions for Regulation and Management of the Natural Gas Distribution System ("Official Gazette of the Republic of Macedonia" no. 201/16, 87/17 and 142/18) Natural gas transmission tariff system ("Official Gazette of the Republic of Macedonia" no. 244/18) on 23rd of November 2018 submitted a Request for approval of the regulated income and tariffs for the activity of natural gas transmission for 2019 to the Energy Regulatory Commission. The Energy Regulatory Commission on 28th of December 2018 adopted a Decision approving a tariff of 1,2783 den/nm³ for the performance of the activity of natural gas transmission. The gas transmission tariff for the producers of electricity and thermal energy in combined heat and power plants is 1,2268 den/nm³, for the producers of thermal energy and industrial consumers is 1,3495 den/nm³ and for other consumers with natural gas consumption during the previous year of under 150.000 nm³ is 1,4108 den/nm³.

### III.5.2. Tariff for Natural Gas Distribution for 2019 of DTDIZ - Skopje

The Directorate for Technological and Industrial Development Zones-Skopje, on 26th of November 2018 submitted a Request for approval of the service of natural gas distribution for 2019. The Energy Regulatory Commission, on 28th of December 2018, adopted a Decision approving the tariff for the service of natural gas distribution for 2018 in the amount of 2,7127 den/nm³.

### III.5.3. Tariff for Natural Gas Distribution for 2019 of JP "KUMANOVO GAS"- Kumanovo

JP "KUMANOVO GAS"- Kumanovo, on 7th of December 2018, to the Energy Regulatory Commission, submitted a Request for approval of regulated income and tariffs for the service of natural gas distribution. The Energy Regulatory Commission, on 28th of December 2018 adopted a Decision approving the tariff for the service of natural gas distribution for 2019 in the amount of 3,00 den/nm³.

### III.5.4. Tariff for Natural Gas Distribution for 2019 of JPED "STRUMICA GAS"- Strumica

JPED "STRUMICA GAS"- Strumica, on 30th of November 2018, to the Energy Regulatory Commission submitted a Request for approval of regulated income and tariffs for the service of natural gas distribution. The Energy Regulatory Commission on 28th of December 2018 adopted a Decision approving the tariff for the service of natural gas distribution for 2019 in the amount of 2,87 den/nm³.

*Table III.6. Average natural gas tariffs for 2017, 2018 and 2019*

| Description | 2017 | 2018 | 2019 | 2019/2017 (%) | 2019/2018 (%) |
|---|---|---|---|---|---|
| Tariff for the service of transmission and natural gas transmission system management for GA–MA JSC (den/nm$^3$) | 1,5359 | 1,4530 | 1,2783 | -16,77 | -12,02 |
| Tariff for the service of natural gas distribution for DTIDZ (den/nm$^3$) | 2,8418 | 2,7957 | 2,7127 | -4,54 | -2,97 |
| Tariff for the service of natural gas distribution for JP Kumanovo GAS Kumanovo (den/nm$^3$) | 3,0000 | 3,0000 | 3,0000 | 0,00 | 0,00 |
| Tariff for the service of natural gas distribution for JP Strumica Gas- Strumica (den/nm$^3$) | 2,8700 | 2,8700 | 2,8700 | 0,00 | 0,00 |

*starting from 2019 the tariff for management with the natural gas transmission system is an integral part of the natural gas transmission tariff

The natural gas transmission system tariff within the period 2017-2019 has a falling trend. In 2019, compared to 2018 it has decreased for 12,02%, while compared to 2017 it decreased for 16,77%, which is mostly due to the increased transmitted natural gas volume.

The distribution tariff for the DTIDZ operator in 2019 has decreased for 2,97% compared to 2018, while compared to 2017 it decreased for 4,54%. The distribution tariffs of the DSOs JP Kumanovo Gas- Kumanovo and JP Strumica Gas- Strumica remain at the same level in the period from 2017 to 2019.

*Table III.7. Natural gas transmission tariffs by consumer category for 2019*

| Consumer category | 2019 |
|---|---|
| Producers of thermal energy and electricity from combined power plants where electricity and thermal and/ or mechanical energy are produced simultaneously and in a single process (den/nm³) | 1,2268 |

| | |
|---|---|
| Thermal energy producers and industrial consumers (den/nm³) | 1,3495 |
| Other consumers with natural gas consumption under 150.000 nm³ (den/nm³) during the previous year | 1,4108 |

## III.3.5. Average Monthly Natural Gas Prices in 2018

With the natural gas market liberalization in the Republic of North Macedonia in 2015, the natural gas prices are established freely by the market participants. Still, the natural gas market remains insufficiently developed, with a small natural gas consumption and a small number of active traders and natural gas suppliers.

In 2018 there are four entities importing natural gas, Makpetrol JSC Skopje, TE-TO JSC Skopje, Kogel Steel DOO Skopje and TE-TO Gas Trade, whereby TE-TO JSC Skopje imports natural gas for own needs.

In 2018 the natural gas trader Makpetrol JSC Skopje sells to the largest number of suppliers and largest consumers, while TE- TO Gas Trade has traded largest volume.

The dominant supplier for 2018 is Makpetrol Promgas supplying the consumers connected to the natural gas transmission system in Skopje, while the consumers connected to the distribution systems managed by JP Kumanovo Gas, DTIDZ and JPED Strumica Gas are supplied by these entities, which according to the law, hold a license for natural gas supply as well.

Below, there are the monthly average prices of the traders and average retail prices at the transmission system level and the average retail prices at the natural gas distribution system level for 2018.

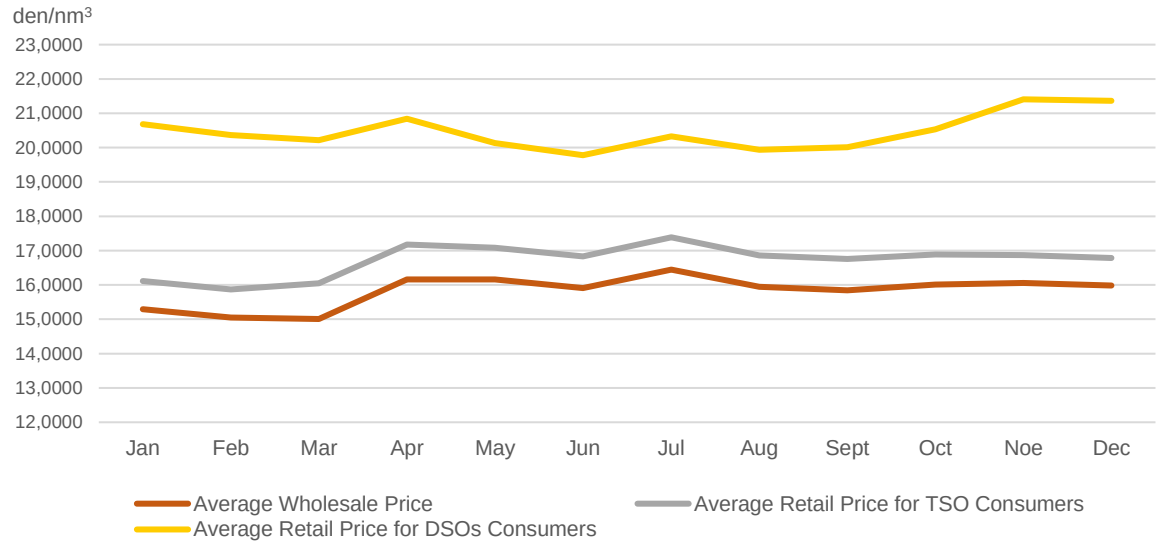
Average retail prices are expressed with included tariffs for transmission and distribution accordingly, while VAT is excluded.

*Table III.8. Average monthly wholesale prices, retail prices for consumers connected to transmission systems and retail prices for consumers connected to the distribution systems in 2018*

| **Month** | **Average wholesale prices** *(den/nm³)* | **Average retail price for natural gas supply for the consumers connected to the transmission system** *(den/nm³)* | **Average retail price for natural gas supply to the consumers connected to the distribution systems** *(den/nm³)* |
|---|---|---|---|
| January | 14,7825 | 17,2035 | 21,5655 |
| February | 14,3383 | 16,6205 | 21,1932 |
| March | 14,4203 | 16,7334 | 21,0662 |
| April | 15,1044 | 17,5630 | 21,1764 |
| May | 15,5861 | 17,9881 | 21,2050 |

| | | | |
|---|---|---|---|
| June | 15,8935 | 18,3652 | 21,5510 |
| July | 17,7350 | 20,2785 | 23,4949 |
| August | 17,7376 | 20,1233 | 23,4539 |
| September | 17,7987 | 20,2984 | 23,5681 |
| October | 17,7710 | 21,2443 | 24,7550 |
| November | 19,4040 | 21,8282 | 25,4621 |
| December | 19,5871 | 21,9030 | 26,7163 |

From the presented data it can be noticed that the consumers connected to the natural gas distribution systems are paying highest average natural gas prices since, aside to the transmission tariff, the price includes the natural gas distribution tariff. Also, considering that the natural gas distribution system service a small consumer number, the natural gas that the operators/ suppliers of the distribution systems procure has a higher price, because they do not import the gas, but procure the necessary quantities from traders and suppliers at the domestic market.




*Average monthly prices of natural gas in 2018 (den/nm$^3$)*

Below is an overview of the monthly natural gas prices for the period from 2016 to 2018 at the retail market for the natural gas consumers connected directly to the transmission system. Makpetrol Promgas prevails in this segment as a dominant natural gas supplier.

*Table III.9. Average monthly natural gas prices at the retail market for the consumers connected directly to the transmission system for the period 2016, 2017 and 2018*

| Month | Unit | 2016 | 2017 | 2018 | 2018/2016 (%) | 2018/2017 (%) |
|---|---|---|---|---|---|---|
| January | den/nm$^3$ | 16,6758 | 16,1102 | 17,2035 | 3,16 | 6,79 |
| February | den/nm$^3$ | 16,8391 | 15,8692 | 16,6205 | -1,30 | 4,73 |
| March | den/nm$^3$ | 16,7232 | 16,0483 | 16,7334 | 0,06 | 4,27 |

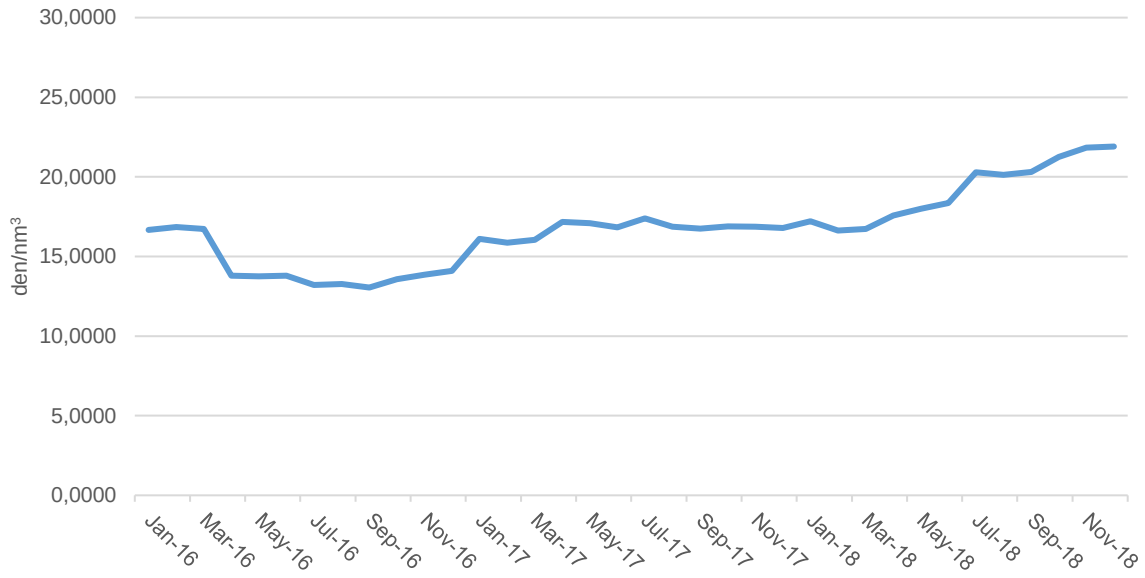
| | | | | | | |
|---|---|---|---|---|---|---|
| April | den/nm$^3$ | 13,7949 | 17,1774 | 17,5630 | 27,32 | 2,24 |
| May | den/nm$^3$ | 13,7533 | 17,0836 | 17,9881 | 30,79 | 5,29 |
| June | den/nm$^3$ | 13,7939 | 16,8351 | 18,3652 | 33,14 | 9,09 |
| July | den/nm$^3$ | 13,2041 | 17,3874 | 20,2785 | 53,58 | 16,63 |
| August | den/nm$^3$ | 13,2757 | 16,8635 | 20,1233 | 51,58 | 19,33 |
| September | den/nm$^3$ | 13,0487 | 16,7533 | 20,2984 | 55,56 | 21,16 |
| October | den/nm$^3$ | 13,5681 | 16,8917 | 21,2443 | 56,58 | 25,77 |
| November | den/nm$^3$ | 13,8452 | 16,8688 | 21,8282 | 57,66 | 29,40 |
| December | den/nm$^3$ | 14,1006 | 16,7872 | 21,9030 | 55,33 | 30,47 |

The average retail prices are expressed with transmission/distribution tariff included and VAT excluded.

The retail price at a transmission system level during 2018 is 17,8607 den/nm$^3$ and compared to 2017, when the price was 16,6057 den/nm$^3$, increased for 7,56%.

The average retail price of natural gas for the consumers connected directly to the transmission system in 2018 increased for 21,59% compared to 2016 when the price was 16,6057 den/nm$^3$.

Following chart presents the trend of the average monthly gas retail price for the consumers connected to the transmission system in the period from 2016 to 2018.




*Average Monthly Gas Retail Prices for the consumers connected to the TSO in 2016, 2017 and 2018 (*den/nm$^3$)

ENERGY AND WATER SERVICES REGULATORY COMMISSION OF THE REPUBLIC OF NORTH MACEDONIA

# DISTRICT HEATING

## ANNUAL REPORT

# 2018

# IV. DISTRICT HEATING MARKET

## IV.1. General Data on the District Heating Sector

Active district heating systems in the Republic of North Macedonia are present only at the territory of the City of Skopje, where there are three functioning systems.

The largest district heating system is the one managed by BALKAN ENERGY GROUP JSC Skopje to which 51.357 consumers were connected with a total engaged power of 471 MW, while 3.725 were connected to the system of ESM JSC Skopje, Energetika Subsidiary with a total engaged power of 50 MW, and 471 consumers were connected to Skopje Sever JSC Skopje with 8 MW.

The Proizvodstvo na Toplina BE DOOEL Skopje capacities for generating thermal energy are:

- Thermal power plant Istok with installed thermal power of 279 MW, located in the east industrial zone of the city,
- Thermal power plant Zapad, with installed thermal power of 171 MW, located in the Taftalidge Settlement and
- Thermal power plant 11-ti Oktomvri with installed thermal power of 28 MW, located in the Kisela Voda Settlement.

The total installed thermal power of the thermal power plants managed by Proizvodstvo na Toplina BE DOOEL Skopje is 478 MW, whereby natural gas is used to produce thermal energy.

The combined thermal energy and electricity producer TE-TO JSC Skopje is connected to the distribution grid of Distribucija na Toplina BE DOOEL Skopje with installed thermal power of 160 MW, as an unregulated thermal energy producer.

ESM JSC Skopje. Energetika Subsidiary has a total installed thermal power of 96 MW. ESM JSC Skopje owns the majority part of the distribution grid managed and used by ESM JSC Skopje, Energetika Subsidiary. In 2018 ESM JSC became the owner of the combined plant for thermal energy and electricity that was previously owned by KOGEL STEEL DOO Skopje, with installed thermal power of 13,5 MW.

Skopje Sever JSC Skopje produces thermal energy through two boilers of 23 MW each, i.e. has total installed thermal power of 46 MW. The distribution grid in Skopje Sever JSC Skopje has been constructed by Toplifikacija JSC Skopje as an investor.

*District Heating System operated by Distribucija na Toplina BE DOOEL Skopje*

The total installed thermal power of the thermal power plants and the cogenerating plants in the City of Skopje is 793,5 MW.

The basic data on the three thermal energy systems of the City of Skopje are given below.

*Table IV.1. Basic data on the production, distribution and supply of thermal energy BALKAN ENERGY GROUP JSC Skopje in 2016, 2017 and 2018*

| Ord. No. | Description | 2016 | 2017 | 2018 | 2018/2016 (%) | 2018/2017 (%) |
|---|---|---|---|---|---|---|
| 1. | Installed production power (MW) | 478 | 478 | 478 | 0,00 | 0,00 |
| 2. | Engaged power of the consumers (MW) | 443 | 456 | 472 | 6,54 | 3,50 |
| 3. | Total number of active consumers | 47.250 | 49.202 | 51.357 | 8,69 | 4,38 |
| 3.1. | Number of households | 46.116 | 48.085 | 50.248 | 8,96 | 4,49 |
| 4. | Approved technical losses in the distribution network (%) | 12 | 12 | 11.5 | 0,00 | -4,17 |

From the presented data it can be concluded that the rising trend of the connected consumers to the district heating system managed by BALKAN ENERGY GROUP JSC Skopje continues, whereby the total number of active consumers in 2018 has risen for 4,38% compared to 2017, while compared to 2016 the growth is 8,69%.

According to the GIS records, the total length of the distribution grid and the connections measured to the thermal stations, i.e. including the part of the connections that passes through the facilities, up until and including 31.12.2018 is 226,34 km.

*Table IV.2. Basic data on the production, distribution and supply of thermal energy in 2016, 2017 and 2018 For Skopje Sever JSC*

| Ord. No. | Description | 2016 | 2017 | 2018 | 2018/2016 (%) | 2018/2017 (%) |
|---|---|---|---|---|---|---|
| 1. | Installed production power (MW) | 46 | 46 | 46 | 0,00 | 0,00 |
| 2. | Engaged power by the consumers (MW) | 7.6 | 7.6 | 7.7 | 1,3 | 1,3 |
| 3. | Number of households | 468 | 454 | 455 | 0,2 | - |
| 4. | Length of the distribution grid (km) | 10,4 | 10,4 | 10,4 | 0,00 | 0,00 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 5. | Approved technical losses in the distribution grid (%) | 7 | 12 | 12 | 71,43 | 0,00 |

*Table IV.3. Basic data on the production, distribution and supply of thermal energy in 2016, 2017 and 2018*
*ESM JSC Skopje, Energetika Subsidiary*

| Ord. No. | Description | 2016 | 2017 | 2018 | 2018/2016 (%) | 2018/2017 (%) |
|---|---|---|---|---|---|---|
| 1. | Installed production power (MW) | 96 | 96 | 96 | 0,00 | 0,00 |
| 2. | Number of households | 3.577 | 3.613 | 3.641 | 1,79 | 0,77 |
| 3. | Fuel | natural gas | natural gas | natural gas | - | - |
| 4. | Length of the distribution grid (km) | 38 | 38 | 38 | 00,0 | 0,00 |
| 5. | Approved technical losses in the distribution grid (%) | 7 | 12 | 12 | 71,43 | - |

## IV.2. State of the District Heating Market

The following are the performers of the regulated energy activities in 2018 at the territory of the City of Skopje:

- BALKAN ENERGY GROUP JSC Skopje
- Proizvodstvo na Toplina BE DOOEL Skopje,
- Distribucija na Toplina BE DOOEL Skopje,
- Snabduvanje so Toplina BE DOOEL Skopje,
- ESM JSC Skopje, Energetika Subsidiary,
- Skopje Sever JSC Skopje

According to the Energy Law, for the systems with installed power of consumers of over 80 MW, licenses holders for production, distribution and supply of thermal energy cannot be a single legal entity. Because of this, for each activity in the BALKAN ENERGY GROUP JSC Skopje system there is a separate legal entity. In the system operated by ESM JSC Skopje, Energetika Subsidiary, engaged power of the consumers is under 80 MW, and therefore all three licenses for production, distribution and supply are given to a single company.

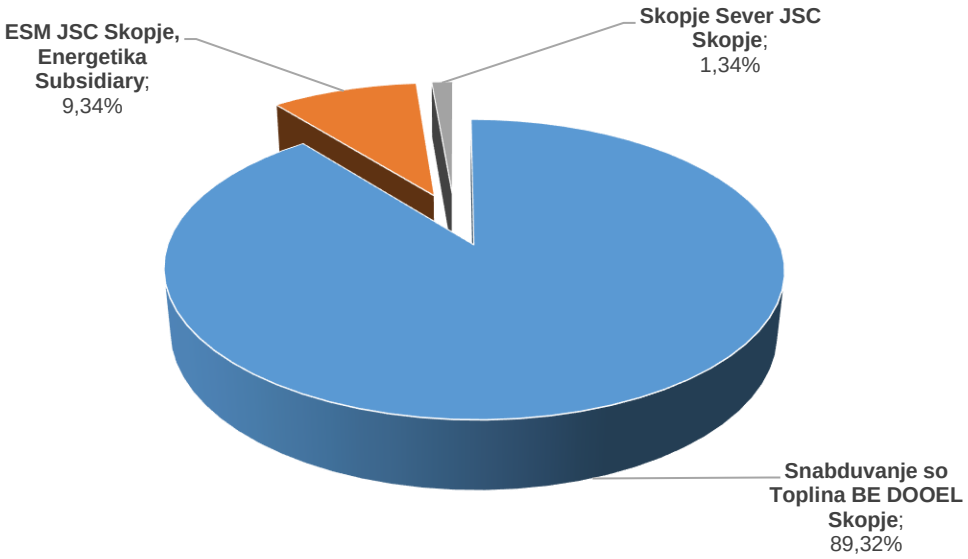
The companies of BALKAN ENERGY GROUP JSC Skopje, in 2018, managed the largest district heating system in the Republic of North Macedonia. The thermal energy production is performed with basic assets that with a lease agreement are undertaken from Toplifikacija JSC Skopje. The distribution of thermal energy is made with basic assets that are leased with an agreement from the JSC for Construction and Management with Residential and Commercial Space.

From the data submitted by BALKAN ENERGY GROUP JSC Skopje, ESM JSC Skopje, Energetika Subsidiary and Skopje Sever JSC Skopje, the total produced and delivered thermal energy for 2016, 2017 are 2018 are shown in the tables IV.4, IV.5 and IV.6. The heating charges are paid based on the measured and delivered thermal energy at the measuring point at the entrance of the facility. The regulation and reading of the delivered thermal energy in the facilities is made from the dispatch center.

The Rulebook on Determination of the Quality of the Delivered Thermal energy determines the procedure for examination of the quality of the delivered thermal energy, i.e. the observance of the conditions for quality determined with the Rules on the Conditions for Supply of Thermal Energy.

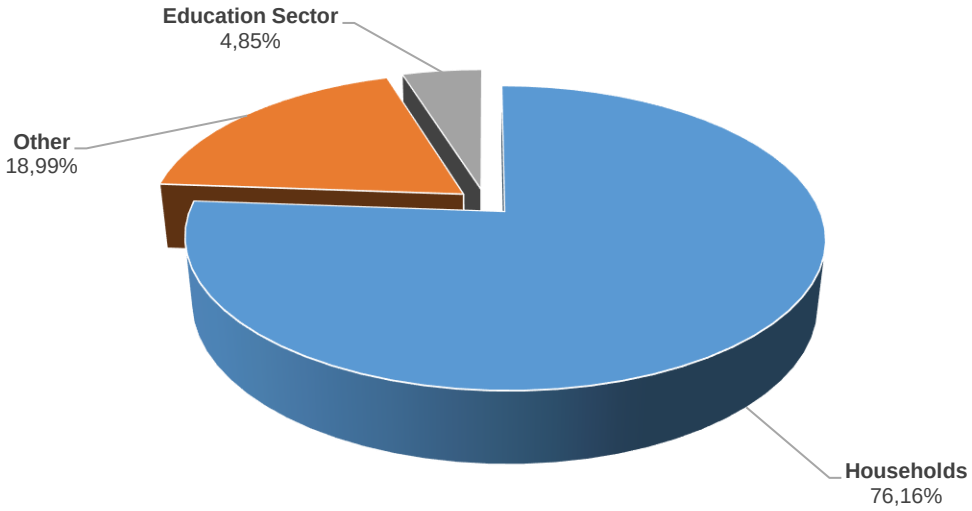
*Table IV.4. Overview of produced, taken and delivered thermal energy in 2016, 2017 and 2018*

| Ord. No. | Description | 2016 | 2017 | 2018 | 18/16 (%) | 18/17 (%) |
|---|---|---|---|---|---|---|
| **1.** | **Production of thermal energy BE DOOEL Skopje** | | | | | |
| 1.1 | Consumed natural gas ($nm^3$) | 32.653.025 | 31.374.668 | 27.814.823 | -14,82 | -11,35 |
| 1.2 | Produced thermal energy (kWh) | 318.946.600 | 299.456.700 | 264.211.300 | -17,16 | -11,77 |
| **2.** | **Distribucija na Toplina BE DOOEL Skopje** | | | | | |
| 2.1 | Undertaken thermal energy from a regulated producer PTBE (kWh) | 318.946.600 | 299.456.700 | 264.211.300 | -17,16 | -11,77 |
| 2.2 | Undertaken thermal energy from an unregulated producer TE-TO JSC Skopje (kWh) | 205.576.800 | 263.291.900 | 259.128.700 | 26,05 | -2,72 |
| 2.3 | Total undertaken produced thermal energy (kWh) | 524.523.400 | 562.748.600 | 523.340.000 | 0,22 | 7,0 |
| 2.4 | Delivered thermal energy (kWh) | 452.073.361 | 487.645.707 | 458.185.976 | 1,35 | 6,04 |



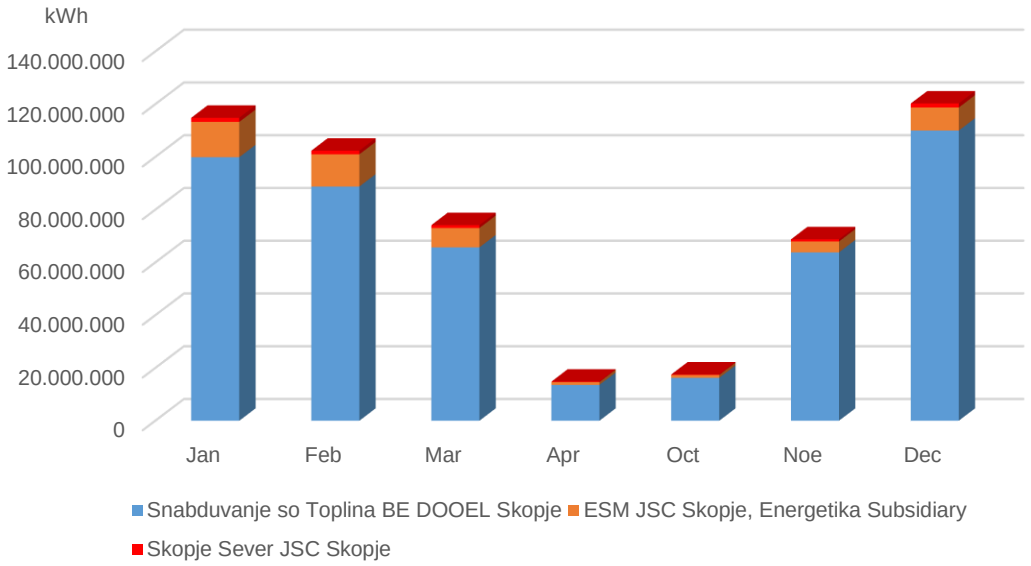

*Delivered volume of thermal energy by companies in 2018*

From the previous chart it can be concluded that Snabduvanje so Toplina BE DOOEL has the largest share in the total volume of delivered thermal energy with 89,32%. Next is the system of ESM JSC Skopje, Energetika Subsidiary with share of 9,34%, and finally Skopje Sever with share of 1,34%.



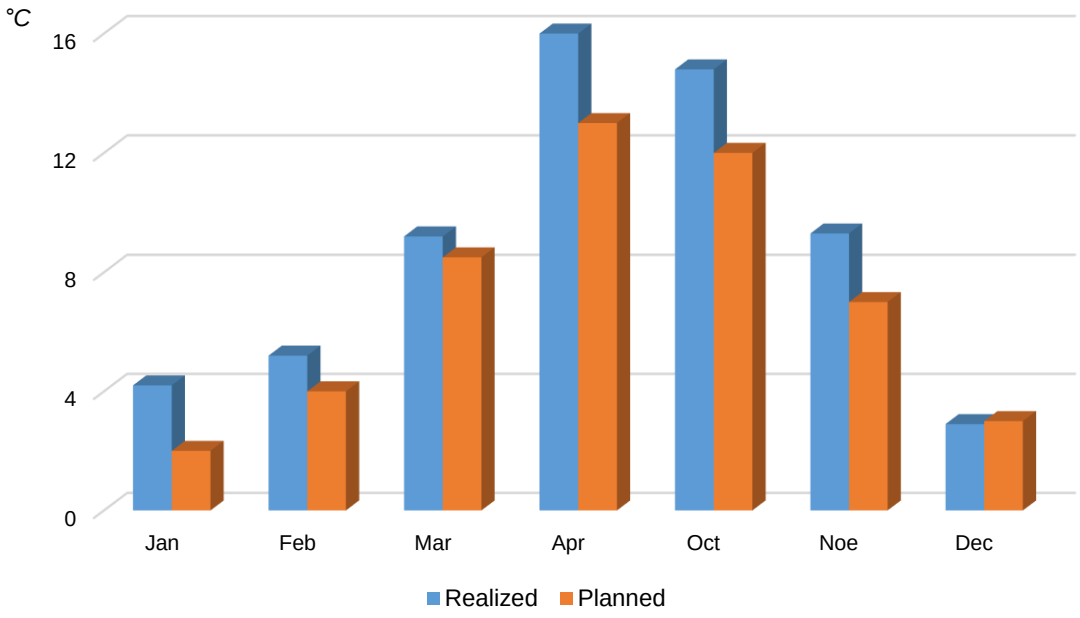

*Delivered volume of thermal energy by consumer categories in 2018*

Regarding the delivered volume of thermal energy by consumer category, the largest share belongs to the households with a total of 76,16%, the category of other consumers with 18,99% and finally the consumer category in the education sector with 4,85%.



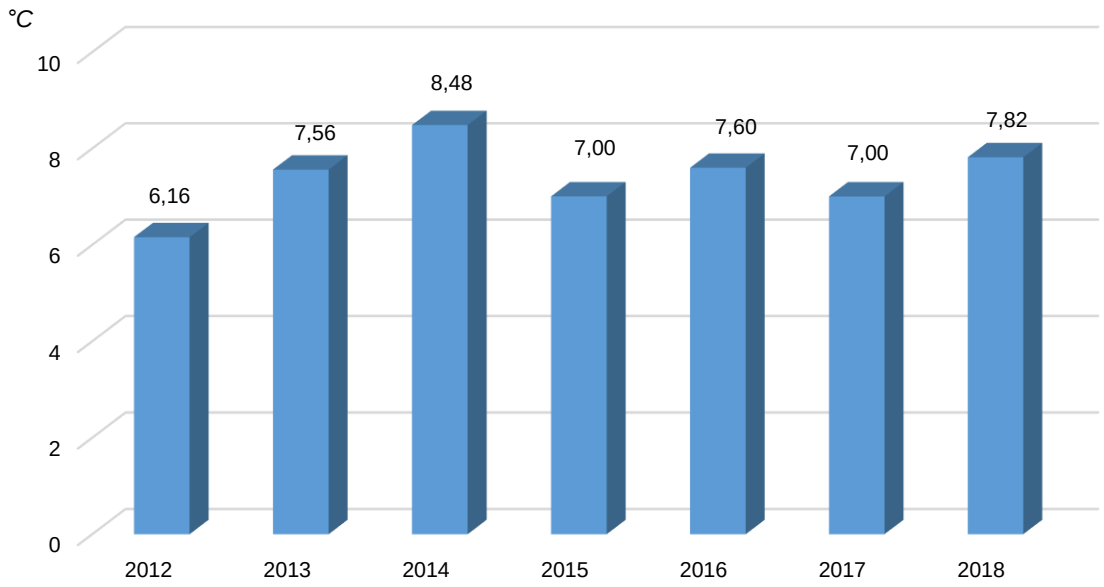

*Delivered thermal energy by months and companies for 2018*

The largest volumes of thermal energy are delivered in December and January, which is understandable for in these months the temperatures are lowest. A total of 46% of the total delivered thermal energy for 2018 are delivered in these two months.



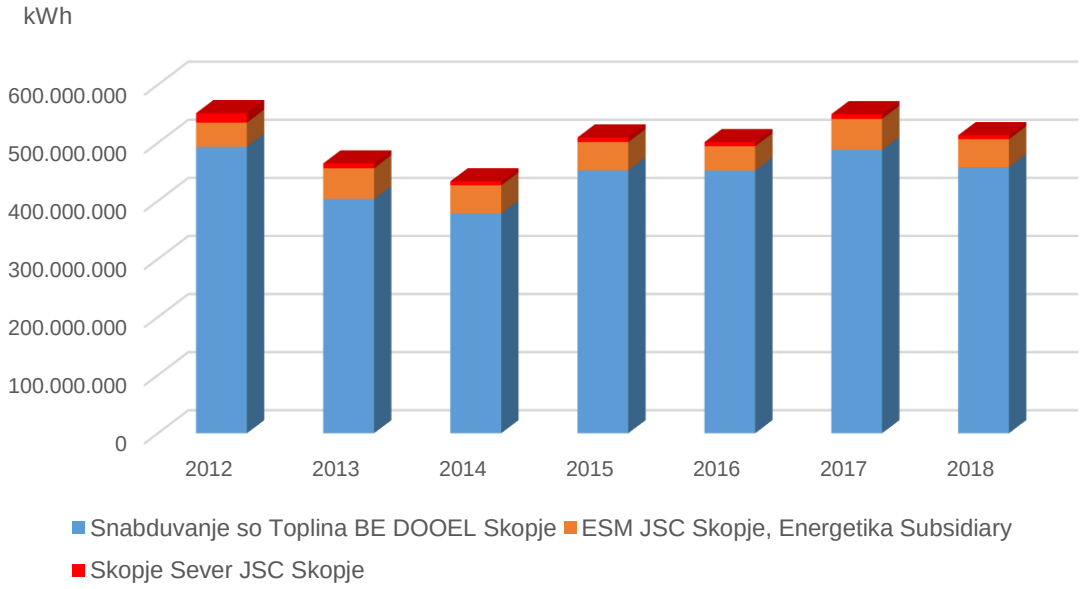

*Planned and realized average monthly temperatures (in °C) during 2018 heating season*

The lowest temperature has been marked in December, whereby this is near the one forecasted for that month, 3°C. For all other months the lowest marked temperature is higher than the forecasted one. The usually coldest month is January, with a significantly higher temperature of 4,2°C compared to the forecasted one, which was 2°C.




*Average temperatures during the heating season by years*

An average temperature of 7,82°C has been marked during the heating season in 2018. This temperature is higher than the averagely forecasted temperature of 6,23°C. During the previous years, there are continuously average temperatures during the heating season of over 7°C. The last year when the average temperature during the heating season was under 7°C was 2012.




*Delivered thermal energy by years and companies*

From the charts showing the temperatures and delivered thermal energy volumes, it can be concluded that the thermal energy volumes are directly reliant on the temperature. The largest thermal energy delivery is in the years with lower temperatures. In the past years, an average of about 500 million kWh of thermal energy were delivered. Last year a heating energy of 512,9 million kWh was delivered. The largest volume of thermal energy has been delivered in 2012, when

lowest temperature of 6,16°C has been marked, while the smallest thermal energy volume has been delivered in 2014, when the highest temperature was 8,48°C.

## IV.2.1. Development and Investment Plans

The goal of the development and investment plans is to provide safe and continuous production, distribution and supply of thermal energy, as well as increased efficiency of the systems and staff.

The realization of the development and investment plans will cause decrease of the costs for the systems' functioning.

The development plans are directed toward safety in the operation of the system elements, monitoring and remote control of the parameters.

### 1. Proizvodstvo na Toplina BE DOOEL Skopje

Proizvodstvo na Toplina Balkan Energy, in accordance with the development strategy is planning to invest about 3.000.000 Euro in the next five-year period in the following areas:

- Modernization and automatization of the production process with the final goal of management and surveillance from the centralized SCADA,
- Reconstruction, modernization and automatization of the pump stations and replacement of the pump aggregates and the auxiliary equipment,
- Reconstruction and modernization of the electric powered units and the equipment in the thermal power plants,
- Reconstruction, upgrade and modernization of the safety systems for protection of the staff and units in the thermal power plants.

The objective of the envisaged investments is to provide safe, secure, quality and continuous production of thermal energy and increased efficiency of the total process. The realization of the envisaged investments will prolong the service years of the thermal energy power plants for about 20 years. The safety and security of the operation of the thermal power plants are expected to increase to a degree that would always enable production of thermal energy during heating season.

### 2. Distribucija na Toplina BE DOOEL Skopje

Distribucija na Toplina BALKAN ENERGY DOOEL in the upcoming five-year period plans to develop the distribution system through the following investment activities:

- Optimization of the distribution system through integration of the distribution grid is aimed to meet the criteria for efficient district heating, in accordance with the European Directive for Energy Efficiency and the draft- Law on energy Efficiency, as well as to increase reliability,
- Increase of the capacity of the current grid and construction of new lines in accordance of the city development and the adoption of the urban plans,
- Modernization (replacement) of the current, obsolete SCADA system in the

thermal stations,

- Investments into thermal stations and auxiliary equipment with the purpose of providing safe, secure and continuous delivery of thermal energy.

### 3. Snabduvanje so Toplina BE DOOEL Skopje

Snabduvanje so Toplina BE DOOEL Skopje in the next five-year period plans to invest the funds from the depreciation to procure servers and network equipment for high reachability and backup of the payment systems, continuous renewal of the IT equipment it disposes of, connection of the disconnected consumers, as well as connection of new consumers.

### 4. ESM JSC Skopje, Energetika Subsidiary

ESM JSC Skopje, Energetika Subsidiary, in the period from 2019 to 2023 planes to invest in the basic means for production, distribution and supply with thermal energy in order to provide safe, secure and continuous supply with thermal energy and increase the efficiency of the production process as follows:

- Purchase and installment of a gas thermoelectric power plant (160 MWel and 80 MWte),
- Purchase and installment of energy boilers(2x40t),
- Revitalization of the measuring and regulatory equipment,
- Installation of calorimeters to the thermal energy users,
- Purchase and installment of cooling tower (100 MW),
- Increase of the plants energy efficiency by improving the technological process,
- Development and expansion of the distribution grid,
- Construction of a secondary regulation.

The future realization of the increase of the thermal energy consumer number and the decrease of the thermal energy losses is crucial for Skopje Sever DOOEL Skopje and ESM JSC Skopje.

## IV.3. Regulations

The new Energy Law from 2018 envisages adoption of new by-laws in the district heating area. The Energy Regulatory Commission formed a task force for the preparation of the new by-laws where representatives from civil society organizations, as well as representatives from the expert's community were included. Numerous meetings were held, and many activities were undertaken by the end of the year, which enabled preparation of draft texts of the by-laws. Due to the inclusion of the wider public, the work process continued in the first quarter of 2019 when the Rules for Thermal Energy Supply and the Tariff System for Thermal

Energy Sales were adopted, while the Rulebook on Regulation of the Prices for Thermal Energy and System Services is in its final drafting stage.

## IV.4. Licenses

In 2018 the Energy Regulatory Commission adopted 2 decisions for licenses in the district heating market:

- 1 decision for amendment of a license for thermal energy production and
- 1 decision for revoking a license for production of electricity and thermal energy in combined cycle power plant.

In the period from 2004 until 31st of December 2018, the Energy Regulatory Commission has issued a total of 17 licenses in the district heating market, 7 of which are active:

| Energy activity | thermal energy production | Combined production of electricity and thermal energy | Thermal energy distribution | Thermal energy supply | Total |
|---|---|---|---|---|---|
| Number of active licenses | 2 | 1 | 2 | 2 | 7 |

## IV.5. Approval of District Heating Prices

### IV.5.1. District heating prices adopted with Decisions from 30.07.2018, applied as of 01.08.2018

In accordance with the Rulebook on Prices of Thermal Energy and System Services (“Official gazette of the Republic of Macedonia” no. 28/13, 32/15, 126/15 and 112/16) Proizvodstvo na Toplina BE DOOEL Skopje and Snabduvanje so Toplina BE DOOEL Skopje on 31.05.2018 submitted regular requests for the determination of a regulated maximal income for 2018. Also, Skopje Sever JSC Skopje and ESM JSC Skopje, Energetika Subsidiary submitted requests for that purpose.

On 31.07.2018 the Energy Regulatory Commission adopted 5 decisions upon the requests.

These decisions corrected the total annual district heating charge for the consumers of Snabduvanje so Toplina BE DOOEL for -3,1%, for the consumers of ESM JSC Skopje, Energetika Subsidiary for 0,55%, while for the consumers supplied by Skopje Sever JSC Skopje for -0,76%.

Following are the tariffs for each individual tariff element and company.

*Table IV.5. Overview of the prices for thermal energy and engaged power at the measuring site level that refer to Snabduvanje so Toplina BE DOOEL Skopje 2016, 2017 and 2018*

| | Consumer category | Unit | Prices from 01.08.2016 | Prices from 01.08.2017 | Prices from 01.08.2018 | 18/16 (%) | 18/17 (%) |
|---|---|---|---|---|---|---|---|
| **Energy price** | Households | den/kWh | 1,9245 | 1,8498 | 1,8394 | -4,42% | -0,56% |
| | Education | den/kWh | 1,9245 | 1,8498 | 1,8394 | -4,42% | -0,56% |
| | Education | den/kWh | 2,6943 | 2,5898 | 2,5752 | -4,42% | -0,56% |
| **Engaged power price** | Households | den/kW/ann. | 1.020,9793 | 1.019,1181 | 931,1257 | -8,80% | -8,63% |
| | Education | den/kW/ann. | 1.020,9793 | 1.019,1181 | 931,1257 | -8,80% | -8,63% |
| | Other | den/kW/ann. | 1.429,3710 | 1.426,7653 | 1.303,5760 | -8,80% | -8,63% |

*Table IV.6. Overview of the prices for thermal energy and engaged power at the measuring site level that refer to ESM JSC Skopje, Energetika Subsidiary 2016, 2017 and 2018*

| | Consumer category | Unit | Prices from 01.08.2016 | Prices from 01.08.2017 | Prices from 01.08.2018 | 18/16 (%) | 18/17 (%) |
|---|---|---|---|---|---|---|---|
| **Energy price** | Households | den/kWh | 1,9525 | 1,7633 | 1,7241 | -11,70% | -2,22% |
| | Schools | den/kWh | 2,5382 | 2,2923 | 2,2414 | -11,69% | -2,22% |
| | Business entities | den/kWh | 3,3192 | 2,9976 | 2,9310 | -11,70% | -2,22% |
| **Engaged power price** | Households | den/kW/ann. | 882,9941 | 1.106,6306 | 1.171,2301 | 32,64% | 5,84% |
| | Schools | den/kW/ann. | 1.147,8923 | 1.438,6198 | 1.452,3991 | 26,53% | 0,96% |
| | Business entities | den/kW/ ann. | 1.501,0899 | 1.881,2720 | 1.899,2912 | 26,53% | 0,96% |

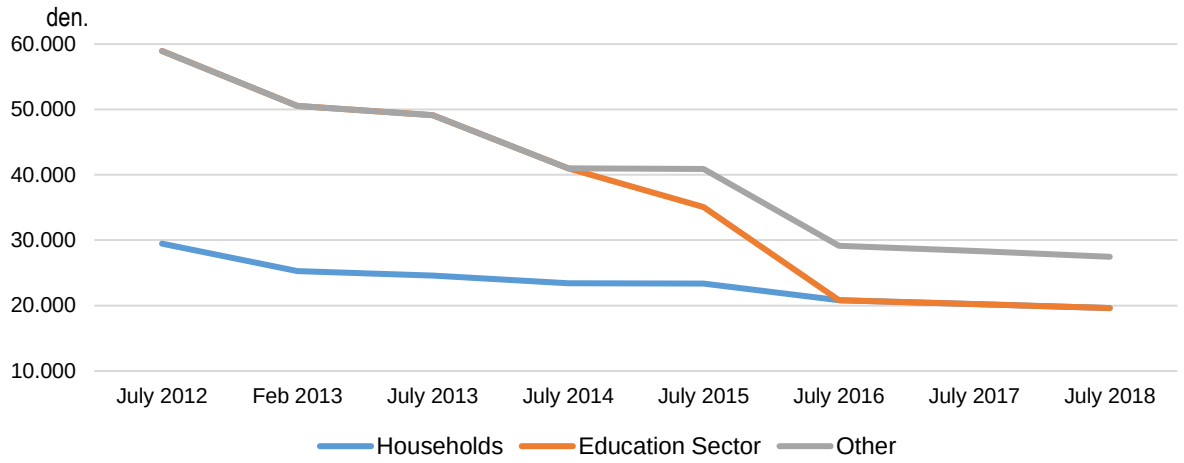
*Table IV.7. Overview of the prices for thermal energy and engaged power at the measuring site level that refer to Skopje Sever JSC Skopje for 2016, 2017 and 2018*

| | Consumer category | Unit | Prices from 01.08.2016 | Prices from 01.08.2017 | Prices from 01.08.2018 | 18/16 (%) | 18/17 (%) |
|---|---|---|---|---|---|---|---|
| **Energy price** | Households | den/kWh | 2,2246 | 2,2148 | 2,2270 | 0.11% | 0.55% |
| | Other | den/kWh | 4,2384 | 4,2196 | 4,2428 | 0.10% | 0.55% |
| **Engaged power price** | Households | den/kW/ann. | 1.052,6123 | 1.001,60 | 959,1400 | -8.88% | -4.24% |
| | Other | den/kW/ann. | 2.005,4370 | 1.908,26 | 1827.3535 | -8.88% | -4.24% |

In order to simplify the display of the thermal energy charge, a model of a standard apartment with heating surface of 50 $m^2$, an average annual consumption of thermal energy of 7.500 kWh and engaged power of 6,25 kW is used.

*Table IV.8. Overview of an average district heating charge for the household category supplied by Snabduvanje so Toplina BE DOOEL, ESM JSC Skopje, Energetika Subsidiary and Skopje Sever JSC Skopje for 2016, 2017 and 2018*

| | Unit | 2016 | 2017 | 2018 | 18/16 (%) | 18/17 (%) |
|---|---|---|---|---|---|---|
| **Snabduvanje so Toplina BE DOOEL Skopje** | **den** | 20.815 | 20.243 | 19,615 | -5.76% | -3.10% |
| **ESM Energetika** | **den** | 20.162 | 20.141 | 20,251 | 0.44% | 0.55% |
| **Skopje Sever** | **den** | 23.264 | 22.871 | 22,697 | -2.44% | -0.76% |




*Changes in the total average district heating charge by Snabduvanje BE DOOEL in the period Dec 2012 - Aug 2018 (in denars)*

Within the period from 2012 to 2018 for the consumers of the largest district heating system Snabduvanje BE DOOEL, the district heating costs for households (calculated for the model of standard apartment), has decreased in total of 33,45%. During the same period, for the education category the charge has decreased for 66,72%, while for the other category the decrease is 53,41%.

This shows that for a longer period, the district heating charges have been continuously decreasing, and by so contributing in increasing the number of connected consumers and enabling stable and safe operation of this system.

ENERGY AND WATER SERVICES REGULATORY COMMISSION OF THE REPUBLIC OF NORTH MACEDONIA

# OIL & OIL DERIVATIVES

## ANNUAL REPORT

# 2018

# V. OIL & OIL DERIVATIVES MARKET

## V.1. General Data on the Oil Sector

The energy infrastructure in the oil sector of the Republic of North Macedonia enables import, export and transport of crude oil and oil derivatives, crude oil processing, production of biofuel, distribution, transport and sale of the oil derivatives.

The OKTA Refinery has been constructed in 1980 and was commissioned in 1982. It has been designed as a hydro- skimming refinery with a projected capacity of 2,5 million tons annually, i.e. 5480 BBL/daily. The maximum capacity of 1,36 million tons has been reached in 1988.

The refinery, within its technological composition, encompasses several processing plants such as: atmospheric distillation, hydrodesulphurization of primary petroleum, catalytic reforming, high temperature isomerization, hydrodesulphurization of kerosene, hydrodesulphurization of middle distillates and recuperation of liquid oil gas.

As of 1999 OKTA Refinery JSC Skopje is a joint stock company with a private majority share package from the strategic investor EL.P.ET Balkaniki from Greece.

The OKTA Refinery JSC Skopje has the capacity to produce: unleaded gasoline with 95 octanes (Euro V), unleaded gasoline with 98 octanes (Euro V), diesel fuel with 10 ppm Sulphur (Euro V), jet engine fuels - JET A-1, liquid petroleum gas (LPG) – propane and butane mixture and commercial butane, fuel oil with Sulphur concentration of up to 2% and heating gas oil with 1000 ppm Sulphur.

In 2002 the oil pipeline Thessaloniki- Skopje was commissioned, with a total length of 213,5 km, 16-inch NPS, transportation loading strength of 2,5 million tons of oil annually. The crude oil transportation takes place from the terminal HELP.PE.-TIK (Hellenic Petroleum, Thessaloniki Industrial Complex) to the OKTA terminal. The trace of the oil pipeline between the terminals HELP. PE- TIK and OKTA is with 15 block venting stations (3 of which are in the Republic of Greece and 12 in the Republic of North Macedonia) for provision of separate oil pipeline sections.

The oil pipeline control and monitoring has been performed through the SCADA System. The oil pipeline is managed and disposed of by the joint Macedonian -Greek company VARDAX with headquarters in Thessaloniki and an office in Skopje.

The refinery to produce bio- diesel fuel is owned by the private joint stock company Makpetrol JSC Skopje. This refinery started with production in 2007 and has the capacity of 30 thousand tons annually. A non- refined rapeseed oil seeds is used for production of biodiesel fuel supplied through import.

In North Macedonia currently there are approximately 330 gas stations. Aside to the fact that the ownership structure in the retail sector has significantly modified, Makpetrol JSC Skopje is still the dominant company in the retail area with 127 gas stations. Next are Lukoil Makedonija DOOEL Skopje, OKTA Brand with 26 gas stations, while the remaining 147 gas stations are privately owned by several domestic small companies.

Some of the companies that own gas stations, aside to the main activity which is retail sale of fuels at their gas stations, act also in the capacity of wholesale traders, i.e. do not sell some of the supplied liquid fuels at the gas stations, but directly to the final consumers.

The total storage capacity for oil and oil products in the Republic of North Macedonia is about 382 thousand $m^3$.

The storage capacities in the Republic of North Macedonia are enough to supply 90 days average consumption of any type of oil products**.**

The OKTA Refinery JSC Skopje, Makpetrol JSC Skopje, Lukoil DOOEL Skopje, the State Stock Reserves of the Republic of North Macedonia, as well as other smaller privately and state-owned companies have their storage facilities and they compose the storage capacities in the Republic of North Macedonia.

The formation, renewal and use of the mandatory reserves of oil and oil products have been regulated with the Law on Mandatory Reserves of Oil and Oil Products and the EU directives.

## V.2. State of the Oil and Oil Derivatives Market

The oil and oil derivatives market in the Republic of North Macedonia, aside from being regulated with the Energy Law has also been regulated with the following laws: Trade Law, Law on Competition Protection, Customs Law, Law on Value Added Tax, Law on Excise and the Law on Market Inspection. Aside to these laws, the oil and oil derivatives market has been regulated with the Rulebook on Quality of the Liquid Fuels, the Technical Prescriptions (storage and transport of the oil derivatives etc.), as well as with the ratified international agreements: The Agreement for Stabilization and Association with the EU, the Agreement for Energy Charter and the Agreement for Establishment of the Energy Community. Also, the relations of this market are affected by the accession of our country in the World Trade Organization.

### V.2.1. Market Participants

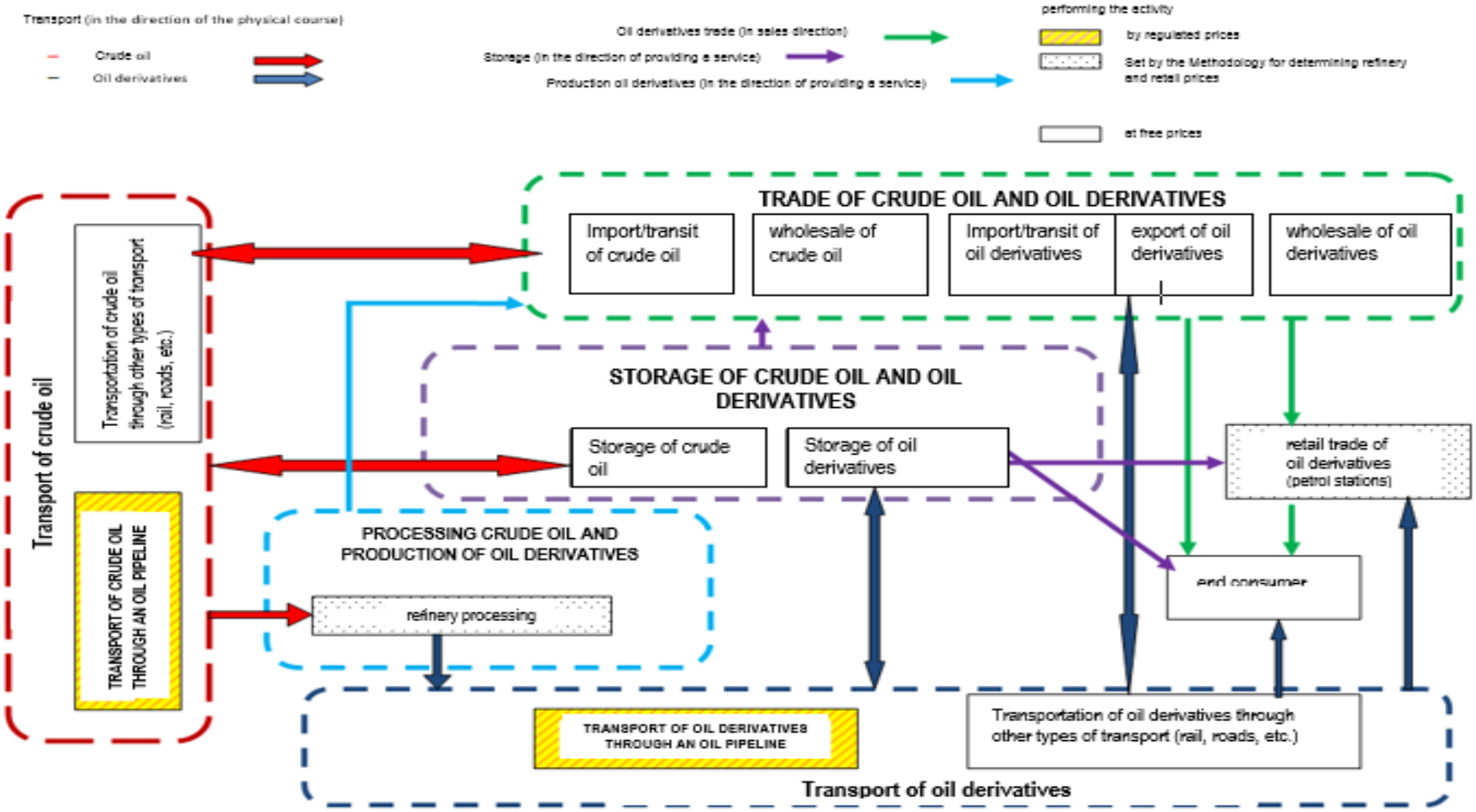
In accordance with the new Energy Law, the activities in the area of crude oil, oil derivatives, biofuels and transportation fuels are as follows:

- processing crude oil and production of oil derivatives;
- production of transportation fuels by mixing fossil fuels and biofuels;
- transportation of crude oil through oil pipelines,
- transportation of oil derivatives through oil product lines and
- wholesale trading with crude oil, oil derivatives, biofuels and transportation fuels.

The stated activities can be performed by domestic and foreign entities based on issued licenses by the Energy Regulatory Commission.

In the scope of this sector following activities are carried out: imports and exports of crude oil and oil derivatives, transportation of crude oil through oil pipeline, processing of crude oil, biofuel production and distribution and sale of oil derivatives.

Relationships between market participants are presented in the following diagram.


Transport (in the direction of the physical course)
Crude oil
Oil derivatives
Oil derivatives trade (in sales direction)
Storage (in the direction of providing a service)
Production oil derivatives (in the direction of providing a service)
performing the activity
by regulated prices
Set by the Methodology for determining refinery and retail prices
at free prices
TRADE OF CRUDE OIL AND OIL DERIVATIVES
Import/transit of crude oil
wholesale of crude oil
Import/transit of oil derivatives
export of oil derivatives
wholesale of oil derivatives
Transport of crude oil
Transportation of crude oil through other types of transport (rail, roads, etc.)
TRANSPORT OF CRUDE OIL THROUGH AN OIL PIPELINE
STORAGE OF CRUDE OIL AND OIL DERIVATIVES
Storage of crude oil
Storage of oil derivatives
retail trade of oil derivatives (petrol stations)
PROCESSING CRUDE OIL AND PRODUCTION OF OIL DERIVATIVES
refinery processing
end consumer
TRANSPORT OF OIL DERIVATIVES THROUGH AN OIL PIPELINE
Transportation of oil derivatives through other types of transport (rail, roads, etc.)
Transport of oil derivatives

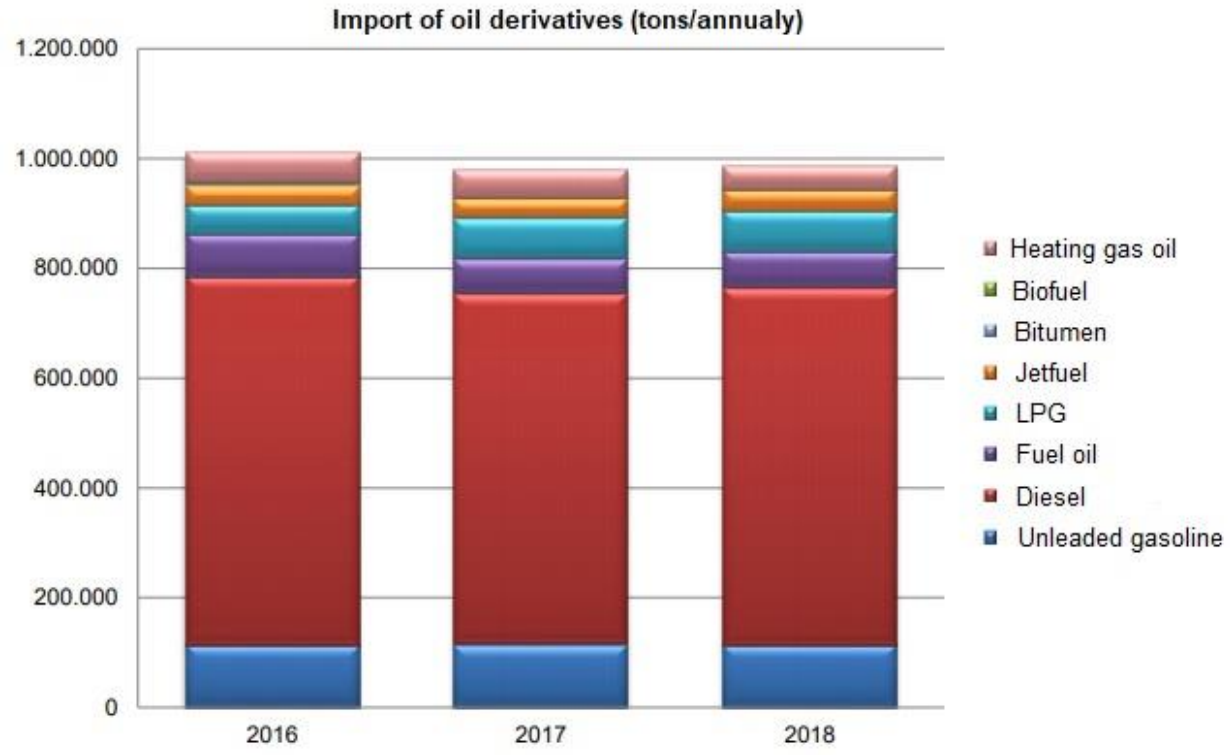
### V.2.2. Production, Purchase and Sale of Oil Derivatives

The crude oil and oil derivatives market, i.e. their purchase and sale in the Republic of North Macedonia are constantly monitored by the Energy Regulatory Commission through the monthly and annual reports that the licensed entities submit to the Energy Regulatory Commission in accordance with the issued licenses.

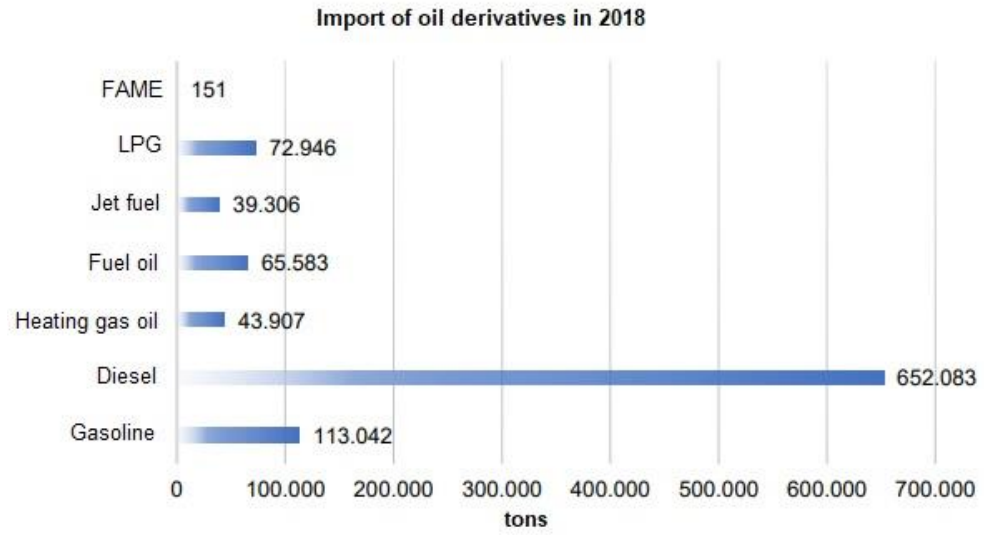
In 2018 there has not been import of crude oil in the Republic of North Macedonia by OKTA Refinery JSC Skopje and due to those reasons, in 2018, at the domestic market no crude oil has been processed and no oil derivatives have been produced.

The total imported quantities of oil derivatives in the Republic of North Macedonia in 2018 are 987.662 tons, which is 0,68 % more compared to the imported quantities of oil derivatives in 2017 (980.956 tons). The largest importer for this year again is OKTA Refinery JSC Skopje whose share is 76,69% in the total imports, followed by Lukoil Makedonija DOOEL Skopje with 10,70%, OM Petrol Skopje with 3,61% and the remaining wholesale traders with 9% share in the total imports of oil derivatives in 2018.

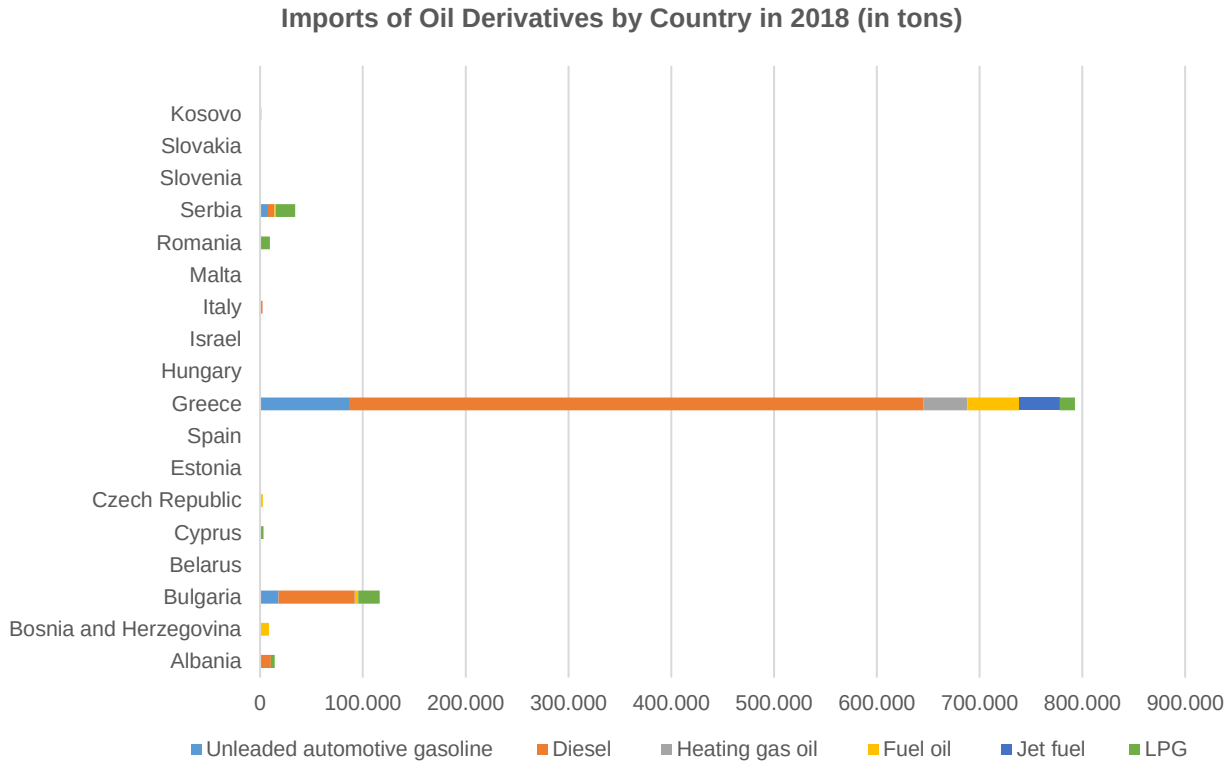
*Import of oil derivatives in the Republic of North Macedonia for 2016, 2017 and 2018 (tons/annually)*




In 2018 the largest import is for diesel fuel, i.e. 66% of the total import, next are the unleaded gasoline types with 11,45%, LPG with 7,39%, the fuel oil with 6,65%, the heating gas oil with 4,45%, the jet fuel with 3,98% and a small percentage of biogas fuel.

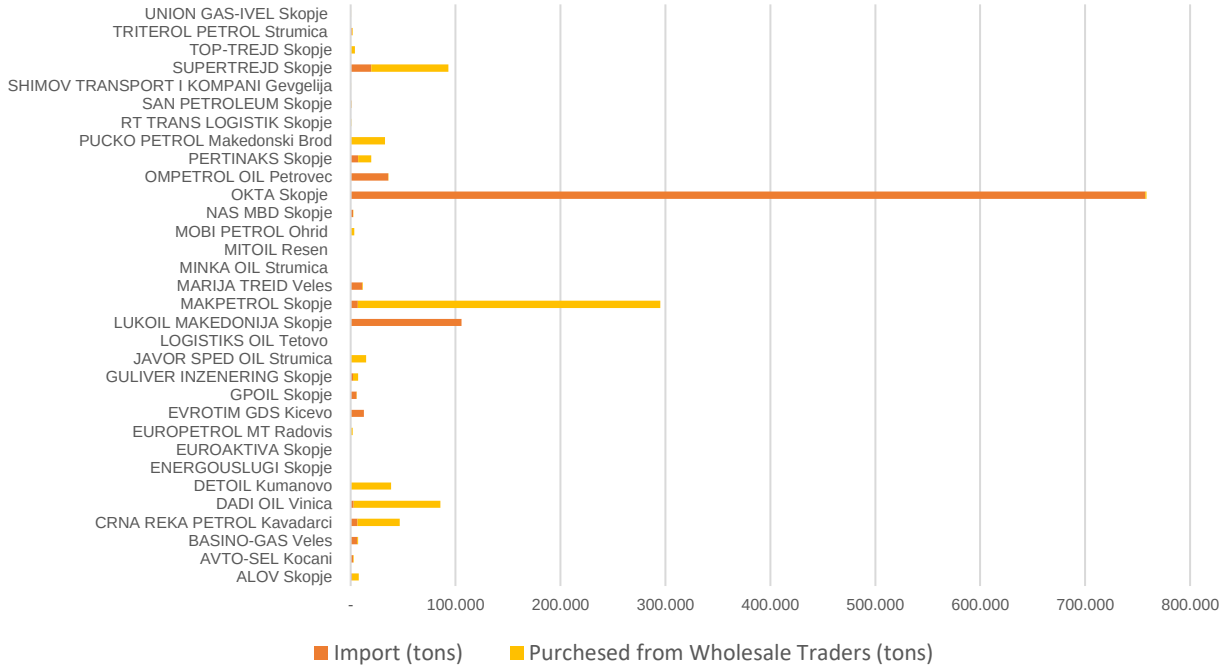



Wholesale traders of crude oil, oil derivatives, biofuels and transportation fuels in 2018 imported oil derivatives in the Republic of North Macedonia from 18 countries, whereby the most of the oil derivatives were imported from the neighboring countries Greece with 80,31%, Bulgaria with 11,80%, Serbia with 3,46% and Albania with 1,43%.

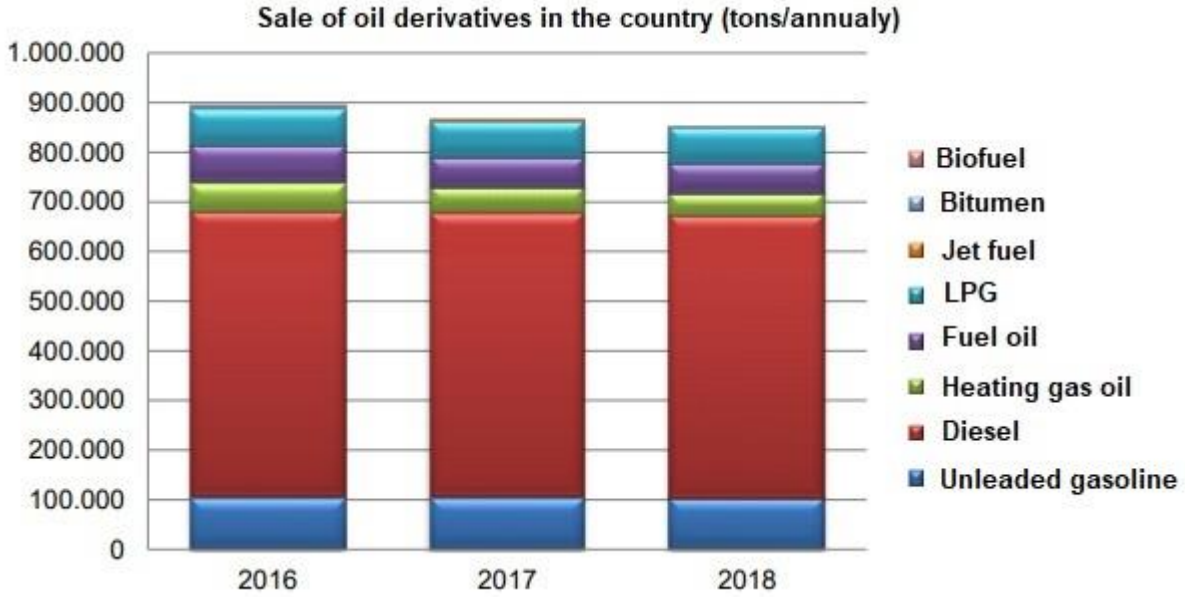



The purchase and sale of the oil derivatives in the Republic of North Macedonia was made actively by 32 legal entities licensed for wholesale trading with crude oil, oil derivatives, biofuels and transportation fuels.

**Total Purchase of Oil Derivatives by Wholesale Traders in the country in 2018**



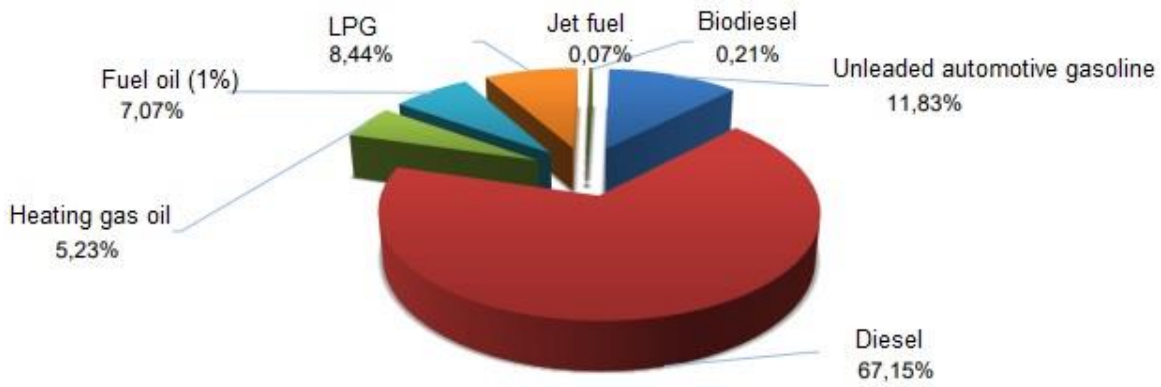

The export of oil derivatives in 2018 was 140.445 tons and compared to 2017 (117.434 tons) has increased for 19,59%. The largest exporter of oil derivatives in 2018 is OKTA Oil Refinery JSC Skopje with 76,36%, next is Makpetrol JSC Skopje with 15,92%, then OM Petrol Skopje with 6,9% and the remaining export of 0,82% has been made by the other wholesale traders.




In 2018 there were 851.770 tons of oil derivatives sold at the domestic market, which is a decrease of 1,84% compared to the quantities sold in 2017 (867.771 tons).

The consumption of oil derivatives in 2018 is dominated by the diesel fuels with 67,15%, the unleaded automotive types with 11,83%, LPG with 8,44%, fuel oil (1% sulfur

content) with 7,07%, heating gas oil with 5,23%, the biofuel with 0,2% and the Jet fuel with 0,07%.




*Share of oil derivatives in the total domestic consumption of oil derivatives in 2018*

Share of the licensed wholesale traders in wholesale and retail sales of oil derivatives in the country (including exports) in 2018 is presented in the following chart.

**Total sales by wholesale traders of oil derivatives with included exports in 2018**

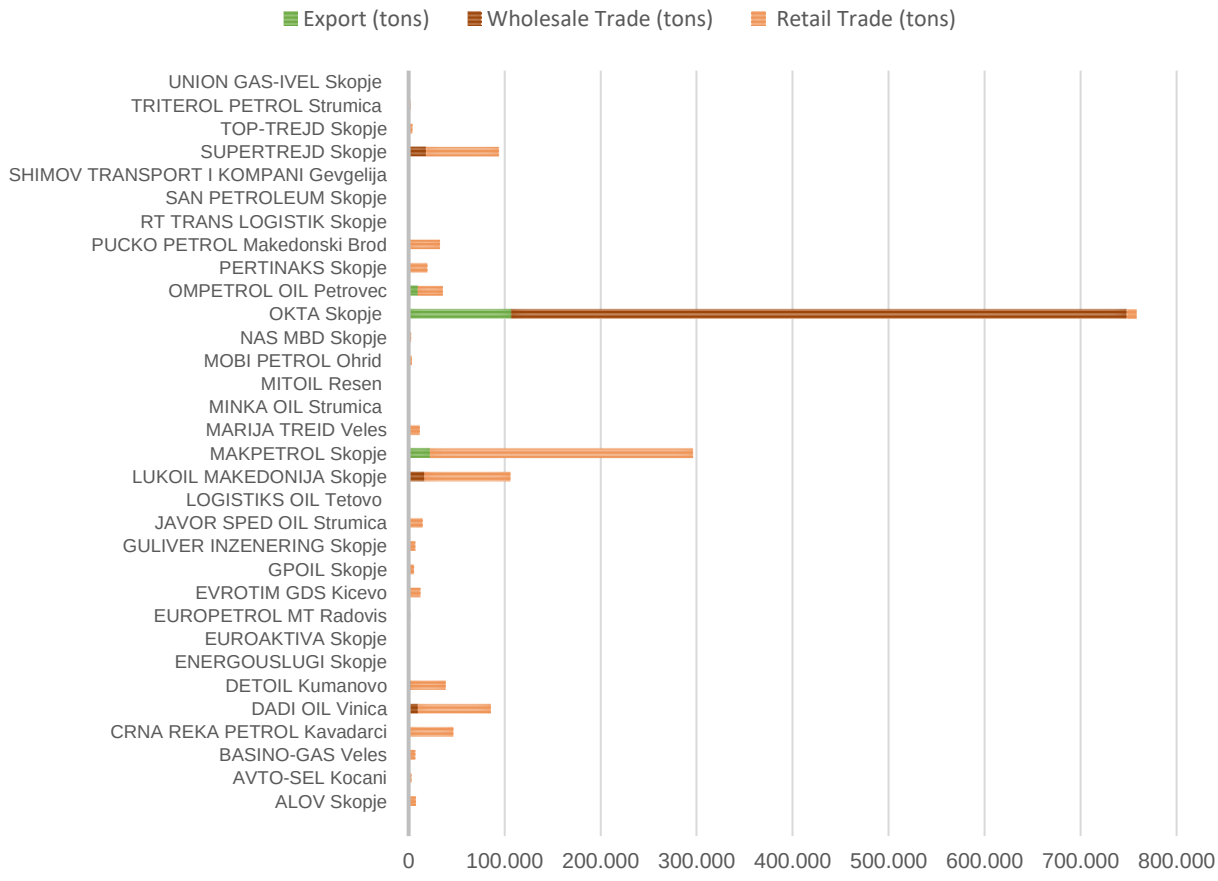


***Table V.1. Overview of the purchase of crude oil, purchase and sale of oil derivatives in 2018 expressed in tons***

| Oil and oil derivative type | Reserve condition at the beginning of the year | Purchase | | | TOTAL available | Sale | | | | | Reserve condition at the end of the year |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | in the country | IMPORT | TOTAL Procured | | in the country | | | EXPORT | TOTAL Sale | |
| | | OKTA Refinery prod. | | (3+4) | (2+5) | Gas stations | Final consumers | TOTAL (7+8) | | (9+10) | (6-11) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| **Crude oil** | **-** | **-** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| **Unleaded automotive gasoline** | **4.626** | **-** | **113.042** | 113.042 | **117.668** | **98.269** | **2.455** | **100.724** | **12.875** | **113.599** | **4.069** |
| **Diesel fuels** | **16.310** | **-** | **652.082** | 652.082 | **668.392** | **415.679** | **156.214** | **571.893** | **82.157** | **654.050** | **14.342** |
| **Heating gas oil (EL-1)** | **3.016** | **-** | **43.907** | 43.907 | **46.923** | **8.281** | **36.283** | **44.564** | **-** | **44.564** | **2.359** |
| **Fuel oil (M1-NS)** | **2.127** | **-** | **66.228** | 66.228 | **68.355** | **-** | **60.248** | **60.248** | **5.575** | **65.823** | **2.532** |
| **LPG** | **2.697** | **-** | **72.947** | 72.947 | **75.644** | **57.969** | **13.931** | **71.900** | **1.161** | **73.061** | **2.583** |
| **Jet fuel** | **1.915** | **-** | **39.306** | 39.306 | **41.221** | **-** | **593** | **593** | **38.677** | **39.270** | **1.951** |
| **Biodiesel** | **2.106** | **-** | **-** | 2.106 | **2.106** | **1.700** | **47** | **1.747** | **-** | **1.748** | **358** |
| **FAME** | **93** | **-** | **151** | 151 | **244** | **100** | **-** | **100** | **-** | **100** | **144** |

## V.3. Licenses

In 2018, the Energy Regulatory Commission, in accordance with the Rulebook on Licenses for the Performance of energy activities adopted a total of 8 decisions within the area of crude oil, oil derivatives, biofuels and transportation fuels from which:

- 3 decisions on modification of a license for the performance of the energy activity of wholesale trade with crude oil, oil derivatives, biofuels and transportation fuels,
- 3 decisions on the termination of a license for the performance of the energy activity of wholesale trading with crude oil, oil derivatives, biofuels and transportation fuels,
- 1 decision for revoking of a license for the performance of the energy activity of wholesale trading with crude oil, oil derivatives, biofuels and transportation fuels and
- 1 decision for rejecting request for issuing license for the performance of the energy activity of storage of crude oil, oil derivatives, biofuels and transportation fuels.

The activities of storage of crude oil, oil derivatives, biofuels and transportation fuels and the activity of production of biofuels are no longer prescribed by the new Energy Law from 2018, and therefore the Energy Regulatory Commission will no longer issue licenses for those activities, while the already issued licenses shall be terminated during 2019.

In the period from 2004 until 31st of December 2018, the Energy Regulatory Commission has issued a total of 62 licenses in the area of crude oil, oil derivatives, biofuels and transportation fuels of which 46 were active in 2018:

| **Energy activity** | **Number of active licenses in 2018** |
|---|---|
| Wholesale trading of crude oil, oil derivatives, biofuels and transportation fuels | 31 |
| Storing crude oil, oil derivatives, biofuels and transportation fuels | 7 |
| Processing of crude oil and production of oil derivatives | 1 |
| Transportation of crude oil or oil derivatives through oil pipelines i.e. product pipelines | 1 |
| Production of biofuels | 4 |
| Production of fuels intended for transportation by mixing fossil fuels and biofuels | 2 |
| **Total** | **46** |

## V.4. Approving Prices of Certain Oil Derivatives

The prices of certain oil derivatives are formed and approved as highest prices in accordance with the Methodology prescribed with Annex E from the Share Purchase and Concession Agreement of OKTA Refinery JSC Skopje signed between the Government of the Republic of North Macedonia and the joint stock company EL.P.E.T- Balkaniki as a strategic investor.

The elements for the formation of the refinery prices of the oil derivatives according to this Methodology are:

- the average price of the crude oil of the type “Brent” at the London stock exchange and the price changes of certain oil derivatives published in the market report Platts Crude Oil Spot Price, in the past 14-day period,
- the amount of the handling fee, the transportation expenses, the insurance, customs fees, banking commission, forwarding, quality examination of the crude oil and refinery price for processing of ton of crude oil,
- the average exchange rate MKD/USD in the past 14-day period.

The following are integral elements that fall into the structure of the retail prices of the oil derivatives:

- *the refinery price of the oil derivatives*- it is calculated according to the Methodology prescribed with Annex D from the Share Purchase and Concession Agreement of the OKTA JSC Skopje Refinery.
- *the supply cost of the oil derivatives (trade margin)- the worth of the margin can differ, and it depends on the selected retail prices group made by the company that distributes oil derivatives*. In order to stimulate the competitiveness in the sector of oil derivatives retail sale, the Energy Regulatory Commission, since 01.11.2004, started determining four levels of retail prices of the oil derivatives based on four different trade margins, that mutually differ for 0,5 denars per liter. In this manner the traders are enabled to select and apply different price levels, whereby the difference between the highest and lowest retail price for the respective oil derivative is 1,5 denars per liter.
- *the transportation cost*- the amount of this cost has been averaged and is 0,50 den/lit., except for the FUEL OIL M-1 NS for which no average amount of this cost has been determined;
- *oil derivative excise* – the Law on Excise regulates the excises charged directly or indirectly for the consumption at the territory of the Republic of North Macedonia for: mineral oils, alcohol and alcoholic beverages and tobacco goods. From energy point of view, the mineral oils are important (unleaded automotive gasoline, diesel fuel, heating gas oil, jet fuel and airplane petrol, engine petroleum, lighting petroleum, for airplanes and engines).
- *the value added tax VAT*- according to the Law on Value Added Tax (VAT), the tax rates of the VAT are calculated by applying proportional tax rates on the tax base of 18% and is applied to all types of energy products.

- *compensation for financing of activities in the environmental area*- according to the Law on Environment this compensation is paid by the taxpayers determined under this Law.
- *the compensation for mandatory reserves of oil and oil derivatives* – in accordance with the Law on Mandatory Reserves of Oil and Oil Derivatives, this compensation is paid upon import and/ or production of oil derivatives.

Observing the above-mentioned elements, as well as the current legal acts in the country in the area of liquid fuels, the Energy Regulatory Commission determines the prices of the individual oil derivatives.

*Table V.2. Average prices of crude oil and average exchange rate of MKD/USD in 2018*

| date | USD/barrel | MKD/USD | Number of "Official Gazette of the RM" |
|---|---|---|---|
| 1/9/2018 | 66.542 | 51.3632 | 3 |
| 1/23/2018 | 69.564 | 50.6260 | 13 |
| 2/6/2018 | 69.078 | 49.9767 | 22 |
| 2/20/2018 | 64.095 | 50.0000 | 32 |
| 3/6/2018 | 65.504 | 49.9800 | 40 |
| 3/20/2018 | 64.633 | 49.8501 | 48 |
| 4/3/2018 | 67.669 | 49.6850 | 59 |
| 4/17/2018 | 68.934 | 50.0377 | 67 |
| 5/2/2018 | 73.889 | 49.5800 | 77 |
| 5/15/2018 | 75.134 | 51.3079 | 85 |
| 5/29/2018 | 78.687 | 52.0600 | 97 |
| 6/11/2018 | 74.946 | 52.5279 | 108 |
| 6/26/2018 | 73.828 | 52.7213 | 116 |
| 7/10/2018 | 75.883 | 52.6097 | 126 |
| 7/24/2018 | 73.279 | 52.7660 | 135 |
| 8/7/2018 | 73.865 | 52.4306 | 145 |
| 8/21/2018 | 70.914 | 54.0218 | 154 |
| 9/4/2018 | 74.550 | 53.6236 | 162 |
| 9/18/2018 | 77.244 | 52.8665 | 173 |
| 10/2/2018 | 80.463 | 52.5878 | 182 |
| 10/15/2018 | 84.280 | 53.0916 | 189 |
| 10/29/2018 | 79.457 | 53.5403 | 196 |
| 11/12/2018 | 72.262 | 53.6549 | 205 |
| 11/26/2018 | 63.764 | 54.1813 | 216 |
| 12/10/2018 | 59.482 | 53.9800 | 225 |
| 12/24/2018 | 57.216 | 53.9700 | 236 |

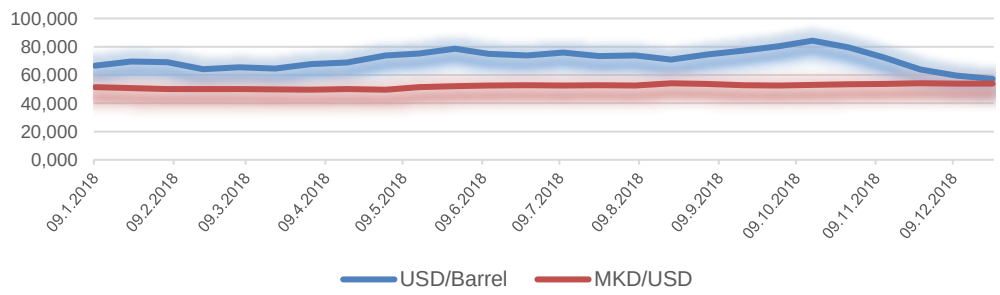
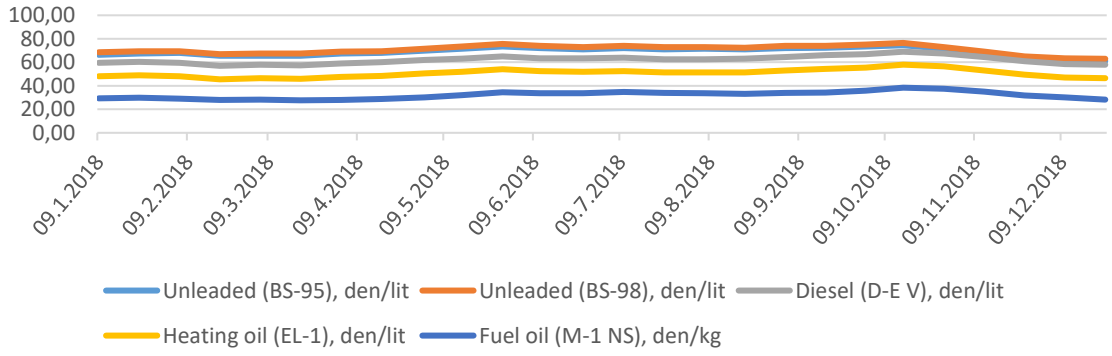


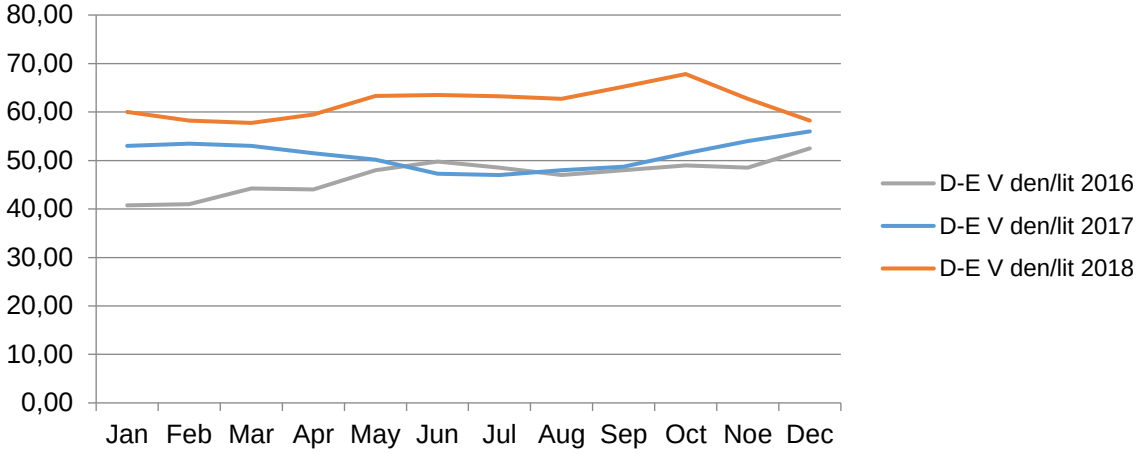
*Table V.3. Retail prices of oil derivatives in 2018*

| date | BMB BS-95 (den/lit.) | BMB BS-98 (den/lit.) | D-E V (den/lit.) | EL-1 (den/lit.) | M -1 HC (den/kg) |
|---|---|---|---|---|---|
| 1/9/2018 | 66.50 | 68.50 | 59.50 | 48.00 | 29.367 |
| 1/23/2018 | 67.50 | 69.50 | 60.50 | 49.00 | 29.906 |
| 2/6/2018 | 68.00 | 69.50 | 59.50 | 48.00 | 29.099 |
| 2/20/2018 | 65.50 | 67.00 | 57.00 | 45.50 | 27.856 |
| 3/6/2018 | 65.50 | 67.50 | 58.00 | 46.50 | 28.109 |
| 3/20/2018 | 65.50 | 67.50 | 57.50 | 46.00 | 27.636 |
| 4/3/2018 | 67.50 | 69.00 | 59.00 | 47.50 | 28.038 |
| 4/17/2018 | 68.00 | 69.50 | 60.00 | 48.50 | 28.720 |
| 5/2/2018 | 70.00 | 71.50 | 62.00 | 50.50 | 30.037 |
| 5/15/2018 | 71.50 | 73.50 | 63.00 | 52.00 | 32.137 |
| 5/29/2018 | 73.50 | 75.50 | 65.00 | 54.00 | 34.534 |
| 6/11/2018 | 72.00 | 74.00 | 63.50 | 52.50 | 33.785 |
| 6/26/2018 | 71.00 | 73.00 | 63.50 | 52.00 | 33.695 |
| 7/10/2018 | 72.00 | 74.00 | 64.00 | 52.50 | 34.711 |
| 7/24/2018 | 71.00 | 73.00 | 62.50 | 51.50 | 33.897 |
| 8/7/2018 | 71.50 | 73.00 | 62.50 | 51.50 | 33.651 |
| 8/21/2018 | 71.00 | 72.50 | 63.00 | 51.50 | 33.053 |
| 9/4/2018 | 72.00 | 74.00 | 64.50 | 53.00 | 34.004 |
| 9/18/2018 | 72.50 | 74.00 | 66.00 | 54.50 | 34.351 |
| 10/2/2018 | 73.50 | 75.00 | 67.00 | 55.50 | 35.750 |
| 10/15/2018 | 74.50 | 76.50 | 69.00 | 58.00 | 38.409 |
| 10/29/2018 | 71.50 | 73.00 | 67.50 | 56.50 | 37.414 |
| 11/12/2018 | 67.00 | 69.00 | 64.50 | 53.00 | 35.133 |
| 11/26/2018 | 63.00 | 65.00 | 61.00 | 49.50 | 31.826 |
| 12/10/2018 | 61.50 | 63.50 | 58.50 | 47.00 | 30.037 |
| 12/24/2018 | 61.00 | 63.00 | 58.00 | 46.50 | 28.176 |

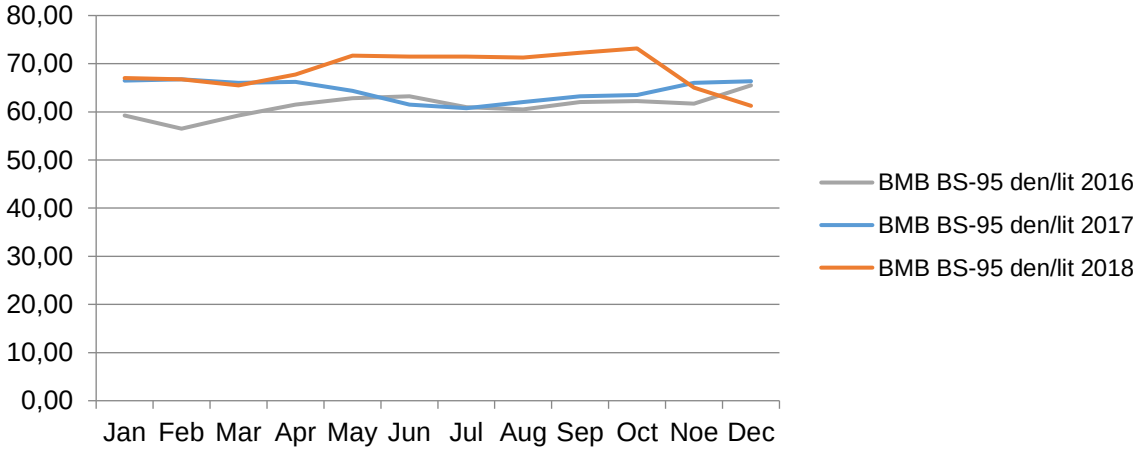


## Comparison of trends in retail prices of Automotive Diesel (D-E V), Automotive Unleaded Gasoline (BMB-BS 95), Heating oil (EL-1) and Fuel oil (NS M-1) for 2016, 2017 and 2018

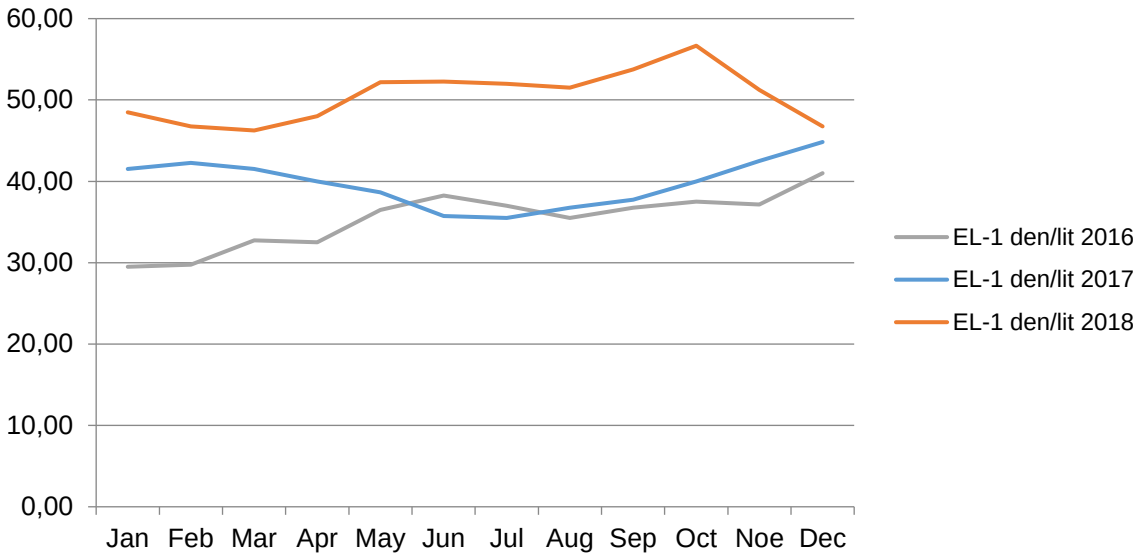
**Comparison of trends in average retail prices of Automotive Diesel (D-E V) for 2016, 2017 and 2018**



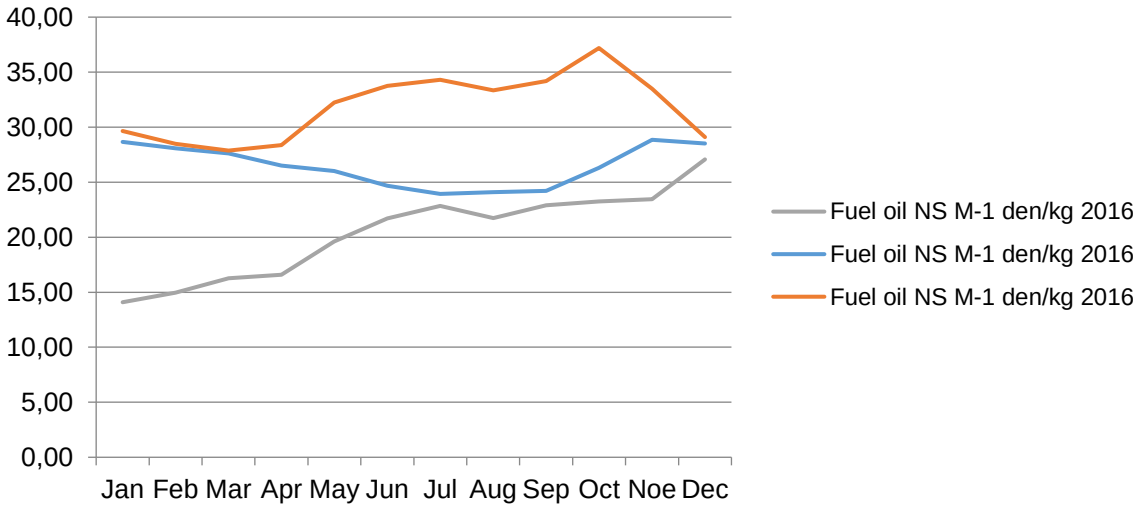

**Comparison of trends in average retail prices of Unleaded Automotive Gasoline (BMB BS-95) for 2016, 2017 and 2018**



**Comparison of trends in average retail prices of Heating oil (EL-1) for 2016, 2017 and 2018**




**Comparison of trends in average retail prices of Fuel oil (NS M-1) for 2016, 2017 and 2018**



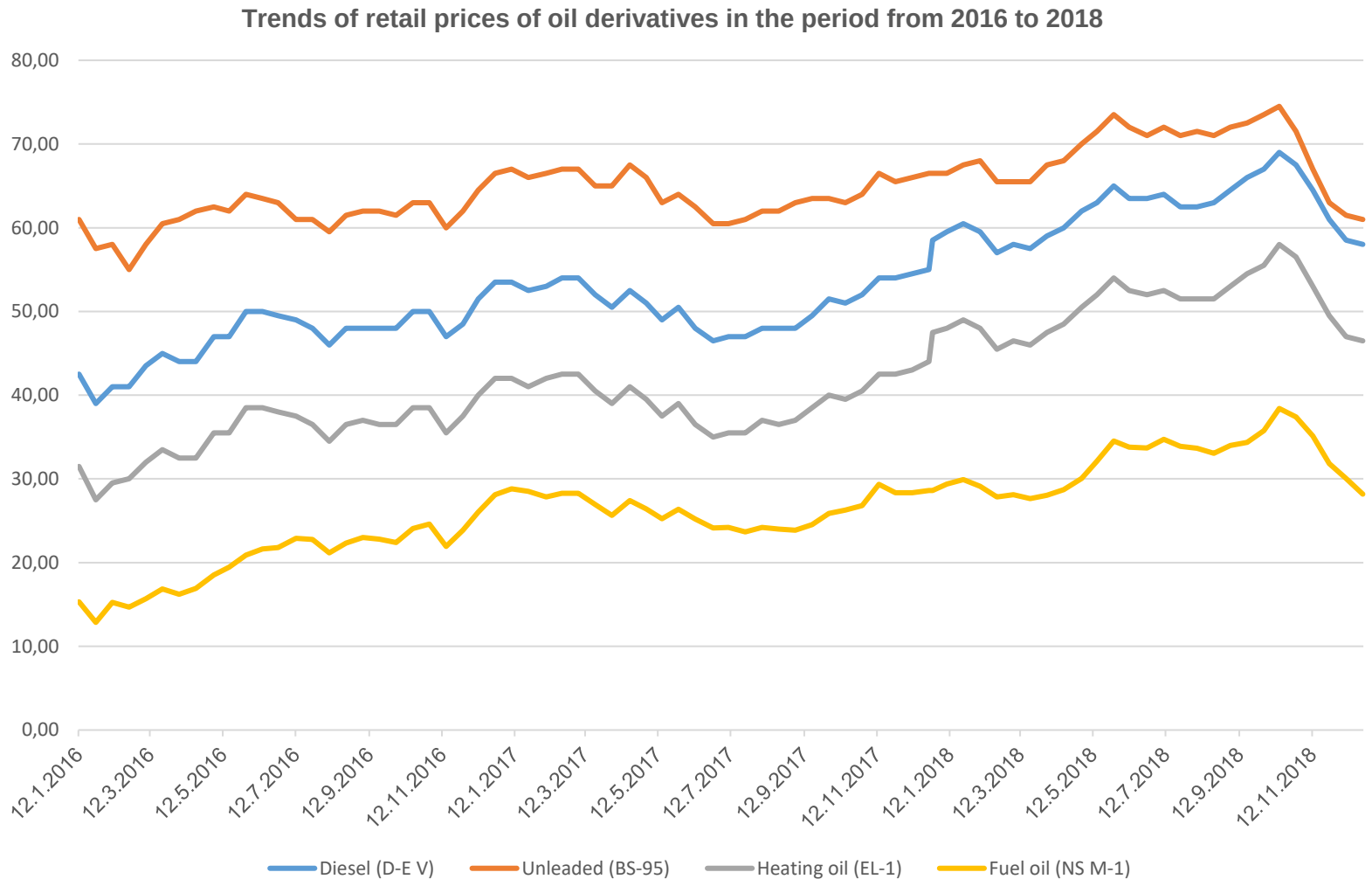
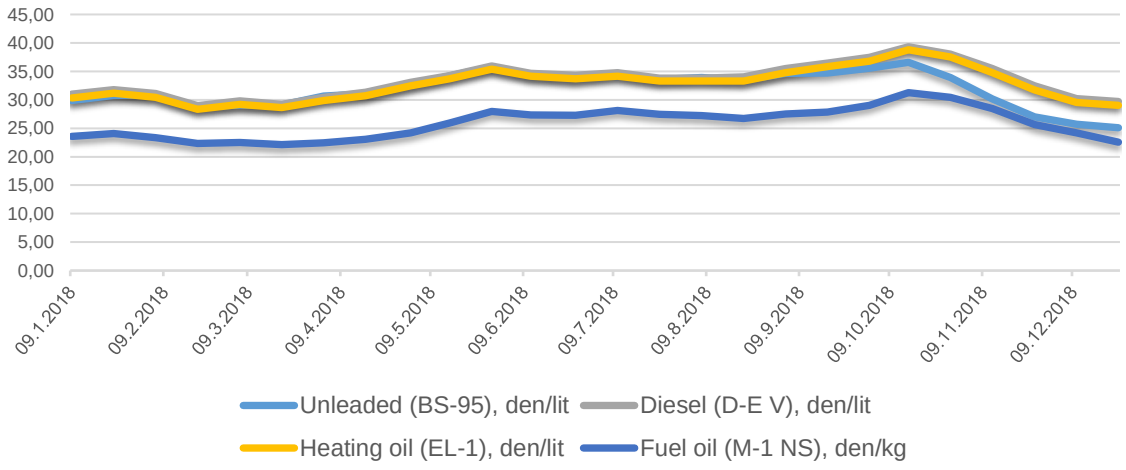

Trends of retail prices of oil derivatives in the period from 2016 to 2018
80,00
70,00
60,00
50,00
40,00
30,00
20,00
10,00
0,00
12.1.2016
12.3.2016
12.5.2016
12.7.2016
12.9.2016
12.11.2016
12.1.2017
12.3.2017
12.5.2017
12.7.2017
12.9.2017
12.11.2017
12.1.2018
12.3.2018
12.5.2018
12.7.2018
12.9.2018
12.11.2018
Diesel (D-E V)
Unleaded (BS-95)
Heating oil (EL-1)
Fuel oil (NS M-1)

*Table V.4 Refinery prices of oil derivatives for 2018*

| date | BMB B-S-95 (den/ lit.) | BMB BS 98 (den/ lit.) | D-E V (den/lit.) | EL-1 (den/lit.) | M -1 NC (den/kg) |
|---|---|---|---|---|---|
| 1/9/2018 | 29.854 | 31.395 | 31.005 | 30.336 | 23.597 |
| 1/23/2018 | 30.768 | 32.287 | 31.803 | 31.165 | 24.054 |
| 2/6/2018 | 30.871 | 32.371 | 31.091 | 30.441 | 23.370 |
| 2/20/2018 | 28.814 | 30.314 | 28.978 | 28.334 | 22.317 |
| 3/6/2018 | 29.108 | 30.608 | 29.816 | 29.176 | 22.531 |
| 3/20/2018 | 29.065 | 30.560 | 29.217 | 28.623 | 22.130 |
| 4/3/2018 | 30.639 | 32.113 | 30.449 | 29.894 | 22.471 |
| 4/17/2018 | 31.044 | 32.536 | 31.342 | 30.742 | 23.049 |
| 5/2/2018 | 32.612 | 34.100 | 33.103 | 32.468 | 24.165 |
| 5/15/2018 | 34.182 | 35.721 | 34.239 | 33.708 | 25.945 |
| 5/29/2018 | 35.800 | 37.362 | 35.934 | 35.403 | 27.976 |
| 6/11/2018 | 34.378 | 35.954 | 34.663 | 34.132 | 27.341 |
| 6/26/2018 | 33.759 | 35.340 | 34.325 | 33.708 | 27.265 |
| 7/10/2018 | 34.655 | 36.250 | 34.771 | 34.132 | 28.126 |
| 7/24/2018 | 33.564 | 35.147 | 33.815 | 33.284 | 27.436 |
| 8/7/2018 | 33.947 | 35.502 | 33.815 | 33.284 | 27.228 |
| 8/21/2018 | 33.499 | 35.079 | 34.042 | 33.312 | 26.721 |
| 9/4/2018 | 34.649 | 36.257 | 35.474 | 34.739 | 27.527 |
| 9/18/2018 | 34.733 | 36.319 | 36.458 | 35.826 | 27.821 |
| 10/2/2018 | 35.582 | 37.159 | 37.482 | 36.802 | 29.007 |
| 10/15/2018 | 36.590 | 38.182 | 39.324 | 38.793 | 31.260 |
| 10/29/2018 | 33.906 | 35.502 | 38.052 | 37.521 | 30.417 |
| 11/12/2018 | 30.179 | 31.788 | 35.495 | 34.739 | 28.484 |
| 11/26/2018 | 27.028 | 28.687 | 32.458 | 31.724 | 25.681 |
| 12/10/2018 | 25.701 | 27.321 | 30.227 | 29.510 | 24.165 |
| 12/24/2018 | 25.090 | 26.709 | 29.704 | 29.047 | 22.588 |



ENERGY AND WATER SERVICES REGULATORY COMMISSION OF THE REPUBLIC OF NORTH MACEDONIA

# RENEWABLE ENERGY SOURCES

## ANNUAL REPORT

# 2018

# VI. RENEWABLE ENERGY SOURCES

## VI.1. Regulations

The premiums, in addition to the existing feed-in tariffs, were introduced with the new Energy Law from 2018 as a new measure to support the electricity producers using renewable energy sources.

The premium represents an additional amount on the top of the market price at which the preferential producer will sell generated electricity at the electricity market. The preferential producer using a premium is elected through tender procedure with auction carried out by the Ministry of Economy.

The new Energy Law sets a 90-day period as of the day of its enforcement during which the following by-laws which refer to preferential electricity producers from renewable sources are to be adopted:

- Decree for support of the electricity producers from renewable sources by the Government of the Republic of North Macedonia,
- Decision for the total installed capacity of the preferential producers, by the Government of the Republic of North Macedonia,
- Rulebook on Renewable Energy Sources, by the Ministry of Economy and
- Rulebook on Preferential Producers which are using Feed-in Tariff, by the Energy Regulatory Commission.

The decree for measures for support of the production of electricity from renewable sources determines the types of technologies for which a premium is awarded, i.e. a feed-in tariff, the special conditions that need to be met by the electric power plant so that the producer can acquire the status of a preferential producer, the highest limit of installed capacity of the electric power plant, the amount and period of use of the feed-in tariffs, the manner of payment, as well as the period of their use, the manner of execution of the tender procedure and auction for awarding premiums.

The decision for the total installed capacity of the preferential producers prescribes the total installed capacity of the preferential producers of electricity produced from each renewable source of energy.

The Rulebook on Renewable Energy Sources prescribes the types of electric power plants for production of electricity from renewable energy sources, the conditions and manner in which the excess of produced electricity intended for own consumption is being transferred in the electricity distribution grid, the manner of issuance of approval for measuring the wind, the manner of issuance, transfer and revoking of the origin guarantees and their content, as well as the manner and procedure and conditions for validation of the origin guarantees issued in other countries.

The Rulebook on Preferential Producers using Feed-in Tariffs regulates the manner and procedure for adoption of a resolution for acquisition of a temporary status of a preferential producer and using a feed-in tariff.

The Draft-Rulebook on Preferential Producers using Feed-in Tariff was published on the website of the Energy Regulatory Commission on the 13th of August 2018, enabling all stakeholders to provide suggestions, remarks and proposals.

The Energy Regulatory Commission held a preparatory session on the 30th of August 2018 at which the subject of review was the Draft-Rulebook on Preferential Producers using Feed-in Tariff.

Considering that the provisions from this Rulebook are closely connected to the provisions of the rest of the by-laws which refer to the preferential producers of electricity from renewable energy sources (stated above), the Energy Regulatory Commission, during 2019 shall adopt the Rulebook on Preferential Producers using Feed-in Tariff after the all of the above by-laws are adopted.

## VI.2. Preferential Producers of Energy from RES

Acting in accordance to the old Energy Law and the existing Rulebook on Preferential Producers of Electricity from Renewable Energy Sources, the Energy Regulatory Commission, in 2018 adopted the following:

- 2 resolutions for acquisition of temporary status of a preferential producer of electricity produced from small hydropower plants,
- 28 resolutions for continuation of the validity of the resolutions for acquisitions of a temporary status of a preferential producer of electricity produced from small hydropower plants,
- 1 resolution for termination of the resolution for acquisition of a temporary status of a preferential producer of electricity produced from small hydropower plants,
- 6 resolutions for acquisition of status of a preferential producer of electricity produced from small hydropower plants,
- 6 decisions for use of a feed-in tariff for electricity produced in small hydropower plants,
- 13 resolutions amending the resolution for acquisition of a status of preferential producer of electricity produced from small hydropower plants,
- 13 decisions amending the decision for use of feed-in tariff for electricity produced from small hydropower plants;
- 1 resolution for prolongation of the resolution for acquisition of a temporary status of preferential producer of electricity produced from a wind power plant;
- 3 resolutions amending the resolution for acquisition of a temporary status of a preferential producer of electricity produced from small hydropower plants;
- 1 resolution for acquisition of a temporary status of a preferential producer of electricity produced from renewable energy sources for wind electric power plant;
- 1 resolution for amendment and validity prolongation of the resolution for acquisition of a temporary status of preferential producer of electricity from renewable energy sources, for small hydropower plants;

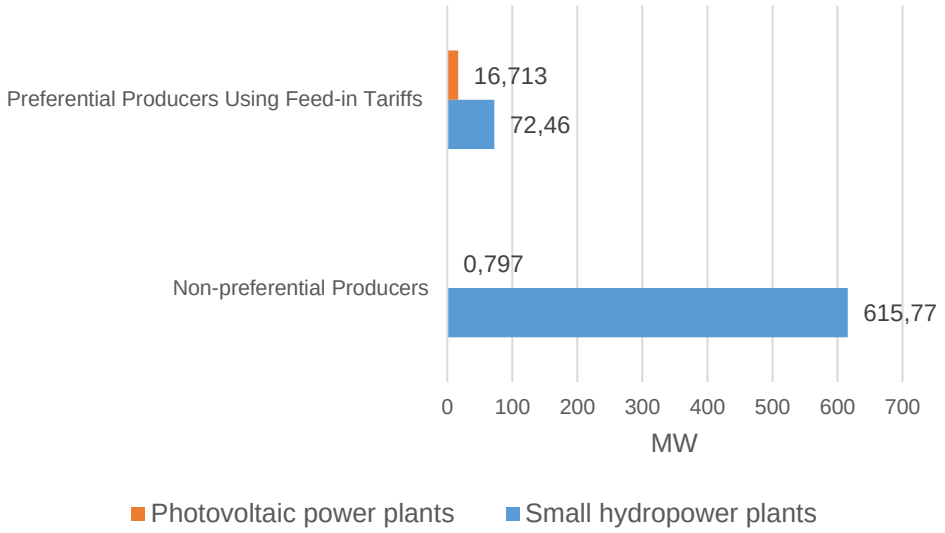
- 2 resolutions for acquisitions of a temporary status of preferential producer of electricity produced from renewable energy sources for thermal power plants for biomass;
- 11 resolutions discarding the request for issuance of temporary resolution for acquisition of status of a preferential producer of electricity produced from renewable energy sources for photovoltaic electricity power plant.

Up until and including 31st of December 2018 the total installed capacity of 185 preferential producers using feed-in tariffs is 133 MW, whereby:

- the total installed capacity of 79 preferential electricity producers from small hydropower plants is 72,46 MW, and 30 small hydropower plants with 34,06 MW, for which resolutions have been issued for acquisition of a temporary status of a preferential producer and are under construction and their commissioning is expected in the period 2019-2021,
- the total installed capacity of 102 photovoltaic power plants of 102 preferential producers of electricity from photovoltaic electric power plants is 16,713 MW,
- the installed capacity for the wind electric power plant “Wind Power Plants Bogdanci” is 36,8 MW, and the rest of the capacity for the same electric power plant which is under construction and is expected to be commissioned in 2020. is 13,2 MW. The wind electric power plant “Wind Farm Bogoslovec” has a planned capacity of 36 MW and is expected to be commissioned until the end of 2020.
- the total installed capacity of 3 preferential producers of electricity from biogas thermal power plants is 6,999 MW, and
- 6 biomass thermal power plants with capacity of 4,3 MW, for which resolutions have been issued for acquisition of temporary status of a preferential producer, are still under construction and are expected to be commissioned in the period 2019-2021.

Regarding the requests for issuance of a resolution for acquisition of a status of a preferential producer submitted after the enforcement of the new Energy Law, the Energy Regulatory Commission adopted 4 resolutions for termination of the procedures. The termination of these procedures shall progress until the adoption of the new Rulebook on Preferential Producers using Feed-in Tariff.

In 2018, small hydropower plants which are preferential producers (72,46 MW) participated with 10,53% in the total installed capacity of the hydropower plants (688,23 MW), while the photovoltaic power plants which are preferential producers (16,713 MW) dominated with 95% in the total installed capacity of photovoltaic power plants (17,51 MW) in the country.



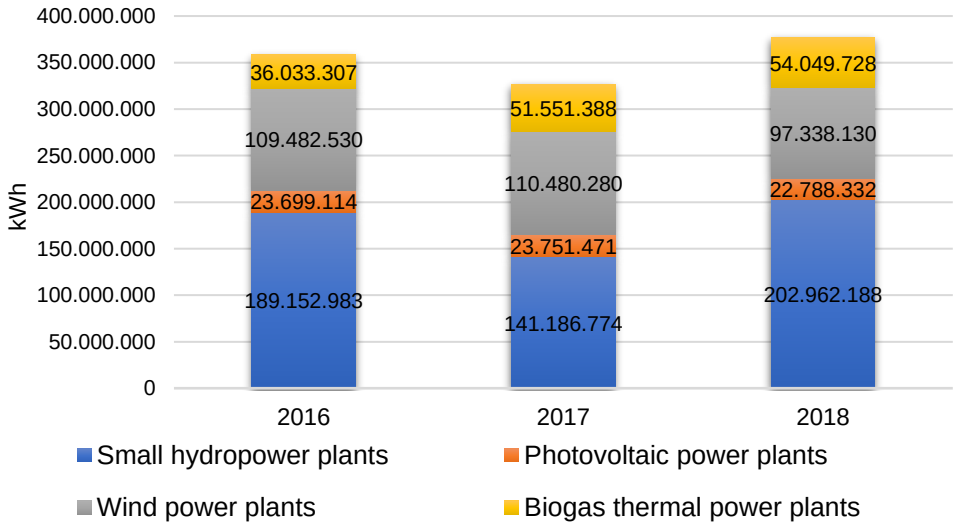

*Installed capacity from small hydropower plants and photovoltaic power plants in 2018 (in MW)*

The total electricity generation from the constructed electricity power plants which acquired the status of a preferential electricity producer from renewable sources for 2018 is 377.138.378 kWh, which compared to 2017 is increased by 15,34%.

In the total electricity generation from the preferential producers in 2018:

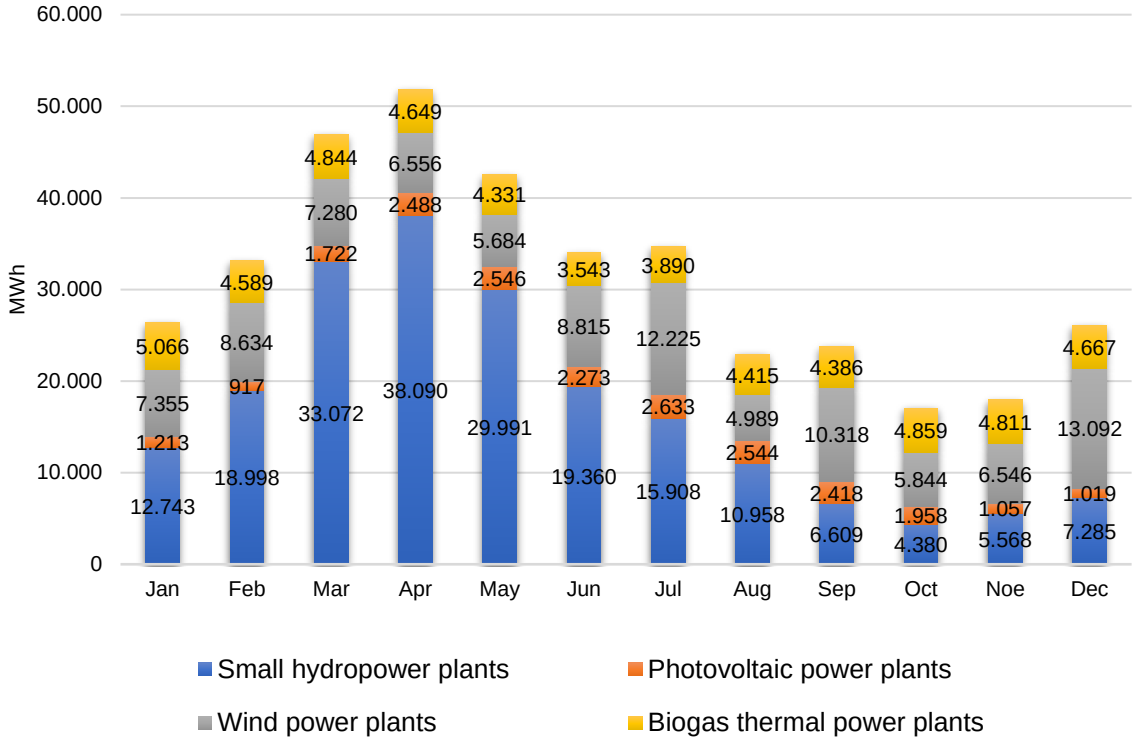
- the small hydropower plants share is 53,82%,
- the wind electric power plants share is 25,81%,
- the biogas thermal power plants share is 14,33% and
- the photovoltaic power plants share is 6,04%.

In the period from 2016 to 2018 there are no significant changes regarding the share of each renewable source in the total electricity generation from power plants that acquired the status of a preferential producer.




*Electricity generation from preferential producers expressed in kWh by years*

In the following chart is presented monthly production of electricity from the preferential producers in 2018 according to the type of technology.




*Monthly generation of electricity from preferential producers in 2018 (in MWh)*

Data from 2018 show that electricity generation from renewable energy sources in the first half of the year is significantly higher compared to the electricity generated from renewable sources in the second half. Namely, in the first half of the year more than 62% of the total generated electricity was generated from renewable sources. This is due to the increased production of electricity from the small hydropower plants in this period of the year, especially during March, April and May.

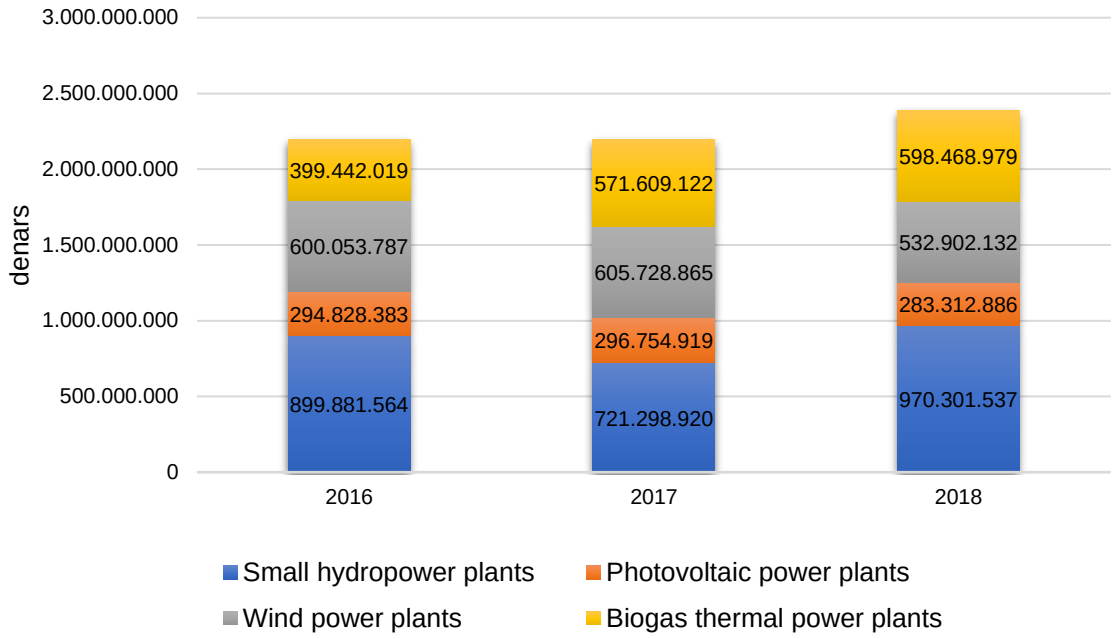
Electricity Market Operator is obliged to purchase the electricity produced by the preferential electricity producers using feed-in tariff, as well is obliged, at the request of the preferential producer, to conclude a contract to purchase the electricity for the period of use of the feed-in tariff determined in the decision for use of the feed-in tariff adopted by the Energy Regulatory Commission

Up until and including 31$^{st}$ of December 2018 the electricity market operator (MEPSO JSC Skopje, OPPE Subsidiary) has concluded a total of 185 contracts for purchase of electricity with the preferential producers.

In 2018 the total cost for purchase of electricity produced by the preferential producers using feed-in tariff is 2.384.985.534 denars for 377.138.378 kWh of generated electricity.

The price for which the electricity market operator sells the electricity to the suppliers and traders is calculated at the end of the month as average price for which the electricity market operator purchased the electricity from the preferential producers.

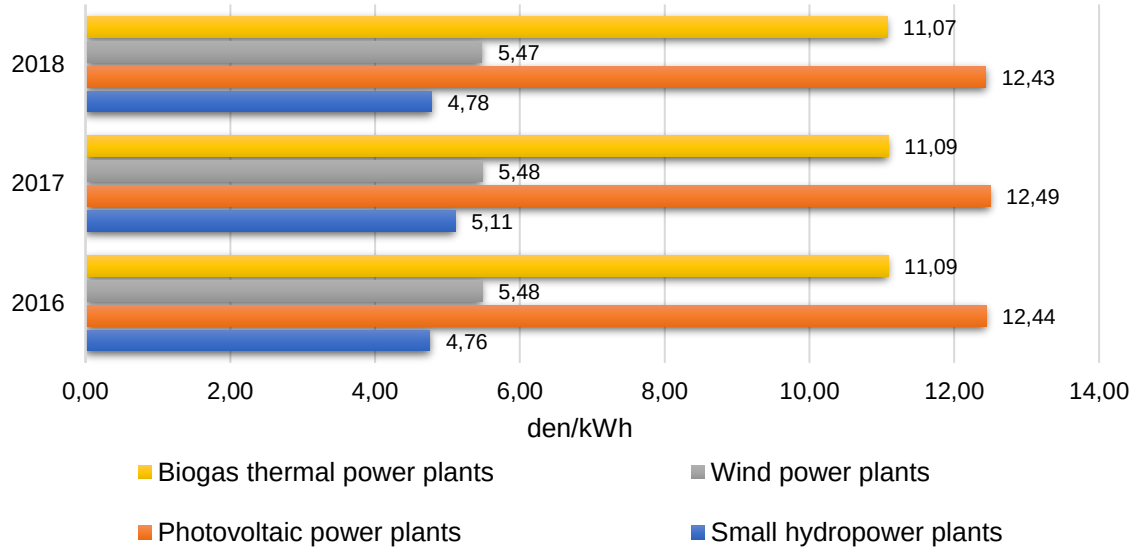
The average price of the electricity produced by the preferential producers which use feed-in tariff in 2018 was 6,32 den/kWh and is lower compared to 2017 when it was 6,72 den/kWh, while in 2016 average price was 6,12 den/kWh.




*Electricity purchase costs from feed-in tariffs in 2018 (in denars)*

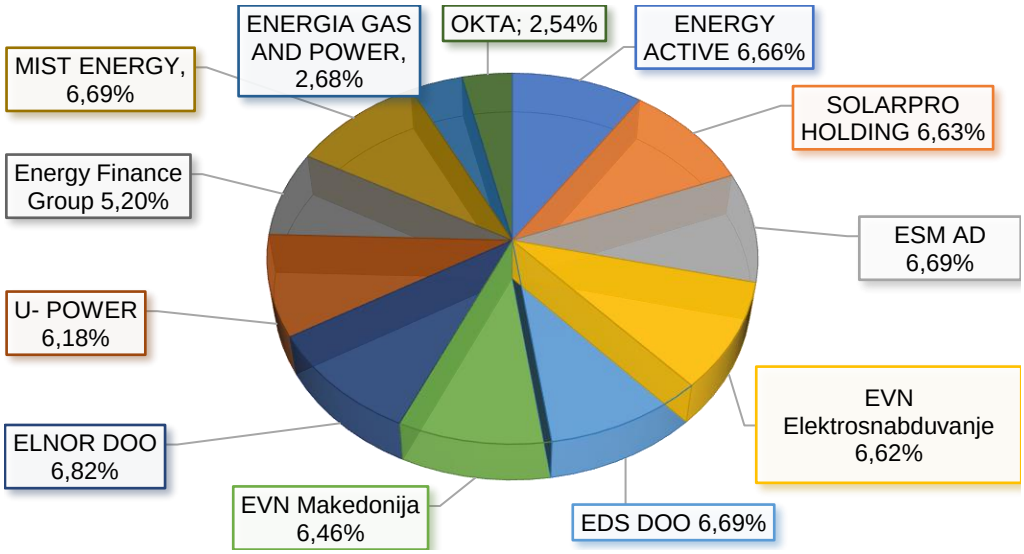
The small hydropower plants and the wind power plants compared to the other two technologies represented in the preferential producer's portfolio are a significantly cheaper source of electricity produced from renewable sources.

As presented in the following chart, in the analyzed period (2016-2018), average electricity price from small hydropower plants is around 5 den/kWh, from wind electric power plants is around 12 den/kWh and from biogas thermal power plants approximately 11 den/kWh.




*Average price of the produced electricity from preferential producers expressed in den/kWh by years*

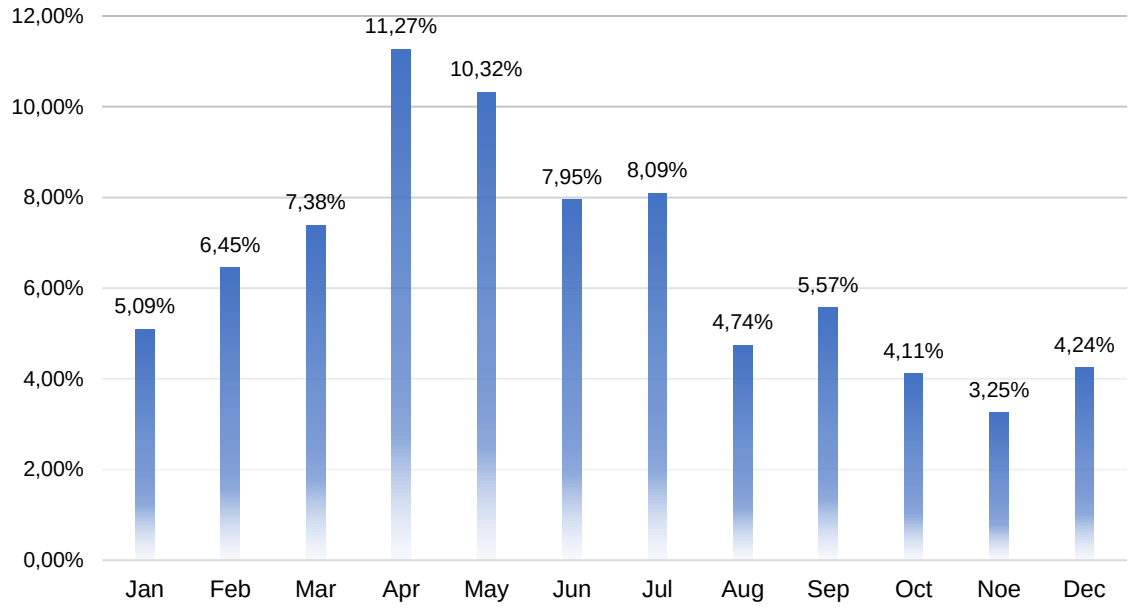
The electricity market operator sells the purchased electricity produced by the preferential producers to the suppliers and traders which are selling electricity to the final consumers.




*Share of purchased electricity by suppliers/ traders in 2018*

As presented in the previous chart, suppliers and traders purchase such electricity volume every day, proportionally to the share of their announced electricity needs of their consumers in the total anticipated needs of electricity in the Republic of North Macedonia.

The electricity produced by the preferential producers in 2018 participated in the total electricity consumption in the Republic of North Macedonia with 6,41%. The chart below shows the share of this electricity in the total electricity consumption for each month separately.




*Share of the electricity produced by preferential producers in the total electricity consumption by months in 2018*

According to the obligations determined by law, the electricity suppliers (both regulated and non-regulated) purchase electricity from the preferential producers of electricity according to their market share. The cost for purchasing electricity from preferential producers was 7,7% of the final electricity price for the consumers supplied at the regulated market in 2018.

ENERGY AND WATER SERVICES REGULATORY COMMISSION OF THE REPUBLIC OF NORTH MACEDONIA

# MONITORING ENERGY MARKETS

## ANNUAL REPORT

# 2018

# VII. MONITORING ENERGY MARKETS

According to Article 25 from the Energy Law, the Energy Regulatory Commission is competent to monitor the functioning of the energy markets in order to provide their efficient, competitive and smooth functioning, as well as to provide secure energy supply. The Energy Regulatory Commission monitors the energy markets in the country, i.e.:

- the electricity market,
- the natural gas markets,
- the oil and oil derivatives market and
- the district heating market.

Market monitoring is one of the functions of the Energy Regulatory Commission aimed to increase efficiency, competitiveness and transparency of the energy markets, detection of irregularities and disruptions of the competition and the unfair competition at the market, as well as other activities related to the energy markets functioning.

At the same time, monitoring energy markets serves to evaluate the impact that the existing regulation has on the functioning of the energy markets, as well as timely information on the need to adopt new or amend the existing by-laws.

The license holders for performing energy activities are obliged to submit information and data relevant to the monitoring of the functioning of the energy markets to the Energy Regulatory Commission. The Energy Regulatory Commission, after it collects the respective reports, data and information submitted by the license holders, processes and analyzes them and then prepares and publishes reports.

The Energy Regulatory Commission, in the first quarter of 2018 has finished the process for development and implementation of a new system for collecting and processing of data on the functioning of the energy markets in the country.

The market monitoring system, i.e. the software package for record keeping, template generating, collection, examination, processing and analyzing of data on the functioning of the energy markets in the country was developed with the technical assistance from the Faculty of Electrical Engineering and Information Technology within the University of “Ss. Cyril and Methodius” from Skopje within the project entitled ”Support for the Energy Regulatory Commission for the Implementation of the Third Energy Package of EU”, which the Kingdome of Norway supported financially.

During 2018 from a total of 2.371 generated templates, 2.043 were submitted and processed reports, i.e. the data of all active license holders in the area of electricity, natural gas, oil and oil derivatives and district heating were collected and processed.

Compared to 2017 there is an increase of 7,64 % regarding the total number of processed reports (1.898), which in the most part is a result of the increase of the number of active license holders.

Most of the analyzed data for 2018 are presented within this Annual Report for each separate market.

ENERGY AND WATER SERVICES REGULATORY COMMISSION OF THE REPUBLIC OF NORTH MACEDONIA

# WATER SERVICES

## ANNUAL REPORT

# 2018

# VIII. REGULATION OF WATER SERVICES

With the Law on Setting Prices of Water Services ("Official Gazette of the RM", no.7 from 18.01.2016) the regulation of water services is regulated, i.e. setting up tariffs for the raw water supply and drinking water supply, collection and disposal of urban wastewaters, as well as purification of wastewaters.

According to the Law on Setting Prices of Water Services, the procedure for setting tariffs for water services is made by the Energy Regulatory Commission.

The regulation of the prices for the water services aims to ensure that the total price of the water services for the average household is affordable considering the total income amounts of the households in the area where the water service is provided, in order to ensure sustainable use of the infrastructure for the performance of the water services, with a final objective of reaching a full refund of the costs, improvement of the quality of the water services and provision of unobstructed services in accordance with the best available practices, provision of gradual, and finally full application of the principle the polluter pays, the user pays and the principle for resource sots, in accordance with the Law on Water and improve the efficiency of the water services, through provision of best quality water services with the least costs.

## VIII.1. General Data on the Water Sector

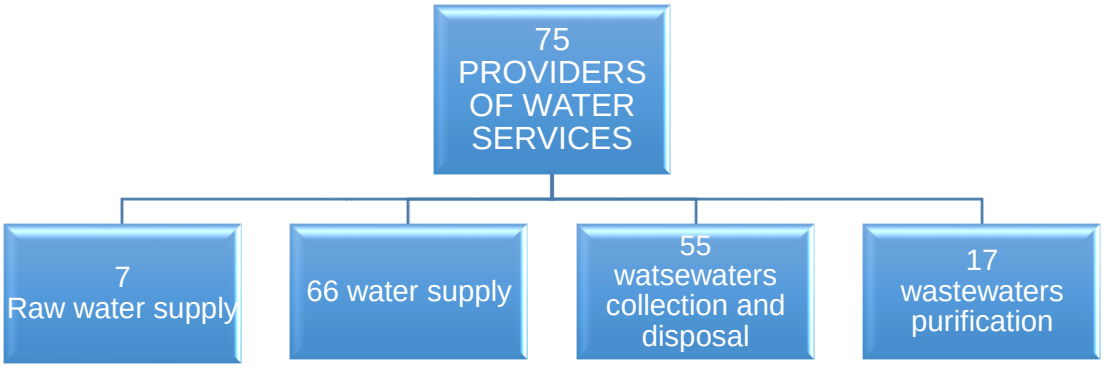
The water is an essential natural resource for human existence, needed in every natural and industrial process. The Republic of North Macedonia owns satisfactory volume of water resources, although they are unequally present on the territory of the country. There are about 35 rivers, 53 natural and artificial lakes in the Republic of North Macedonia. The territory is organized in 8 water management areas as shown below.

The public utility companies and water management enterprises covered with the Law on Setting Prices of Water Services perform the following water services:

- supply with raw water intended for water supply,
- supply with drinking water or water supply,
- collection and disposal of urban wastewaters and
- purification of wastewaters.

Aside to the water services, part of the public utility companies offers services for waste collection and takeaway, green market services, parks and greenery services, cemetery maintenance and other public services.

The total number of water service providers in the Republic of North Macedonia is 75, out of which 7 supply raw water intended for water supply, 66 water supply, i.e. drinking water, 55 collection and disposal of urban wastewaters and 17 purification of wastewaters.




The size of the areas where the water services are provided vary significantly regarding the number of end users of the water service and their number varies from an area with several thousands to more than half a million inhabitants in the capital City of Skopje. Another thing that makes difference between the water services suppliers is that most of them provide the water service in one municipality although there are such that provide the water service in more than one municipality. The consumption of water also differs among the water services providers and ranges between 60 to 140 liters per capita a day.

The percentage of unpaid water in 2018 remains the largest problem with the water services providers and it ranges from 32% to 78% depending on the water service provider. According to the last available data the unpaid water percentage in 2016 is 67,55%.

## VIII.2. Regulations

### VIII.2.1. Amended Methodology for Setting Water Service Tariffs

According to the Law on Setting Prices of Water Services, the Energy Regulatory Commission on 25$^{th}$ of May 2017 adopted the Methodology for Setting Water Services Tariffs (“Official Gazette of the RM“ no.63/17).

In order for it to be applicable for all water services providers, and considering the experience in the initial stage of determination of water services tariffs for the water services providers on areas of over 10.000 equivalent inhabitants, the Energy Regulatory Commission adopted a Methodology amending the methodology for setting water services tariffs ("Official Gazette of the RM" no. 172/18). These amendments, in Appendix 3 from the Methodology, modify the marks of the years from the regulated period.

## VIII.3. Application of Water Services Tariffs

The water services providers on areas of over 10.000 equivalent inhabitants in 2018 applied tariffs determined by the Energy Regulatory Commission, proposed by the Management Boards and Water Services Providers by given consent from the Municipalities Councils where the water services were provided.

The consent awarding process for the determined tariffs by the Municipalities Councils during 2018 progressed very slowly and resulted in belated application of the determined tariffs. From a total number of 76 approved tariffs, only 27 were applied in January 2018, while the rest of the consents were given during 2018.

The Energy Regulatory Commission in 2018 adopted three regulatory tariffs for JKP Proleter in Resen, after the Municipality Council of Resen did not provide consent.

### VIII.3.1. Tariffs for Supply of Raw Water Intended for Water Supply of the Population

The water service of raw water supply intended for water supply of the population at the territory of the Republic of North Macedonia is provided by 7 water service providers, covering partially or fully the needs for water supply in the following municipalities: Kumanovo, Sveti Nikole, Probishtip, Veles, Strumica, Novo Selo, Vasilevo, Bosilovo, Bitola, Dolneni, Plasnica, Kichevo, Makedonski Brod, Prilep, Krushevo and Berovo.

The VIII.1. Table shows the tariffs for water intended for water supply of the population for 2017 and 2018. From the presented data aside to the tariffs of JP Strezevo Bitola and JPHS Zletovica Probishtip, which were increased in 2018 compared to 2017, the rest of the water service providers tariffs in 2018 decrease compared to 2017. The largest tariffs decrease of 49,14% is noted at Vodostopanstvo JSC, Subsidiary Kumanovsko-Lipkovsko Pole.

*Table VIII.1. Tariffs for supply with water intended for water supply of the population for 2017 and 2018*

| Ord. No. | Provider of the water service-raw water supply | Unit | 2017 | 2018 | 2018/2017 (%) |
|---|---|---|---|---|---|
| 1 | JPV Lisice Veles | den/m³ | 4,26 | 3,80 | -10,80 |
| 2 | JP Studenchica Kichevo | den/m³ | 2,59 | 2,06 | -20,34 |

| | | | | | |
|---|---|---|---|---|---|
| 3 | JP Strezevo Bitola | den/m³ | 4,26 | 5,15 | 21,07 |
| 4 | JPHS Zletovica Probishtip | den/m³ | 4,00 | 4,19 | 4,75 |
| 5 | Vodostopanstvo JSC, Berovo Subsidiary | den/m³ | 4,26 | 2,97 | -30,22 |
| 6 | Vodostopanstvo JSC, Subsidiary Strumicko Pole | den/m³ | 4,38 | 3,60 | -17,81 |
| 7 | Vodostopanstvo JSC, Subsidiary Kumanovsko- Lipkovsko Pole | den/m³ | 6,43 | 3,27 | -49,14 |

## VIII.3.2. Drinking Water Supply Tariffs

The water service of drinking water supply or water supply in the areas of over 10.000 equivalent inhabitants in the Republic of North Macedonia is provided by a total of 29 water services providers covering fully or partially the drinking water needs of the following municipalities: Veles, Kavadarci, Negotino, Sveti Nikole, Berovo, Vinica, Kocani, Probishtip, Shtip, Debar, Struga, Kichevo, Ohrid, Bosilovo, Gevgelija, Strumica, Radovis, Bitola, Dolneni, Prilep, Resen, Brvenica, Vrapchishte, Gostivar, Zhelino, Tetovo, Kumanovo, Kumanovo, Skopje and Ilinden

Table VIII.2. shows the given tariffs for water supply for 2017 and 2018 by user category. It can be seen from the analysis that 18 of 24 providers of the water service in 2018 increased the tariff for the households compared to 2017, 6 of them decreased it and 4 of them left it the same. In the other user category 16 water service providers in 2018 increased the tariff compared to 2017, 5 decreased it, while 7 did not change the tariff for this user category.

*Table VIII.2. Water supply tariffs for 2017 and 2018*

| Ord. No. | Provider of the water service of water supply | Unit | households | | | other | | |
|---|---|---|---|---|---|---|---|---|
| | | | 2017 | 2018 | 2018/2017 (%) | 2017 | 2018 | 2018/2017 (%) |
| 1 | JKP Derven Veles | den/m³ | 30,40 | 31,62 | 4,01% | 60,25 | 63,05 | 4,65% |
| 2 | JKP Komunalec Kavadarci | den/m³ | 14,87 | 16,50 | 10,96% | 35,51 | 27,61 | -22,25% |
| 3 | JKP Komunalec Negotino | den/m³ | 18,50 | 20,50 | 10,81% | 36,50 | 38,00 | 4,11% |
| 4 | JKP Komunalec Sveti Nikole | den/m³ | 35,24 | 32,33 | -8,26% | 35,24 | 46,00 | 30,53% |
| 5 | JKP Usluga Berovo | den/m³ | 28,00 | 30,78 | 9,93% | 56,00 | 56,63 | 1,13% |
| 6 | JKP Solidarnost Vinica | den/m³ | 23,21 | 22,50 | -3,06% | 45,15 | 47,31 | 4,78% |
| 7 | JKP Vodovod Kocani | den/m³ | 35,50 | 39,92 | 12,45% | 65,00 | 78,59 | 20,91% |
| 8 | JKP Nikola Karev Probishtip | den/m³ | 29,00 | 31,50 | 8,62% | 47,00 | 46,00 | -2,13% |
| 9 | JKP Isar Shtip | den/m³ | 35,50 | 33,73 | -4,99% | 53,00 | 52,23 | -1,45% |
| 10 | JKP Standard Debar | den/m³ | 14,31 | 14,31 | 0,00% | 30,20 | 30,20 | 0,00% |
| 11 | MJP Proaqua Struga | den/m³ | 25,50 | 26,51 | 3,96% | 39,20 | 41,51 | 5,89% |
| 12 | JKP Komunalec Kichevo | den/m³ | 21,00 | 24,00 | 14,29% | 33,00 | 36,00 | 9,09% |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 13 | MJP Proaqua Ohrid | den/m³ | 25,50 | 25,17 | -1,30% | 39,20 | 36,08 | -7,96% |
| 14 | JPKD Ograzhden Bosilovo | den/m³ | 19,00 | 19,30 | 1,58% | 0,00 | 0,00 | 0 |
| 15 | JPKD Komunalec Gevgelija | den/m³ | 13,90 | 14,46 | 4,03% | 28,80 | 29,21 | 1,42% |
| 16 | JKP Komunalec Strumica | den/m³ | 29,89 | 31,20 | 4,38% | 43,87 | 43,87 | 0,00% |
| 17 | JKP Plavaja Radovis | den/m³ | 25,01 | 26,34 | 5,32% | 44,55 | 45,26 | 1,59% |
| 18 | JP Vodovod Bitola | den/m³ | 24,25 | 27,00 | 11,34% | 45,00 | 47,80 | 6,22% |
| 19 | JP Dolneni | den/m³ | 25,00 | 25,00 | 0,00% | 40,00 | 40,00 | 0,00% |
| 20 | JP Vodovod I Kanalizacija Prilep | den/m³ | 26,22 | 26,22 | 0,00% | 46,90 | 46,90 | 0,00% |
| 21 | JKP Proleter Resen | den/m³ | 22,30 | 27,48 | 23,23% | 37,73 | 45,54 | 20,70% |
| 22 | OJP Vardar Brvenica | den/m³ | 15,00 | 16,70 | 11,33% | 25,00 | 29,82 | 19,28% |
| 23 | JKP Vrapcishte | den/m³ | 10,00 | 9,95 | -0,50% | 15,00 | 19,90 | 32,67% |
| 24 | JKP Komunalec Gostivar | den/m³ | 18,00 | 18,00 | 0,00% | 49,00 | 49,00 | 0,00% |
| 25 | JPKD Mirmbajtja ZHELINO | den/m³ | 9,00 | 12,37 | 37,44% | 0,00 | 12,37 | / |
| 26 | JKP Tetovo | den/m³ | 15,08 | 16,08 | 6,63% | 23,65 | 25,45 | 7,61% |
| 27 | JP Vodovod Kumanovo | den/m³ | 6,55 | 4,33 | -33,89% | 9,02 | 5,63 | -37,58% |
| 28 | JKP Vodovod Ilinden | den/m³ | 23,75 | 24,14 | 1,64% | 48,00 | 48,00 | 0,00% |

The largest decrease of the tariff for water supply for both categories of users is noted with JP Vodovod Kumanovo, with 33,89% decrease for households and 37,58% for the category of other users. The drastic fall of the tariffs for water supply of JP Vodovod Kumanovo is a result of the decrease of the raw water price, which dropped 49,14%.

The major increase of the tariff for water supply of the households is noted in JPKD Mirmbajtja Zhelino, while foremost increase of the tariff for water supply for other users is noted with JKP Vrapchishte with 32,67%.

JPKD Mirmbajtja Zhelino in 2018 also initially started to invoice the service for water supply for the other user category.

### VIII.3.3. Tariffs for Collection and Disposal of Urban Wastewaters

The water service for collection and disposal of urban wastewaters on the territory of the Republic of North Macedonia in the areas with over 10.000 equivalent inhabitants in the country is provided by a total of 27 providers of water services covering partially or fully the needs of the following municipalities: Veles, Kavadarci, Negotino, Sveti Nikole, Berovo, Vinica, Kocani, Probishtip, Shtip, Debar, Struga, Kichevo, Ohrid, Gevgelija, Strumica, Radovis, Bitola, Prilep, Resen, Brvenica, Vrapchishte, Gostivar, Zhelino, Tetovo, Kumanovo, Kumanovo, Skopje and Ilinden

The Table VIII.3. shows the tariffs for collection and disposal of urban wastewaters for 2017 and 2018 by user category.

*Table VIII.3. Tariffs for collection and disposal of urban wastewaters for 2017 and 2018*

| Ord. No. | Provider of the water service - collection and disposal of urban wastewaters | Unit | households | | | other | | |
|---|---|---|---|---|---|---|---|---|
| | | | 2017 | 2018 | 2018/2017 (%) | 2017 | 2018 | 2018/2017 (%) |
| 1 | JKP Derven Veles | den/m³ | 5,45 | 5,01 | -8,07% | 8,65 | 7,66 | -11,45% |
| 2 | JKP Komunalec Kavadarci | den/m³ | 4,55 | 3,50 | -23,08% | 9,50 | 6,50 | -31,58% |
| 3 | JKP Komunalec Negotino | den/m³ | 5,00 | 6,50 | 30,00% | 9,30 | 10,50 | 12,90% |
| 4 | JKP Komunalec Sveti Nikole | den/m³ | 8,5 | 5 | -41,18% | 10,00 | 8,00 | -20,00% |
| 5 | JKP Usluga Berovo | den/m³ | 8,40 | 6,42 | -23,57% | 16,80 | 11,56 | -31,19% |
| 6 | JKP Solidarnost Vinica | den/m³ | 6,00 | 6,26 | 4,33% | 6,00 | 6,26 | 4,33% |
| 7 | KJP Vodovod Kocani | den/m³ | 19,00 | 14,57 | -23,32% | 30,00 | 22,59 | -24,70% |
| 8 | JKP Nikola Karev Probishtip | den/m³ | 3,50 | 4,10 | 17,14% | 4,10 | 4,10 | 0,00% |
| 9 | JKP Isar Shtip | den/m³ | 12,00 | 12,00 | 0,00% | 23,00 | 23,00 | 0,00% |
| 10 | JKP Standard Debar | den/m³ | 2,52 | 2,52 | 0,00% | 5,33 | 5,33 | 0,00% |
| 11 | MJP Proaqua Struga | den/m³ | 6,80 | 9,73 | 43,09% | 11,80 | 18,26 | 54,75% |
| 12 | JKP Komunalec Kichevo | den/m³ | 5,00 | 6,00 | 20,00% | 7,00 | 7,00 | 0,00% |
| 13 | JP Niskogradba Ohrid | den/m³ | 7,80 | 8,21 | 5,26% | 13,50 | 14,21 | 5,26% |
| 14 | JKPD Komunalec Gevgelija | den/m³ | 5,50 | 3,16 | -42,55% | 11,50 | 6,43 | -44,09% |
| 15 | JKP Komunalec Strumica | den/m³ | 9,54 | 9,00 | -5,66% | 14,31 | 13,00 | -9,15% |
| 16 | JKP Plavaja Radovis | den/m³ | 3,00 | 5,26 | 75,33% | 6,00 | 9,46 | 57,67% |
| 17 | JKP Niskogradba Bitola | den/m³ | 10,55 | 11,89 | 12,70% | 15,83 | 17,24 | 8,91% |
| 18 | JP Vodovod I Kanalizacija Prilep | den/m³ | 3,00 | 5,28 | 76,00% | 3,00 | 5,28 | 76,00% |
| 19 | JKP Proleter Resen | den/m³ | 4,62 | 4,90 | 6,06% | 6,25 | 6,54 | 4,64% |
| 20 | OJP Vardar Brvenica | den/m³ | 0,00 | 3,60 | / | 10,75 | 3,60 | -66,50% |
| 21 | JKP Vrapcishte | den/m³ | 0,00 | 10,62 | / | 13,01 | 10,62 | -18,37% |
| 22 | JKP Komunalec Gostivar | den/m³ | 10,80 | 10,80 | 0,00% | 19,60 | 19,60 | 0,00% |
| 23 | JPKD Mirmbajtja ZHELINO | den/m³ | 8,00 | 8,21 | 2,63% | 0,00 | 8,21 | / |
| 24 | JKP Tetovo | den/m³ | 6,51 | 3,00 | -53,94% | 11,14 | 6,38 | -42,74% |
| 25 | JP Vodovod Kumanovo | den/m³ | 6,55 | 4,33 | -33,89% | 9,02 | 5,63 | -37,58% |
| 26 | JKP Vodovod Ilinden | den/m³ | 9,52 | 7,86 | -17,44% | 20,00 | 16,08 | -19,60% |

From the analysis it can be seen that in 2018, 11 out of 26 providers of the water service for collection and disposal of urban wastewaters increased the tariff for households compared to 2017, 10 of them decreased it, while 3 service providers have no modification in the household tariff.

Regarding the other user category, 8 providers of the water service for collection and disposal of urban wastewaters in 2018 increased the tariff compared to 2017, 12 of them decreased it, while 5 have no modification in the tariff for this user category.

The largest decrease of the tariff for collection and disposal of urban wastewaters for households of 53,94% is noted with JKP Tetovo, while the major

decrease of 66,50% of this tariff for the category other users is noted with OJP Vardar Brvenica.

On the other side, major increases of the tariff for collection and disposal of urban wastewaters for both user categories are noted at JP Vodovod i Kanalizacija Prilep.

OJP Brvenica and JKP Vrapchishte for the first time in 2018 started to invoice the service for collection and disposal of urban wastewaters for the household category. JPKD Mirmbajtja Zhelino, for the first time in 2018 started to invoice the service for collection and disposal of urban wastewaters for the other user category.

### VIII.3.4. Tariffs for Purification of Wastewaters

In the areas with over 10.000 equivalent inhabitants, the service for purification of wastewaters in 2018 is performed by JKP Komunalec Kichevo, JKPD Komunalec Gevgelija, JKP Komunalec Strumica, JKP Plavaja Radovis and JKP Vodovod Ilinden in 2018 this service was provided for the first time. Table VIII.4. shows the approved tariffs for purification of wastewaters for 2018 by user category.

*Table VIII.4. Wastewater purification tariffs for 2018*

| Ord. No. | Provider of the water service-wastewater purification | Unit | 2018 | |
|---|---|---|---|---|
| | | | households | other |
| 1 | JKP Usluga Berovo | den/m$^3$ | 12,62 | 12,62 |
| 2 | MJP Proaqua Struga | den/m$^3$ | 16,54 | 26,52 |
| 3 | JKP Komunalec Kicevo | den/m$^3$ | 10,00 | 13,00 |
| 4 | JKPD Komunalec Gevgelija | den/m$^3$ | 13,37 | 27,23 |
| 5 | JKP Komunalec Strumica | den/m$^3$ | 12,83 | 19,34 |
| 6 | JKP Plavaja Radovis | den/m$^3$ | 12,55 | 18,78 |
| 7 | JKP Niskogradba Bitola | den/m$^3$ | 6,41 | 9,30 |
| 8 | JKP Proleter Resen | den/m$^3$ | 11,23 | 15,84 |
| 9 | JP Vodovod Kumanovo | den/m$^3$ | 10,48 | 10,48 |
| 10 | JKP Vodovod Ilinden | den/m$^3$ | 6,79 | 13,89 |

## VIII.4. Decisions for Setting Water Services Tariffs

During 2018, the Energy Regulatory Commission received requests for setting tariffs from 35 water services providers at territories with under 10.000 equivalent inhabitants from all 8 planning regions in the Republic of North Macedonia and accordingly Decisions for setting tariffs for water services for the regulated period 2019-2021, were adopted.

The Energy Regulatory Commission with these decisions set the average tariffs for the performance of water services, as well as the minimum and maximum

range expressed in percentage in which the provider of the water service may adopt a Decision for tariff setting, which is further given to the founder of the water service provider to be approved.

The minimum average tariffs cover the operative costs, depreciation of the own basic assets and the price for the long-term debts of the companies, while the maximum average tariffs cover the operative costs, depreciation of the own basic assets and depreciation of the basic assets obtained free of charge, the liquidity means, as well as the return from the regulated basic assets.

The determined tariffs by the Energy Regulatory Commission are the average tariffs according the Methodology. The water services providers, in the range determined by the Energy Regulatory Commission, determine the tariffs by user categories- households and other. The Municipality Councils provide consent for the determined tariffs.

The Energy Regulatory Commission, in the process of setting average tariffs for water services, considered that the price for the water service should not surpass the availability threshold, determined at 3% of the average total income by household in the area where the water service is provided. The price of the water service includes the water service tariff, the contributions related to the use of the waters determined under the Law on Waters or another law, as well as the taxes determined by law.

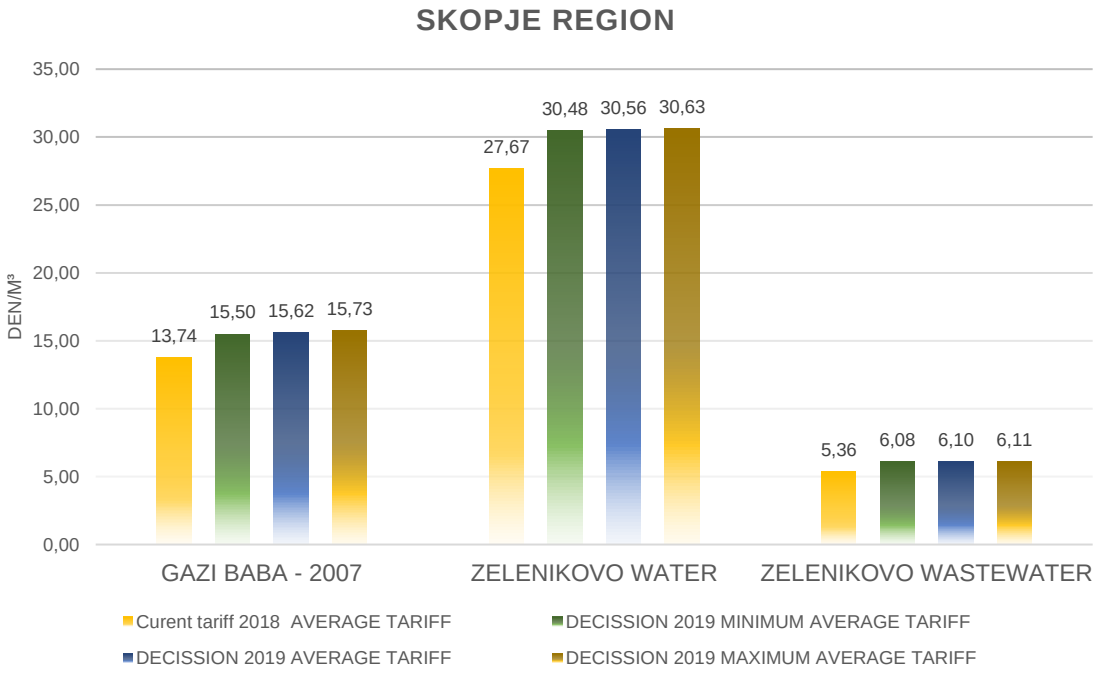
Below is a short analysis on the requests of the water services providers and the decisions adopted by the Energy Regulatory Commission for the average tariff, compared with the existing tariffs for water services, in all 8 planning regions of the Republic of North Macedonia.

### VIII.4.1. Skopje Region

The Skopje Planning Region covers the JKP Gazi Baba and JKP Zelenikovo. The Energy Regulatory Commission adopted the following tariffs with Decisions for setting water services tariffs.

*Table VIII.5. Overview of minimum average tariffs, average tariffs and maximum average tariffs for the Skopje Region*

| **SKOPJE REGION** | | **Existing tariff 2018** | | | **DECISION 2019** | | |
|---|---|---|---|---|---|---|---|
| **Water services providers at territories with under 10.000 equivalent inhabitants** | **Water service** | **households** | **other** | **Average tariff** | **Minimum average tariff** | **Average tariff** | **Maximum average tariff** |
| JKP Gazi Baba - 2007 | water supply | 13,72 | 17,14 | 13,74 | 15,50 | 15,62 | 15,73 |
| JKP Zelenikovo | water supply | 27,00 | 47,00 | 27,67 | 30,48 | 30,56 | 30,63 |
| JKP Zelenikovo | collection and disposal of wastewaters | 5,00 | 11,00 | 5,36 | 6,08 | 6,10 | 6,11 |



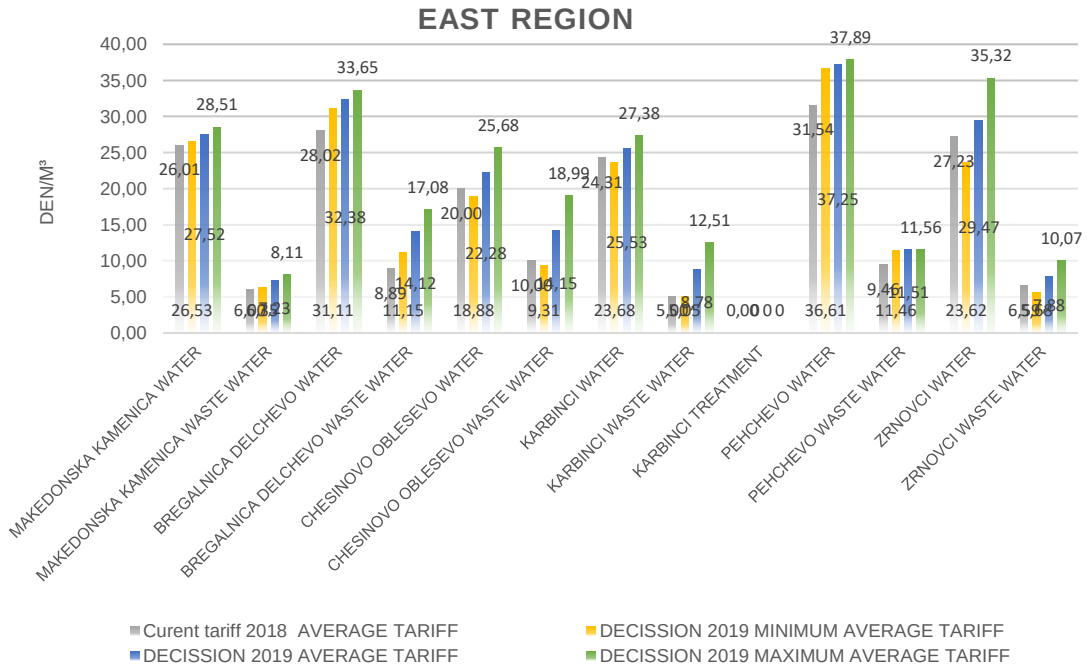

## VIII.4.2. East Region

The East Planning Region includes JP Kamena Reka, Makedonska Kamenica, JPKD Bregalnica Delcevo, JKP Obleshevo Cheshinovo Obleshevo, JP Plachkovica Karbinci, JKP Komunalec Pehcevo and JKP Vodna Kula Zrnovci. The Energy Regulatory Commission adopted the following tariffs with a Decision for setting tariffs for water services in the East Planning Region.

*Table VIII.6. Overview of minimum average tariffs and, average tariffs and maximum average tariffs from the East Region*

| **EAST REGION** | | **Existing tariff 2018** | | | **DECISION 2019** | | |
|---|---|---|---|---|---|---|---|
| **Water services providers at territories with under 10.000 equivalent inhabitants** | **Water service** | **households** | **other** | **Average tariff** | **Minimum average tariff** | **Average tariff** | **Maximum average tariff** |
| JP Kamena Reka, Makedonska Kamenica | water supply | 22,00 | 58,00 | 26,01 | 26,53 | 27,52 | 28,51 |
| JP Kamena Reka, Makedonska Kamenica | collection and disposal of wastewaters | 5,00 | 10,00 | 6,00 | 6,35 | 7,23 | 8,11 |
| JPKD Bregalnica Delcevo | water supply | 26,00 | 46,87 | 28,02 | 31,11 | 32,38 | 33,65 |
| JPKD Bregalnica Delcevo | collection and takeaway of wastewaters | 8,00 | 15,06 | 8,89 | 11,15 | 14,12 | 17,08 |
| JKP Obleshevo Cheshinovo Obleshevo | water supply | 20,00 | 20,00 | 20,00 | 18,88 | 22,28 | 25,68 |
| JKP Obleshevo Cheshinovo Obleshevo | collection and takeaway of wastewaters | 10,00 | 10,00 | 10,00 | 9,31 | 14,15 | 18,99 |
| JP Plachkovica Karbinci | water supply | 21,48 | 42,96 | 24,31 | 23,68 | 25,53 | 27,38 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| JP Plachkovica Karbinci | collection and takeaway of wastewaters | 5,00 | 5,00 | 5,00 | 5,05 | 8,78 | 12,51 |
| JP Plachkovica Karbinci | wastewaters filtering | 0,00 | 0,00 | 0,00 | 0 | 0 | 0 |
| JKP Komunalec Pehcevo | water supply | 26,40 | 52,80 | 31,54 | 36,61 | 37,25 | 37,89 |
| JKP Komunalec Pehcevo | collection and takeaway of wastewaters | 7,92 | 15,84 | 9,46 | 11,46 | 11,51 | 11,56 |
| JKP Vodna Kula Zrnovci | water supply | 25,00 | 55,00 | 27,23 | 23,62 | 29,47 | 35,32 |
| JKP Vodna Kula Zrnovci | collection and takeaway of wastewaters | 6,00 | 15,00 | 6,59 | 5,68 | 7,88 | 10,07 |

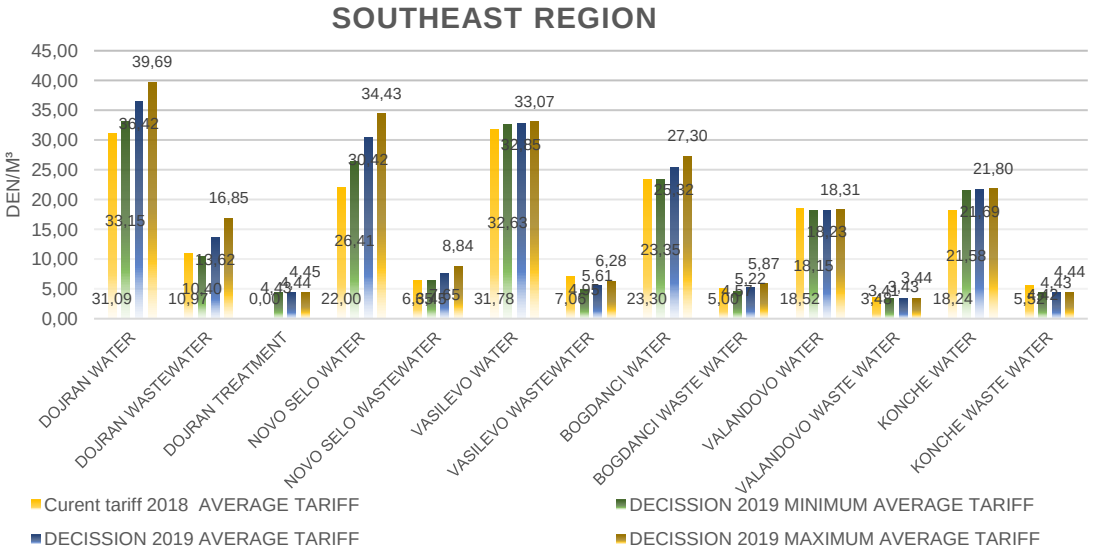



## VIII.4.3. Southeast Region

The Southeast Planning Region includes JPKD Komunalec Polin Dojran, JPKD Komuna Novo Selo, JKP Turija Vasilevo, JKP Komunalna Chistota Bogdanci, JP Komunalen Servis Valandovo and JPKD Lkavica Konche. The Energy Regulatory Commission adopted the following tariffs with a Decision for setting tariffs for water services in the Southeast Planning Region.

*Table VIII.7. Overview of minimum average tariffs and, average tariffs and maximum average tariffs from the Southeast region*

| SOUTHEAST REGION | | Existing tariff 2018 | | | DECISION 2019 | | |
|---|---|---|---|---|---|---|---|
| **Water services providers at territories with under 10.000 equivalent inhabitants** | **Water service** | **households** | **other** | **Average tariff** | **Minimum average tariff** | **Average tariff** | **Maximum average tariff** |
| JPKD Komunalec Polin Dojran | water supply | 23,00 | 45,00 | 31,09 | 33,15 | 36,42 | 39,69 |
| JPKD Komunalec Polin Dojran | collection and disposal of wastewaters | 7,09 | 17,64 | 10,97 | 10,40 | 13,62 | 16,85 |
| JPKD Komunalec Polin Dojran | wastewaters purification | 0,00 | 0,00 | 0,00 | 4,43 | 4,44 | 4,45 |
| JPKD Komuna Novo Selo | water supply | 20,00 | 40,00 | 22,00 | 26,41 | 30,42 | 34,43 |
| JPKD Komuna Novo Selo | collection and disposal of wastewaters | 5,00 | 10,00 | 6,35 | 6,45 | 7,65 | 8,84 |
| JKP Turija Vasilevo | water supply | 30,00 | 45,00 | 31,78 | 32,63 | 32,85 | 33,07 |
| JKP Turija Vasilevo | collection and disposal of wastewaters | 7,48 | 5,71 | 7,06 | 4,95 | 5,61 | 6,28 |
| JKP Komunalna Chistota Bogdanci | water supply | 21,75 | 30,00 | 23,30 | 23,35 | 25,32 | 27,30 |
| JKP Komunalna Chistota Bogdanci | collection and disposal of wastewaters | 4,00 | 8,00 | 5,00 | 4,57 | 5,22 | 5,87 |
| JP Komunalen Servis Valandovo | water supply | 17,00 | 24,00 | 18,52 | 18,15 | 18,23 | 18,31 |
| JP Komunalen Servis Valandovo | collection and disposal of wastewaters | 3,00 | 5,00 | 3,48 | 3,41 | 3,43 | 3,44 |
| JPKD Lakavica Konche | water supply | 18,00 | 32,00 | 18,24 | 21,58 | 21,69 | 21,80 |
| JPKD Lkavica Konche | collection and disposal of wastewaters | 5,52 | 5,52 | 5,52 | 4,42 | 4,43 | 4,44 |

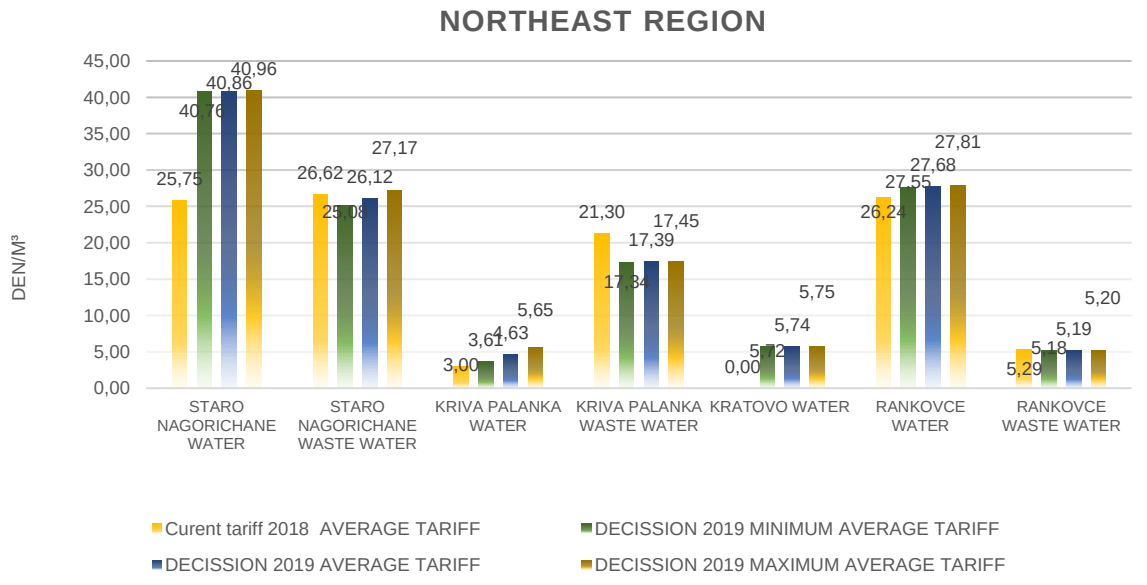


### VIII.4.4. Northeast Region

The Northeast Planning Region covers JKP Kozjak Staro Nagorichane, JP Komunalec Kriva Palanka, DKU Silkom Kratovo and JKP Chist Den Rankovce. The Energy Regulatory Commission adopted the following tariffs with a Decision for setting tariffs for water services in the Northeast Planning Region.

*Table VIII.8. Overview of minimum average tariffs, average tariffs and maximum average tariffs from the Northeast Region*

| NORTHEAST REGION | | Existing tariff 2018 | | | DECISION 2019 | | |
|---|---|---|---|---|---|---|---|
| **Water services providers at territories with under 10.000 equivalent inhabitants** | **Water service** | **households** | **other** | **Average tariff** | **Minimum average tariff** | **Average tariff** | **Maximum average tariff** |
| JKP Kozjak Staro Nagorichane | water supply | 25,00 | 50,00 | 25,75 | 40,76 | 40,86 | 40,96 |
| JP Komunalec Kriva Palanka | water supply | 24,00 | 43,06 | 26,62 | 25,08 | 26,12 | 27,17 |
| JP Komunalec Kriva Palanka | collection and disposal of wastewaters | 3,00 | 3,00 | 3,00 | 3,61 | 4,63 | 5,65 |
| DKU Silkom Kratovo | water supply | 20,00 | 30,00 | 21,30 | 17,34 | 17,39 | 17,45 |
| DKU Silkom Kratovo | collection and disposal of wastewaters | 0,00 | 0,00 | 0,00 | 5,72 | 5,74 | 5,75 |
| JKP Chist Den Rankovce | water supply | 25,00 | 42,00 | 26,24 | 27,55 | 27,68 | 27,81 |
| JKP Chist Den Rankovce | collection and disposal of wastewaters | 5,00 | 7,00 | 5,29 | 5,18 | 5,19 | 5,20 |

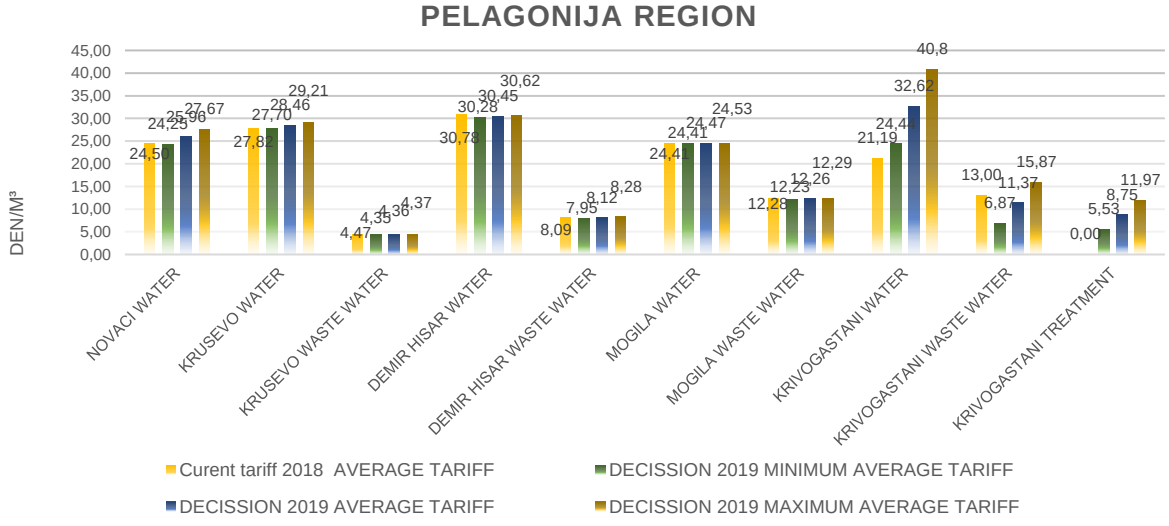


## VIII.4.5. Pelagonia Region

The Pelagonia Planning Region includes JKPD Komunalna Higiena Novaci, JP Komuna Krushevo, JKP Komunalec Demir Hisar, JKP Pela Higiena Mogila and JP Pelagonija Krivogashtani. The Energy Regulatory Commission adopted the following tariffs with a Decision for setting tariffs for water services in the Pelagonia Planning Region.

*Table VIII.9. Overview of minimum average tariffs, average tariffs and maximum average tariffs from the Pelagonia Region*

| PELAGONIA REGION | | Existing tariff 2018 | | | DECISION 2019 | | |
|---|---|---|---|---|---|---|---|
| **Water services providers at territories with under 10.000 equivalent inhabitants** | **Water service** | **households** | **other** | **Average tariff** | **Minimum average tariff** | **Average tariff** | **Maximum average tariff** |
| JKPD Komunalna Higiena Novaci | water supply | 24,50 | 0,00 | 24,50 | 24,25 | 25,96 | 27,67 |
| JP Komuna Krushevo | water supply | 25,60 | 50,00 | 27,82 | 27,70 | 28,46 | 29,21 |
| JP Komuna Krushevo | collection and disposal of wastewaters | 3,80 | 8,00 | 4,47 | 4,35 | 4,36 | 4,37 |
| JKP Komunalec Demir Hisar | water supply | 21,37 | 46,77 | 30,78 | 30,28 | 30,45 | 30,62 |
| JKP Komunalec Demir Hisar | collection and disposal of wastewaters | 6,00 | 10,00 | 8,09 | 7,95 | 8,12 | 8,28 |
| JKP Pela Higiena Mogila | water supply | 24,25 | 45,00 | 24,41 | 24,41 | 24,47 | 24,53 |
| JKP Pela Higiena Mogila | collection and disposal of wastewaters | 12,13 | 22,50 | 12,28 | 12,23 | 12,26 | 12,29 |
| JP Pelagonija Krivogashtani | water supply | 21,00 | 25,16 | 21,19 | 24,44 | 32,62 | 40,8 |
| JP Pelagonija Krivogashtani | collection and disposal of wastewaters | 13,00 | 13,00 | 13,00 | 6,87 | 11,37 | 15,87 |
| JP Pelagonija Krivogashtani | wastewaters purification | 0,00 | 0,00 | 0,00 | 5,53 | 8,75 | 11,97 |

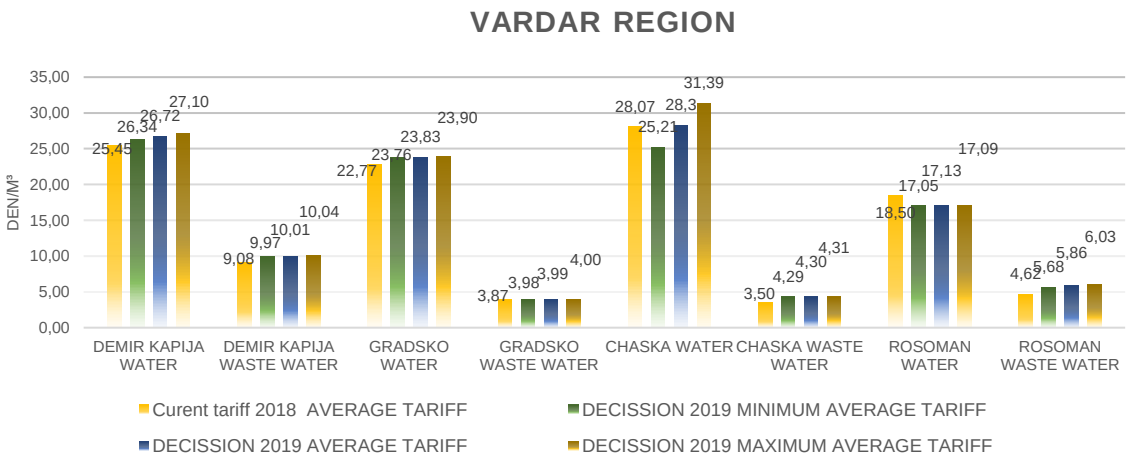


## VIII.4.6. Vardar Region

The Vardar Planning Region includes JKPD Boshava Demir Kapija, JKP Klepa Gradsko, JKP Topolka Chashka and JKPD Rosoman. The Energy Regulatory Commission adopted the following tariffs with a Decision setting tariffs for water services in the Vardar Planning Region.

*Table VIII.10. Overview of minimum average tariffs, average tariffs and maximum average tariffs from the Vardar region*

| VARDAR REGION | | Existing tariff 2018 | | | DECISION 2019 | | |
|---|---|---|---|---|---|---|---|
| **Water services providers at territories with under 10.000 equivalent inhabitants** | **Water service** | **households** | **other** | **Average tariff** | **Minimum average tariff** | **Average tariff** | **Maximum average tariff** |
| JKPD Boshava Demir Kapija | water supply | 17,00 | 34,00 | 25,45 | 26,34 | 26,72 | 27,10 |
| JKPD Boshava Demir Kapija | collection and disposal of wastewaters | 6,00 | 12,00 | 9,08 | 9,97 | 10,01 | 10,04 |
| JKP Klepa Gradsko | water supply | 21,00 | 39,00 | 22,77 | 23,76 | 23,83 | 23,90 |
| JKP Klepa Gradsko | collection and disposal of wastewaters | 3,00 | 6,00 | 3,87 | 3,98 | 3,99 | 4,00 |
| JKP Topolka Chashka | water supply | 28,00 | 30,00 | 28,07 | 25,21 | 28,3 | 31,39 |
| JKP Topolka Chashka | collection and disposal of wastewaters | 3,50 | 3,50 | 3,50 | 4,29 | 4,30 | 4,31 |
| JKPD Rosoman | water supply | 16,83 | 30,00 | 18,50 | 17,05 | 17,13 | 17,09 |
| JKPD Rosoman | collection and disposal of wastewaters | 4,00 | 8,00 | 4,62 | 5,68 | 5,86 | 6,03 |

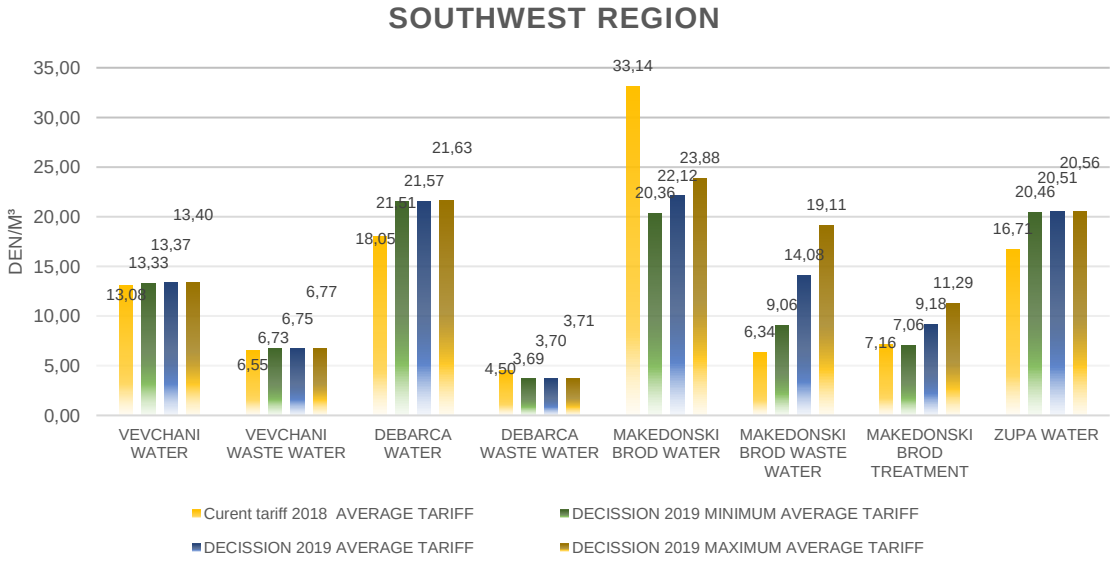


## VIII.4.7. Southwest Region

The Southwest Planning Region covers JP Eremija Vevchani, JPKD Debarca, JP Vodovod I Kanalizacija Makedonski Brod and JKP Kale Centar Zhupa. The Energy Regulatory Commission adopted the following tariffs with a Decision for determination of the tariffs for the water services in the Southwest Planning Region:

*Table VIII.11. Overview of minimum average tariffs, average tariffs and maximum average tariffs from the Southwest Region*

| Southwest Region | | Existing tariff 2018 | | | DECISION 2019 | | |
|---|---|---|---|---|---|---|---|
| **Water services providers at territories with under 10.000 equivalent inhabitants** | **Water service** | **households** | **other** | **Average tariff** | **Minimum average tariff** | **Minimum average tariff** | **Maximum average tariff** |
| JP Eremija Vevchani | water supply | 12,00 | 24,00 | 13,08 | 13,33 | 13,37 | 13,40 |
| JP Eremija Vevchani | collection and disposal of wastewaters | 6,00 | 12,00 | 6,55 | 6,73 | 6,75 | 6,77 |
| JPKD Debarca | water supply | 15,00 | 30,00 | 18,05 | 21,51 | 21,57 | 21,63 |
| JPKD Debarca | collection and disposal of wastewaters | 4,50 | 9,00 | 4,50 | 3,69 | 3,70 | 3,71 |
| JP Vodovod I Kanalizacija Makedonski Brod | water supply | 29,00 | 58,00 | 33,14 | 20,36 | 22,12 | 23,88 |
| JP Vodovod I Kanalizacija Makedonski Brod | collection and disposal of wastewaters | 6,34 | 6,34 | 6,34 | 9,06 | 14,08 | 19,11 |
| JP Vodovod I Kanalizacija Makedonski Brod | wastewaters purification | 7,16 | 7,16 | 7,16 | 7,06 | 9,18 | 11,29 |
| JKP Kale Centar Zhupa | water supply | 15,00 | 35,00 | 16,71 | 20,46 | 20,51 | 20,56 |

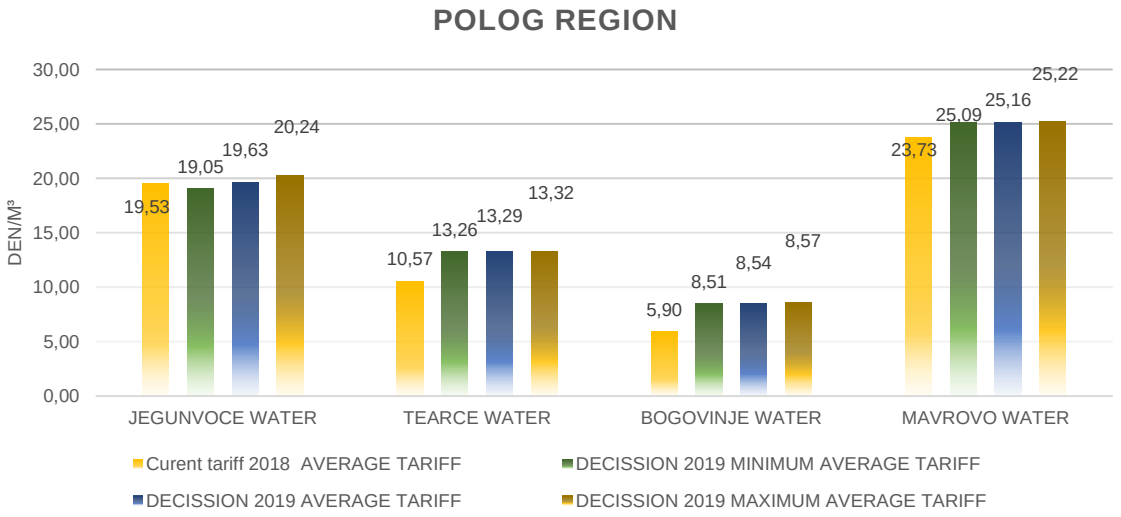


## VIII.4.8. Polog Region

The Polog Planning Region includes DU Chistota Jegunovce, JP Higiena Tearce, JKP Shari Bogovinje and JPKD Mavrovo Mavrovi Anovi. The Energy Regulatory Commission adopted the following tariffs with a Decision for setting tariffs for the water services in the Polog Planning Region.

*Table VIII.12. Overview of minimum average tariffs, average tariffs and maximum average tariffs from the Polog Region*

| POLOG REGION | | Existing tariff 2018 | | | DECISION 2019 | | |
|---|---|---|---|---|---|---|---|
| **Water services providers at territories with under 10.000 equivalent inhabitants** | **Water service** | **households** | **other** | **Average tariff** | **Minimum average tariff** | **Minimum average tariff** | **Maximum average tariff** |
| DU Chistota Jegunovce | water supply | 18,00 | 33,00 | 19,53 | 19,05 | 19,63 | 20,24 |
| JP Higiena Tearce | water supply | 10,00 | 15,00 | 10,57 | 13,26 | 13,29 | 13,32 |
| JKP Shari Bogovinje | water supply | 5,00 | 10,00 | 5,90 | 8,51 | 8,54 | 8,57 |
| JPKD Mavrovo Mavrovi Anovi | water supply | 21,17 | 31,75 | 23,73 | 25,09 | 25,16 | 25,22 |

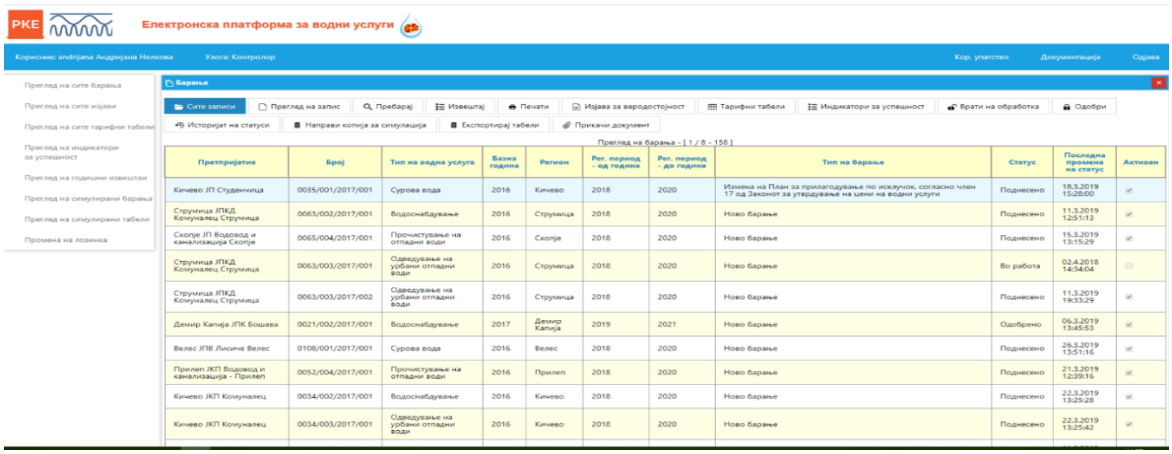



After the adopted decisions by the Energy Regulatory Commission, the Management Boards of the Water Services Providers adopted 23 Decisions for setting tariffs for water services, while 21 of them have been approved by the founder of the water service provider.

According to the legal provisions, this procedure for approval provision by the founders of the water services providers is still underway and is to be completed in the first half of 2019.

## VIII.5. Electronic Platform for Water Services

The electronic platform for water services is a basis for development of the national database for water services in the Republic of North Macedonia.




The providers of water services submit the Requests for setting tariffs for water services, Business Plans and Plans for adjustment of the tariffs on this platform, which are further processed by the Energy Regulatory Commission. In the upcoming period this electronic platform is to be upgraded and is expected to become an electronic database available for use by all interested parties.

ENERGY AND WATER SERVICES REGULATORY COMMISSION OF THE REPUBLIC OF NORTH MACEDONIA

# COMPLAINTS, ADMINISTRATIVE AND COURT PROCEDURES

## ANNUAL REPORT

# 2018

# IX. COMPLAINTS, ADMINISTRATIVE AND COURT PROCEDURES

In the chapter a review of the complaints, dispute resolution procedures, requests for free access to public information and court procedures which were initiated and/or was acted upon by the Energy Regulatory Commission in 2018, is provided.

## IX.1. Complaints

During 2018 the Energy Regulatory Commission, in accordance with the Law on Acting upon Complaints and Suggestions ("Official Gazette of the Republic of Macedonia" no.82/08, 13/13 and 193/15) received 49 complaints, 47 of which referred to issues regarding electricity and 2 regarding district heating.

*Table IX.1. Submitted complaints to the Energy Regulatory Commission in 2018*

<table>
<tr><th colspan="2">Electricity</th><th colspan="2">District Heating</th><th colspan="2">Natural gas</th><th colspan="2">Oil and oil derivatives</th></tr>
<tr><th>Legal entities</th><th>Natural persons</th><th>Legal entities</th><th>Natural persons</th><th>Legal entities</th><th>Natural persons</th><th>Legal entities</th><th>Natural persons</th></tr>
<tr><td>18</td><td>29</td><td>--</td><td>2</td><td>-</td><td>-</td><td>-</td><td>-</td></tr>
<tr><th>Acted upon</th><th>Referred to the competent authorities</th><th>Acted upon</th><th>Referred to the competent authorities</th><td rowspan="3">-</td><td rowspan="3">-</td><th>Acted upon</th><th>Referred to the competent authorities</th></tr>
<tr><td>47</td><td>-</td><td>2</td><td>-</td><td rowspan="2">-</td><td rowspan="2">-</td></tr>
<tr><th colspan="2">Total</th><th colspan="2">Total</th></tr>
<tr><td colspan="2">47</td><td colspan="2">2</td><td colspan="4"></td></tr>
<tr><th colspan="8">Total</th></tr>
<tr><td colspan="8">49</td></tr>
</table>

*Table IX.2. Comparison of submitted complaints to the Energy Regulatory Commission in 2016, 2017 2018*

| | 2016 | 2017 | 2018 | 2018/2016 (%) | 2018/2017 (%) |
|---|---|---|---|---|---|
| **Electricity** | 38 | 54 | 47 | 23,68 | -12,96 |
| **District Heating** | 16 | 7 | 2 | -87,50 | -71,43 |
| **Natural gas** | - | - | - | - | - |
| **Oil and oil derivatives** | - | 3 | - | - | - |
| **Total** | 54 | 64 | 49 | -9,26 | -23,44 |

## IX.2. Administrative Procedures

### IX.2.1. Dispute Resolution Procedures at the Energy Regulatory Commission

Dispute resolution procedures are administered in accordance with the Rulebook on the manner, conditions and procedure for disputes resolution and the amount of the justified compensations for the expenses incurred in the procedure ("Official Gazette of the Republic of Macedonia" no. 24/12).

This rulebook does not refer to disputes for which there is an exclusive competence of a court or another body.

The procedure for disputes resolution is administered by the Commission for Dispute Resolution within the Energy Regulatory Commission.

During 2018 there were 212 procedures for dispute resolution initiated at the Energy Regulatory Commission, for which the Commission for Dispute Resolution held 22 sessions. All procedures referred to disputes in the area of electricity.

*Table IX.3. Initiated procedures for dispute resolution at the Energy Regulatory Commission in 2018*

| **Electricity** | |
|---|---|
| **Legal entities** | **Natural persons** |
| 8 | 204 |
| **Total: 212** | |

*Table IX.4. Comparison of initiated procedures for dispute resolution at the Energy Regulatory Commission in 2016, 2017 and 2018*

| | **2016** | **2017** | **2018** | **2018/2016 %** | **2018/2017 %** |
|---|---|---|---|---|---|
| **Electricity** | 128 | 161 | 212 | 65,63% | 31,68% |
| **District Heating** | - | - | - | - | - |
| **Natural gas** | 2 | - | - | - | - |
| **Oil and oil derivatives** | - | - | - | - | - |
| **Total** | **130** | **161** | **212** | **63,08%** | **31,68%** |

The decisions adopted by the Energy Regulatory Commission regarding the initiated procedures for dispute resolution are presented in the following table.

*Table IX.5. Adopted decisions on initiated procedures dispute resolution by the Energy Regulatory Commission in 2018*

| Adopted | Stopped | Discarded | Rejected | The procedure proceeds in 2019 |
|---|---|---|---|---|
| 89 | 16 | 40 | 1 | 66 |

*Table IX.6. Comparison of adopted decisions on initiated procedures for dispute resolution at the Energy Regulatory Commission in 2016, 2017 and 2018*

| | 2016 | 2017 | 2018 |
|---|---|---|---|
| **Adopted** | 52 | 78 | 89 |
| **Stopped** | 17 | 11 | 16 |
| **Discarded** | 17 | 27 | 40 |
| **Rejected** | - | 5 | 1 |
| **The procedure proceeds in the next year** | 44 | 40 | 66 |
| **Total** | **130** | **161** | **212** |

### IX.2.2. Submitted Appeals at the Commission for Resolution of Appeals in Energy

With the new Energy Law from 2018 the Commission for Resolution of Appeals in Energy was disassembled (as a secondary body). Since the beginning of 2016 until the enforcement of the new Energy Law, the Commission for resolution of appeals in the energy area received one appeal against a Decision of the Energy Regulatory Commission for withdrawal of a license for combined production of thermal energy and electricity, which was rejected.

*Table IX.7. Comparison of submitted appeals to the Commission for resolution of appeals in energy in 2016, 2017 and 2018*

| | 2016 | 2017 | 2018 |
|---|---|---|---|
| **Electricity** | 1 | 1 | 0 |
| **District Heating** | 0 | 0 | 0 |
| **Thermal energy and Electricity** | 0 | 0 | 1 |
| **Natural gas** | 2 | 0 | 0 |
| **Oil and oil derivatives** | 2 | 1 | 0 |
| **Renewable energy sources** | 2 | 0 | 0 |
| **Total** | **7** | **2** | **1** |

### IX.2.3. Requests for Free Access to Public Information

During 2018 the Energy Regulatory Commission received 14 requests for free access to public information, out of which 1 was received in the last workday of 2018 and was processed in 2019.

For 13 of the requests, the Energy Regulatory Commission responded positively, while 27 requests received on the last workday of 2017 were processed and rejected in 2018 in accordance with the Article 6, paragraph (1), line 7 of the Law on Free Access to Public Information.

There were 27 appeals against the responses of the Energy Regulatory Commission, submitted to and acknowledged by the Commission for Protection of the Right to Free Access to Public Information.

The Energy Regulatory Commission modified 27 first instance decisions, acting upon the actions taken by the Commission for Protection of the Right to Free Access to Public Information.

## IX.3. Court Procedures

### IX.3.1. Administrative Disputes

Out of the total number of claims for initiating administrative disputes against the decisions of the Energy Regulatory Commission that were submitted before 2017 to the Administrative Court, the procedures proceeded for 42 administrative disputes in 2018. Three of them have been acknowledged and was acted upon in 2018, 19 were discarded or rejected as groundless and 20 are still under procedure in 2019.

Up until April 2018, the Energy Regulatory Commission received requests to provide response for 84 claims for initiation of an administrative dispute at the Administrative Court against the decisions adopted by the Energy Regulatory Commission during 2017. By the end of 2018, 37 more claims against decisions taken in 2017 were submitted for a response. In 2018 a total of 121 claims were submitted for response. During 2018 the final decisions were adopted on the discarding or rejection of 30 of the claims from 2017, none of the claims were acknowledged, while the procedures upon 91 claims proceeded in 2019 as well.

Until the preparation of the Annual Report for 2018, against the decisions adopted by the Energy Regulatory Commission in 2018, the Energy Regulatory Commission received 22 claims for initiation of an administrative dispute at the Administrative Court, out of which two were discarded in 2018 and for the remaining 20 claims procedure continued in 2019.

*Table IX.8. Overview of administrative disputes*

| | Initiated before 2017 | Initiated in 2017 | Initiated in 2018 | Resolved in 2018 | | | The procedure proceeds in 2019 | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | before 2017 | from 2017 | from 2018 | before 2017 | from 2017 | from 2018 |
| Admin. disputes | 42 | 121 | 22 | 22 | 30 | 2 | 20 | 91 | 20 |
| | | | | 54 | | | 131 | | |

### IX.3.2. Procedures for Debt Collection

The Energy Regulatory Commission, by the end of April 2016 had initiated 7 procedures upon suggestion for adoption of a decision permitting enforcement based on a reliable document in front of the competent notaries public in the Republic of North Macedonia. Six of them were completed in favor of the Energy Regulatory Commission before 2018, while for one of them for which an objection was submitted by the debtor, the procedure proceeded in 2018 as well. This procedure finished in favor of the Energy Regulatory Commission with a ruling by the Court of Appeal Skopje on 5$^{th}$ of October 2018.

The Energy Regulatory Commission in April 2018 initiated a procedure upon suggestion for adoption of a decision permitting enforcement based on a reliable document for which the procedure finished in favor of the Energy Regulatory Commission.

In October 2015 the Energy Regulatory Commission, to the Court of First Instance Skopje 1, Skopje Misdemeanor Department, submitted 4 requests for initiation of a misdemeanor procedure. By the end of 2016 one of the requests had been rejected with a final decision, for two of them the procedures finished with final decisions in 2017 and for one of the requests the procedure is still underway.

In April 2018, two procedures in the area of the labor disputes have been initiated against the Energy Regulatory Commission by members of the Energy Regulatory Commission for whom the mandate was terminated early. These disputes are still underway.

ENERGY AND WATER SERVICES REGULATORY COMMISSION OF THE REPUBLIC OF NORTH MACEDONIA

# INTERNATIONAL ACTIVITIES

## ANNUAL REPORT

# 2018

# X. INTERNATIONAL ACTIVITIES

## X.1. Energy Community Regulatory Board

The Energy Community has been established with the Treaty for establishing Energy Community signed on 25th of October 2005 by the European Commission and the countries of South-Eastern Europe (Albania, Bulgaria, Bosnia and Herzegovina, Romania, Serbia, Croatia, Montenegro, Kosovo and North Macedonia). After the signing, this Treaty was ratified by the contracting parties. The Republic of North Macedonia on 21st of May 2006 ratified this Treaty. The Treaty entered into force on 1st of July thereby establishing the Energy Community.

On 1st of January 2007 Bulgaria and Romania and on 1st of July 2013 Croatia became EU member states.

Afterwards, the following counters accessed the Energy Community as contracting parties: Moldova on 1st of May 2010, Ukraine on 1st of February 2011 and Georgia on 1st of July 2017.

Up until and including 31st of December 2018 in the Energy Community participate:

- 9 signatory countries, as contracting parties (Albania, Bosnia and Herzegovina, Georgia, Kosovo, North Macedonia, Moldova, Serbia, Ukraine and Montenegro),
- The EU member states as part participants and
- 3 countries as observers (Armenia, Norway and Turkey).

The functioning of the Energy Community is being realized within the following institutions:

- Ministerial Council,
- Permanent High-level Group,
- Energy Community Regulatory Board,
- Energy Community Fora (for electricity, natural gas, oil and social issues) and
- The Energy Community Secretariat.

The Energy Community Regulatory Board – ECRB is a coordination institution of the national regulators of the Energy Community for development of harmonized regulatory rules composed of representatives of the regulatory bodies of the signatory countries, as contracting parties. The Energy Regulatory Commission, as a full member, provides a significant contribution in the organization and manner of functioning of the regional and European market of electricity and natural gas through active involvement in the ECRB activities and ECRB Working Groups for electricity (ECRB EWG), natural gas (ECRB GWG) and consumers and retail markets (ECRB CRM WG).

During 2018 ECRB held three meetings, as well nine meetings of the ECRB WGs. The representatives of the Energy Regulatory Commission took part at three ECRB meetings and eight meetings of the ECRB work groups.

Also, representatives from the Energy Regulatory Commission during 2018 took part in the forums for electricity and natural gas, as well as the initial forum for dispute resolution, meetings for preparation of an adapted version of the REMIT regulation, meetings for implementation of the market rules and trading with

electricity and natural gas within Energy Community, meetings of the working groups for electricity and natural gas within the PECI/PMI projects (Projects of Energy Community Interest, Projects of Mutual Interest), meetings of the Energy Community within the Action plan for natural gas 2020 regarding network rules – capacity allocating and congestion management procedures, meetings for implementation of a regional day-ahead market in the countries from the Western Balkans and for implementation of the cross-border balancing, initial meeting within the CROSSBOW project, join workshop of ENTSO-G and the Energy Community on transparency at the natural gas markets, the workshop ”Trading at the energy markets”, as well as at the first trilateral workshop ECRB-CEER-MEDREG for consumers and retail markets.

The following topics and issues were discussed in the electricity working group (ECRB EWG) in 2018:

- harmonization of the licenses for electricity (trade and supply of electricity),
- status of the daily market of electricity and implementation within the contracting parties of the Energy Community,
- harmonization and implementation of the Regulation 543/2013 regarding transparency of electricity data,
- concept for disbalance calculation at the balance energy market,
- status and development of the daily electricity market;
- development of the wholesale electricity market within the contracting parties of the Energy Community and monitoring according to the ACER indicators,
- implementation of the Regional daily electricity market and interconnecting countries at the Balkan peninsula,
- implementation of cross border balancing between the Balkan peninsula countries,
- regional coordination calculation for capacity allocation within the Balkan peninsula countries,
- conditions and manners of appointing an organized electricity market operator and
- introduction of the directive EU 2015/1222 CACM calculation, allocation and management with capacity congestion.

In the natural gas work group (ECRB GWG) in 2018 the following topics were covered:

1. natural gas wholesale market monitoring,
2. implementation of the Network Rules for natural gas transmission directed at:
   - implementation of balancing within contracting parties of the Energy Community,
   - implementation of the tariffs within contracting parties of the Energy Community and
   - report for the natural gas market transparency.

Participation at the 13th Gas Forum where the main topics were:

- development of the natural gas markets within contracting parties of the Energy Community,
- regional initiatives for construction of interconnectors for connection with the magistral gas pipelines,
- capacity allocation mechanism and rules for harmonized gas structures;
- activities for coordinated platform of the distribution systems with the contracting parties of the Energy Community,
- presentation of the project IAP (Ionian- Adriatic magistral gas pipeline) as part of the South corridor, connecting part of the countries from South-East Europe with aim to provide additional security of supply and development of the gasification,
- the natural gas conditions in the Ukraine in correlation with the relationship with Russia and
- characteristics of the manners setting tariffs for distribution of natural gas within the contracting parties of the Energy Community.

Meeting of ENTSO-G (Organization of Operators of the Natural Gas Transmission Systems) for:

- ENTSOG Platform for transparency at the EU natural gas market and
- transparency in the internal natural gas market.

In the working group for consumers and retail markets (ECRB CRM WG) the following key issues were discussed in 2018:

- preparation of a Report for monitoring of the electricity and natural gas retail markets within the Energy Community for 2017,
- providing data for the ACER/CEER Annual Report on the Results of Monitoring the Internal Electricity and Gas Markets in 2017,
- preparation of Assessment paper of the capacities and procedures of the national regulators in the domain of monitoring of the retail markets, where task force leader was the representative of the Energy Regulatory Commission in this working group,
- preparation of a Report for methodologies for tariffs for distribution of electricity and natural gas within the Energy Community,
- preparation of a joint study for complaints management procedures and dispute resolution with MEDREG, and
- join workshop of ECRB-CEER-MEDREG for customers empowerment at the natural gas and electricity retail markets.

Representatives of the Energy Regulatory Commission, the Ministry of Economy and the electricity and natural gas market operators took active part at three meetings in the Energy Community regarding the projects of interest of the Energy Community.

As a result of the activities, the preliminary list of PECI/PMIs for 2018 was agreed upon by the electricity and natural gas groups at the technical level meetings. After the positive opinion received from ECRB on the consistent application of the criteria for evaluation and the cost-benefit analysis, the proposed list was then discussed and agreed upon at the PHLG and a Decision was adopted

by the Ministerial Council of the Energy Community for establishing a list of projects of interest of the Energy Community (PECI/PMIs) in November 2018.

The list of projects of interest of the Energy Community PECI for 2018 covers the following 2 Macedonian projects:

- PECI Project of interest of the Energy Community for gas connection with the Republic of Serbia and
- PMI Project of interest of the Energy Community for gas connection with Greece.

In 2018 the Energy Regulatory Commission gave significant contribution with its remarks regarding the documents reviewed at the meetings of the Ministerial Council and the PHLG of the Energy Community, which were attended by representatives from the Ministry of Economy of the Republic of North Macedonia.

## X.2. Council Of The European Energy Regulators

The Energy Regulatory Commission, as an observer, participates in the activities of the Council of the European Energy Regulators - CEER with headquarters in Brussels, Belgium.

The Council of the European Energy Regulators was established in 2000 with headquarters in Brussels, Belgium as an association for cooperation of the independent energy regulators in Europe. In this Council there are 29 regulatory bodies as members (27 from the EU member states, Iceland and Norway) and 10 regulatory bodies as observers (Bosnia and Herzegovina, Georgia, Kosovo, North Macedonia, Moldova, Montenegro, Serbia, Switzerland and Albania). The Council of European Energy Regulators is composed of a General Assembly, Board of Directors and 6 working groups.

With the membership in the Council of the European Energy Regulators, the Energy Regulatory Commission acquires experience for implementation of the Third Package of legislation and the challenges met by the EU member states in creation of single, competitive, efficient and sustainable internal energy market in the EU, as well as the new packages of the European legislation.

During 2018 a representative of the Energy Regulatory Commission took part at the liaison officers meeting held in Brussels.

## X.3. Energy Regulators Regional Association

The Energy Regulators Regional Association – ERRA is an expert association of regulatory bodies with aim to strengthen cooperation, exchange of experiences and enhance the capacities of the regulatory bodies. The Energy Regulatory Commission is a full member of this association as of 2004.

In 2018 the Energy Regulatory Commission took part in the following ERRA activities:

- virtual join meeting of the Committee for Tariffs and Prices and the Committee for Licenses and Competitiveness

The topic of this meeting were issues related to electricity generation, market transparency, new role of the regulators in monitoring wholesale and retail markets and price comparison tools, as issues of common interest for both committees.

The Committee for tariffs and prices and the Committee for licenses and competitiveness in 2018 held a joint meeting on the topic “Regulation influencing the innovations: overview of the new technological achievements and potential future effects“.

- Committee for licenses and competitiveness. The Energy Regulatory Commission took part at these meetings where the following was discussed:
  - auction of OIE projects and rationalization of the licensing and permit issuing process,
  - EU “Winter Package“- modifications from the third energy package and influence at the markets and competitiveness,
  - EU “Winter Package“- modifications with the grid operators (modification of the role of DSOs, TSOs (ROC), storage),
  - EU “Winter Package“- regulation of the electricity grid, electricity market, RES and efficiency, rights of the consumers and security of supply,
  - Ten Year National Development Plans (TYNDP) - overview and approval and
  - the role of the operator in the cyber security - overview of the latest development and potential regulatory influences.
- Committee for tariffs and prices**.** The Energy Regulatory Commission took part at two meetings at which the following was discussed:
  - capital investments in energy,
  - the influence of the selection of an electricity supplier on the incomes of the regulated enterprises,
  - regulatory aspects and implementation of the support for generating electricity from renewable energy sources in the Republic of Turkey,
  - case study for the new tariff methodology for natural gas distribution in the Republic of Turkey,
  - tariffs for distribution and transmission: report for the comparative analysis of methodological approaches and main components of the incomes of the ERRA states and
  - tariffs for electricity supply of last resort in the Republic of Turkey.

In 2018, deputy head of the Economy Department of the Energy Regulatory Commission was re-elected as a Chairperson of the Committee for Tariffs and Prices of ERRA with a 2-year term of office.

- The working group for consumers and retail markets. The Energy Regulatory Commission took part at two meetings during 2018 where key discussion topics were the following:
  - smart metering – presentation of smart metering roll-out process by the largest electricity distribution system operator in Estonia,

  - Data hubs (meta-base/data center), data exchange between the transmission system operator and the distribution systems operators, where key data source are the smart meters,
  - analysis of the possibility for preparation of a concept for a simple bill for electricity that would be implemented in several countries,
  - preliminary results of an investigation for alternative dispute resolution, as well as application of web tools for price comparison (Price Comparison Tools) in Romania and Lithuania,
  - presentation of the process of implementation of the system for market monitoring implemented in the Energy Regulatory Commission as well as presentation of the key characteristics of the system itself,
  - presentation of draft- indicators for monitoring of the functioning of the electricity retail market based on the concept applied in ECRB,
  - procedures for disconnection of consumers after submitting notification for unpaid bills- examples from Hungary, Latvia and Saudi Arabia,
  - presentation of preliminary results from the Report for monitoring of the functioning of the electricity retail market with 10 ERRA members in 2017, prepared by the representative of the Energy Regulatory Commission in this work group,
  - price comparison tools - examples of E-control from Austria, Bosnia and Herzegovina and North Macedonia,
  - measuring successful competition at the retail markets- presentation of the ACER index prepared by IPA Advisory,
  - insurance deposit– liability of the consumers of electricity in Turkey supplied by a supplier of last resort,
  - presentation of the key elements from the study visit of a delegation of the Estonian regulatory body of the Irish regulator and
  - action plan for the period 2019/2020.
- ERRA General Assembly,
- Meetings of the Presidential Committee,
- Meeting of the ad- hoc group for strategic planning of ERRA,
- Annual ERRA conference for investments and regulation where the key topics included:
  - current status of the Turkish energy sector,
  - the role of the regulator in improvement demand side management,
  - new trends in the gas policy- perspectives for the regional and global markets and
  - strengthening security of supply in conditions of transitional markets.
- training for regulation of renewable energy sources,
- training for newly appointed members of the regulatory bodies,
- training for electricity market monitoring tools,
- participation of representatives of the Energy Regulatory Commission as instructors at the trainings: Principles of regulation of the natural gas market

and Principles of tariff regulation- specialized training for the Company for water and electricity supply of Oman.

## X.4. Association of the European Water Regulators

The Energy Regulatory Commission at the beginning of 2018, as a full member, took part in the activities of the Association of the European Water Regulators (European Water Regulators – WAREG) with headquarters in Milan, Italy.

This association started its activities in April 2014. After meetings and coordinative sessions of regulatory bodies which were initiators of this platform, in December 2017 WAREG was registered and acquired the capacity of a legal entity with headquarters in Milan, Italy as an association for cooperation of the independent regulators for water in Europe.

This association is established with aim to work on harmonization of the differences in national frameworks for regulation, identification of the needs for join efforts for addressing mutual challenges and establishment of a stable basis for water services regulation in Europe.

WAREG has been established by 12 members - initiators, and in 2018 was composed of 26 regulatory bodies as members (21 of the member states of the EU, as well as North Macedonia, Montenegro, Kosovo, Moldova and Albania) and 5 institutions as observers (Turkey - Ministry for Water Management and Forestry, Poland - Ministry of Environment, Sweden - Association for Waters and Wastewaters, Wales - Regulatory Body for Water Services and Belgium - Energy Regulatory Commission of Brussels. WAREG is composed of a General Assembly, President's Office and 2 working groups.

The need to renew the old infrastructures and construct new systems, as well as their more efficient management is an additional incentive for the regulatory bodies directed at establishment of an efficient system of control and monitoring of the taken steps on this basis. The water management services are faced with social problems with equal availability for the end users, especially related to one sensitive issue of the price policies, that represent one of the main elements of the regulation by the regulatory bodies. The cooperation in this direction and the monitoring of the trends from the region and around gives additional significance in the part of the international actions and activities of the Energy Regulatory Commission.

Through the European Water Regulators Association, the regulatory bodies which are members and observers aim to achieve the following objectives:

- exchange of mutual practices, information, common analyses and comparisons of the existing models for determination of the performances of the water supply companies,
- organization of specialized trainings, technical assistance and exchange of experiences,
- promotion of the best practices and stable regulation of the water sector on European level and
- promotion of the activities for cooperation in order to analyze the sustainability of the services, the possibility for proper investments in the infrastructure, quality standards for the services and consumer protection.

The Energy Regulatory Commission, during 2018, as a full member, took part in three events organized by the Association of the European water regulators:

- 14th General Assembly– Gent, Belgium,
- 15th General Assembly– Sofia, Bulgaria and
- 16th General Assembly- Budva, Montenegro.

In 2018 the Energy Regulatory Commission gave significant contribution with its remarks on the founding documents subject to revision at the meetings of the General Assembly, namely regarding the Statute and Rules of Procedure of the European Water Regulators Association.

## X.5. European Integration

The Energy Regulatory Commission with its activities made a significant contribution to the fulfilment of the obligations in the accession process of the Republic of North Macedonia in the European Union.

Energy Regulatory Commission representatives took part with its presentation and made a significant contribution at the 13th meeting of the Sub-Committee for Transport, Environment, Energy and Regional Development held in Brussels, Belgium in March 2018.

According to the Decision for establishing work groups for preparation of the National Program for adoption of the EU legislation and preparation of the negotiating positions for the negotiations for membership in the EU (NPAA), the Energy Regulatory Commission took part in the work group for Chapter 3.15 Energy and prepared the part for the 3.15.2 Internal Energy Market.

Within this working group meetings are regularly held with the Secretariat for European Affairs and the Ministry of Economy, the by-laws needed for adoption in the energy market sectors are being planned and the fulfillment of the taken obligation for the EU integration is updated.

The Energy Regulatory Commission provided quarterly and semi-annual reports for undertaken activities in the internal energy market and renewable energy sources to the Secretariat for European Affairs for regular reporting to the European Commission, as well as for the Report on the progress of the country regarding EU membership preparations in 2018.

## X.6. Balkan Advisory Forum

The Energy Regulatory Commission, along with the regulatory bodies of Greece (RAE), Bulgaria (EWRC), Serbia (AERS) and Montenegro (REGAGEN), in September 2018, signed the Agreement for Establishing a Permanent Balkan Advisory Forum of the Regulatory Bodies of the Balkan Countries, in Thessaloniki, the Republic of Greece.

*Signing Agreement for establishing a Permanent Balkan Advisory Forum, Sept 2018*

The purpose of the establishment of the Balkan Advisory Forum is to enable a closer cooperation, exchange of experiences and knowledge as well as possible building of common positions of the members for various regulatory affairs in the electricity, natural gas and water services domain.

The operation of the Balkan Advisory Forum is going to be especially directed towards development of a stabile regulatory and market framework that would enable attraction of investments in the energy and water sector, thereby enabling the consumers to acquire safe, secure, sustainable, competitive and available supply with electricity, natural gas and water as a crucial precondition for the economic development and the social safety, then optimization of the use of the interconnection capacities and diversification of the energy sources, stimulation of the competition of the energy markets at regional and European level, promotion of the energy efficiency and utilization of the renewable sources, as well as promotion of harmonized and non-discriminatory rules that would enable faster integration at the regional markets.

The Establishment Agreement enables other regulatory bodies from the region to access the Balkan Advisory Forum and thereby strengthening the cooperation and fulfilment of the common priorities.

## X.7. Project Implementation and Other Events

During 2018 the Energy Regulatory Commission worked on implementation of a mutual project with NARUC (National Association of Regulatory Utility Commissions) from the USA, where the main objective is to increase consumers awareness of the transition towards a competitive and functional electricity retail market, through development and promotion of Price Comparison Tool aimed for

retail electricity market consumers in the Republic of North Macedonia. This activity has been supported by USAID and its implementation continued in 2019.

In June 2018 the Energy Regulatory Commission received technical assistance from NARUC/USAID, by engaging an international expert for natural gas. Within the one week stay of the expert in the Energy Regulatory Commission, international experiences from the natural gas area were presented, with a special focus on the tariff system for natural gas transmission, with entry/exit concept and capacity charges, as well as rules for capacity allocation. Also, the expert held a one-day workshop with the representatives of the natural gas sector companies. After the visit, the international expert prepared two reports regarding the Tariff system for natural gas transmission and the Rules for capacity allocation with recommendation for their implementation and alignment with the European directives.

During 2018 the Energy Regulatory Commission, along with the Association of Providers of Utility Services of the Republic of North Macedonia, under sponsorship of the Regional Project “Regional Network for Strengthening of Capacities in the Water Service Sector”, financed by the Governments of Germany and Switzerland, implemented by the German Company for International Cooperation (GIZ) through the Regional fund for Modernization of the Municipal Services (ORFMMS) in the countries from the Western Balkan, took part in a project entitled “Support of the Small Public Utility Companies that Provide the Water Service at Regions of less than 10.000 Equivalent Inhabitants for Preparation Business Plans and Plans for Adjustments of the Tariffs for the Regulated Period 2019-2021“.

In 2018, aside to the participation in the events organized by ECRB, CEER, ERRA and WAREG, the following events and conferences were attended by representatives of the Energy Regulatory Commission:

- meetings within the project for implementation of common electricity day-ahead market between Bulgaria and North Macedonia, which took place in April and May in Sofia, Bulgaria,
- first workshop for Network Rules for natural gas transmission and natural gas market structure organized by USAID/NARUC, that took place in May in Vienna, Austria,
- workshop referring to the installment of individual metering devices and energy demand management in district heating systems, organized by EBOR, which took place in June in Vilnius, Lithuania,
- second workshop for Network Rules for natural gas transmission and natural gas market structure organized by USAID/NARUC, which took place in November in Vienna,
- second workshop entitled “Price Comparison Tool and Consumer Communication” organized by USAID/NARUC, which took part in July in Trebinje, Bosnia and Herzegovina,
- first workshop for cyber security in the energy systems, organized by USAID/NARUC, held in October in Riga, Latvia,
- third workshop for preparation of ten-year national development plans for transmission grid, organized by USAID/NARUC, held in Ljubljana, Slovenia,

- first workshop of the project for consumers and public outreach in South-eastern Europe, organized by USAID/NARUC, held in December in Vienna Austria,
- one day visit of the power exchange in Sofia in October,
- meeting with the Energy and Water Services Regulatory Commission of Bulgaria, held in Sofia in October and
- participation at the international conference for water held in November in Tirana, Albania.

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# FINANCIAL STATEMENT

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# XI. FINANCIAL STATEMENT FOR 2018

## XI.1. Financing of the Energy Regulatory Commission

In accordance with Article 35, paragraph 1 from the Energy Law, the Energy Regulatory Commission is being financed from own resources provided through:

- fee for issuance of licenses for performance of energy activities, i.e. entry in the register of foreign natural gas and electricity traders and suppliers which can perform activity in the Republic of North Macedonia,
- fee for setting water services tariffs procedure, i.e. regulatory tariff for water services and,
- annual fee of the license holders for performance of energy activities, as well fee from the annual revenue of the water services providers realized from the provision of water services.

The fee from the total annual revenue of the licensees for performing energy activities for 2018 and from the annual income of the providers of water services realized from the provision of water services, was determined with Decision no. 08-1897/1 from 16.03.2018 (Official Gazette of the Republic of Macedonia no. 47/18), by the Assembly of the Republic of North Macedonia and that percentage of capture for 2018 is 0,0497%.

## XI.2. Financial Results from the Energy Regulatory Commission Operations

The Energy Regulatory Commission administers the accounting records according to the Law on Accounting for Non-Profit Organizations, the Rulebook on Accounting Plans of the Non-Profit Organizations, the Rulebook on Accounting Plans and Balances of the Non-Profit Organizations. Preparation of the financial statements and recognition of revenues and expenditures is carried out in accordance with the principle of modified occurrence of business changes, i.e. expenditures and income is recognized in the accounting period in which it occurred and in 30 days' time after the expiration of the accounting period, in order to provide accurate, truthful, reliable, comprehensive, prompt and separate presentation of the balance sheet positions, balance of assets, liabilities, sources of funds, revenues, expenditures and performance results.

### XI.2.1. Revenues

Total collected revenues of the Energy Regulatory Commission for the period 01.01 – 31.12.2018 are 80.541.218 denars, whereby:

- 76.230.398 denars or 94,65% of the total revenue comes from the legally collected fee to the licenses holders that perform energy activities,
- 1.692.536 denars or 2,10% are collected revenues from issuing licenses,
- 1.292.646 denars or 1,60% from the total revenues comes from the legally collected fee to the water services providers,

- 1.300.000 denars or 1,62% are collected revenues from the procedure for setting tariffs for water services and
- 25.638 denars or 0,03% are collected revenues on other basis (interest from regular operations, court decisions, exchange rate differences, etc.).

*Table XI.1. Overview of the revenue obtained from the operation of the Energy Regulatory Commission for 2018*

| Ord. No. | REVENUE | 2018 | |
|---|---|---|---|
| | | collected (denars) | share in the total revenue (%) |
| **I.** | **Total revenue from operation (I.1. + I.2.)** | **80.541.218** | **100,00** |
| **I.1.** | **Revenue from collected fees on licensees for performing energy activities, issuing licenses, water services providers and fees charged in the procedures for setting water tariffs. ( I.1.1 + I.1.2 + I.1.3 + I.1.4 )** | **80.515.580** | **99,97** |
| I.1.1. | Fee from the total annual revenue of the licensees for performing energy activities | 76.230.398 | 94,65 |
| I.1.2. | License issuance fee | 1.692.536 | 2,10 |
| I.1.3. | Water services providers fee | 1.292.646 | 1,60 |
| I.1.4. | Water service tariff setting procedure fee | 1.300.000 | 1,62 |
| **I.2.** | **Other revenue (interest from regular operations, court decisions, exchange rate differences, etc.)** | **25.638** | **0,03** |
| **I.3.** | Transferred part of the income excess from the previous year | 48.970.166 | |
| | **TOTAL REVENUE** | **129.511.384** | |

## XI.2.2. Expenditures

Financial expenditures for operation of the Energy Regulatory Commission according to the competences from the Energy Law and the Law on Setting Prices of Water Services in 2018 are 57.134.596 denars. They are 30,60 % under the planned financial assets for 2018.

*Table XI.2. Overview of planned and realized expenditures from the operation of the Energy Regulatory Commission for 2018*

| | EXPENDITURES | 2018 | | |
|---|---|---|---|---|
| | | planned (denars) | realized (denars) | real./ plan. in (%) |
| **I.1** | **MATERIAL EXPENDITURES, SERVICES AND DEPRECIATION** | **15.694.400** | **9.799.580** | **55,29** |
| 1. | Consumables | 844.400 | 180.267 | 21,35 |
| 2. | Energy costs | 1.800.000 | 1.339.371 | 74,41 |
| 3. | Other services | 4.722.000 | 1.611.886 | 34,13 |
| 4. | Transport services | 4.735.000 | 4.513.203 | 95,31 |
| 5. | Representation expenses | 1.000.000 | 1.030.707 | 103,07 |
| 6. | Lease | 798.000 | 374.903 | 46,98 |
| 7. | Other material expenditures | 1.795.000 | 749.243 | 41,74 |
| 8. | Depreciation and reevaluated depreciation | 0,00 | 0,00 | 0,00 |
| **I.2** | **OTHER EXPENDITURES** | **11.602.900** | **7.419.905** | **62,37** |
| 9. | Bank payments fee | 100.000 | 84.757 | 84,75 |
| 10. | Insurance costs | 380.000 | 182.947 | 48,14 |
| 11. | Per diems for business trips in the country and abroad | 3.860.000 | 3.619.542 | 93,77 |
| 12. | Staff costs | 1.440.000 | 758.746 | 52,69 |
| 13. | Compensation to the Complaints Commission in the energy area | 493.400 | 161.110 | 32,65 |
| 14. | Membership fees | 1.329.500 | 506.929 | 38,12 |
| 15. | Intellectual and other services | 3.700.000 | 1.898.927 | 51,32 |
| 16. | Other expenditures | 300.000 | 206.947 | 68,98 |
| **I.3** | **CAPITAL AND OTHER ASSETS** | **9.280.000** | **4.257.039** | **45,87** |
| 17. | Construction facilities assets | 0,00 | 0,00 | 0,00 |
| 18. | Procurement of IT equipment, software and software licenses | 4.000.000 | 3.442.839 | 86,07 |
| 19. | Procurement of motor vehicle | 0,00 | 0,00 | 0,00 |

| | | | | |
|---|---|---|---|---|
| 20. | Procurement of furniture | 4.800.000 | 814.200 | 16,96 |
| 21. | Procurement of other equipment | 480.000 | 0,00 | 0,00 |
| **I.4.** | **SALARIES AND SALARY CONSTRIBUTIONS** | **45.750.180** | **35.658.072** | **77,94** |
| 22. | Salary and salary contributions | 45.750.180 | 35.658.072 | 77,94 |
| **II.** | **Total operation costs (I.1. + I.2. + I.3. + I.4.)** | **82.327.480** | **57.134.596** | **69,40** |

The Energy Regulatory Commission, in accordance with the obligations from the Energy Law, transfers the excess funds collected by the end of the year into the following one.

Explanation on the intention for which the assets have been used, by their respective expenditure categories:

- category of consumables refers to spent office supplies, cleaning and maintenance products, other consumables and spent money for the purchase of fine inventory and auto tires,
- the energy cost category refers to the funds spent for electricity and fuel costs,
- category other services refer to the funds spent on investment maintenance of the basic assets and transportation means, advertising, photocopying, printing, communal hygiene, software maintenance costs, archive and bookkeeping operations, etc.,
- the category transport services refer to the expenditures for telephone services, postal services, internet services and Platts subscription,
- Lease category refers to the incurred expenses based on lease of an apartment for a member of the Commission, as well as a lease of equipment,
- the category of depreciation costs does not represent an expense in non-profit organizations, and it has no impact on the balance of expenditures, but affect the decrease in the value of the assets and sources of funds,
- the cost category of other material expenditures refers to court expenses, professional literature expenses, seminars, vehicle registration expenses, cooperation with regional bodies, etc.,
- the insurance costs category refers to costs made for insurance of the administrative building, the basic assets, transportation means, as well as travel insurance for the employees,
- the per-diem category for business trips in the country and abroad refers to costs incurred for per-diems for business trips in the country and abroad, transportation costs, overnight stay, parking, pay tolls, visa costs etc.,
- the category of staff costs refers to costs made for the payment of recourse for employees, for a separate life, retirement, compulsory systematic examination, jubilee award, employee assistance and other benefits according to the Collective Agreement of the Energy Regulatory Commission,

- the cost category of compensation to the Complaints Commission in the area of energy refers to the costs incurred for members and deputies of the Commission for resolving complaints from the area of energy,
- the cost category for membership fees refers to costs incurred for membership fees for membership in ERRA, CEER and MAKO CIGRE,
- the cost category for intellectual and other services refers to costs incurred for lawyer services, notary services, freelance work payment, agreements per service, financial reports audit, adaptive maintenance of the website, as well as other intellectual services,
- the other expenses category refers to the costs incurred based on foreign exchange rate differences, tax on non-deductible expenses, etc.,
- the category of capital and other assets refers to the costs for procurement of IT equipment, office furniture, licenses, and other equipment necessary for the operation of the Energy Regulatory Commission and
- the salary and salary contributions cost category refer to costs incurred for salaries and contributions to salaries for 30 employees in the Energy Regulatory Commission.

ENERGY AND WATER SERVICES REGULATORY COMMISSION OF THE REPUBLIC OF NORTH MACEDONIA

# ACTIVITIES IN 2019

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# XII. ACTIVITIES IN 2019

In order to enhance the efficiency, competitiveness and transparency of the energy markets, the Energy Regulatory Commission will continue to perform its competences determined under the Energy Law in 2019, i.e. especially to:

- monitor the functioning of the energy markets due to provision of secure energy supply,
- monitor the fulfilment of the legally determined obligations of the performers of the regulated energy activities referring to the provision of security of supply of electricity, natural gas and district heating,
- ensure protection and promotion of consumer rights and will follows the implementation of the measures to protect consumer rights by the transmission and distribution systems operators, as well as the suppliers especially regarding:
  - access to full and understandable information regarding the prices and tariffs applied in the household energy prices,
  - consumed energy bills payment manner,
  - user disconnection from the systems,
  - grid repairing and maintenance compensations,
  - acting upon objections and complaints submitted by the consumers,
  - consumer rights to obtain data on their consumption and
  - provision of information to consumers regarding their rights.
- adopt and amend rulebooks, rules, prescriptions, methodologies and tariff systems,
- adopt decisions on prices and tariffs for regulated energy activities and for the highest selling prices of the oil derivatives and transportation fuels based on the proper prescriptions, methodologies and tariff systems and monitors the application of the tariff systems and prescribed tariffs,
- issue licenses and decisions on amending, transferring, extending, suspending, revoking and termination of licenses for performing separate activities in the energy area and monitors the operation of the license holders regarding their obligations determined in the issued licenses, including the operations related to the cross-border transmission of electricity and natural gas,
- adopt decisions for entry in the register of traders and suppliers with electricity and natural gas and will keep this register,
- adopt decisions for acquiring the status of preferential producer and decisions on the use of feed-in tariffs and will keep the register of preferential producers,
- approve the grid rules adopted by the energy systems operators,
- approve the balancing rules of the electricity and natural gas transmission systems on proposal of the respective operators and monitors their application,
- decide upon complaints submitted:
  - by the electricity, natural gas and district heating transmission and distribution system users:
    - against the acts of the respective operators for rejecting access or connection to the respective system or against the acts determining the compensation amount and other connection conditions or

    - due to damages incurred due to restrictions or termination of electricity, natural gas or thermal energy supply, from and in the electricity or natural gas transmission or distribution systems,
  - by the consumers against the suppliers under public or universal service obligation, as well as against the suppliers of last resort regarding:
    - the supply service quality,
    - limiting or disabling right to switch supplier,
    - consumed energy calculation and bill amount,
  - the energy companies and consumers against the decision of the respective energy market operator due to the refusal of the request for registration at the energy market, as well as refusal of the request for acquire a balance responsible party status.
- cooperate with the competent state bodies, the local self- government units, the energy systems users and energy consumers with other organizations and institutions,
- take measures and submits proposals to the competent bodies on taking measures in accordance with their competence and in a legally prescribed procedure, to the entities that perform the activity contrary to the Energy Law,
- initiate and proposes adoption of new and amends the existing laws and other prescriptions in the energy area,
- take part in respective regional and international organizations and cooperates, consults and exchanges information with other regulatory bodies from the region, as well as the Energy Community Regulatory Board and the Energy Community Secretariat and concludes agreements for cooperation with other regulatory bodies due to creation of a competitive regional electricity and natural gas market and alignment of the legal, regulatory and technical frame,
- perform other activities in accordance with the Energy Law.

During 2019 the Energy Regulatory Commission will monitor the progress of the electricity market liberalization which stared on 1st of January 2019 and the natural gas market liberalization that started on 1st January 2015.

In that context the Energy Regulatory Commission will work on making functional web platform for price comparison Switch.mk, latest until mid-2019, when the operation of the Universal electricity supplier is expected to commence.

In 2019 the Energy Regulatory Commission will continue to actively work on the remaining by-laws that need to be adopted within deadlines determined under the Energy Law.

In the electricity area, the Energy Regulatory Commission in 2019 will work on the Grid Rules for Electricity Distribution of Elektrodistribucija DOOEL Skopje, in order to increase the coverage of new connection switches which will be treated as standard, as well as clarification of the metering points division. Also, in 2019 the Energy Regulatory Commission will approve the Balancing Rules of MEPSO JSC Skopje introducing a new balancing mechanism which is fully market based and will be applied for all electricity market participants.

During 2019, the Energy Regulatory Commission, in addition to the regular activities in the natural gas, district heating and oil derivatives area, will work on

preparation of the remaining by-laws that are to be adopted within the deadlines set under the Energy Law.

Energy Regulatory Commission, during 2019, will take part in the meetings for selection of the PECI projects (projects of common interest of the Energy Community of South-East Europe in the electricity and natural gas area).

During 2019 the Energy Regulatory Commission, in cooperation with the Faculty for Electrical Engineering and Information Technologies, will start activities for upgrading the system for collection and processing of data in line with the provisions from the new Energy Law and will also work on transposing the adapted version of the REMIT regulation, for which there is an implementation obligation within the contracting parties of the Energy Community.

Energy Regulatory Commission will continue to implement the activities in compliance with the legal provisions from the Law on Setting Prices of the Water Services in 2019. Namely, for that purpose, the Energy Regulatory Commission will continue to monitor the application of the water services prices. At the same time, in accordance with its legal competences, it will monitor the application of the water services tariffs with the implementation of the business plans of the water services providers. The Energy Regulatory Commission, after the submitted reports for the implementation of determined tariffs for water services and the realization of the Plan for Adjustment of the Business Plan by the Water Services Providers Providing Water Services at Areas of over 10.000 Equivalent Inhabitants, will compare the same parameters with the previously approved ones in the Decisions for setting water services tariffs.

The Energy Regulatory Commission will continue to participate in the activities of the following bodies in 2019 as well:

- Energy Community Regulatory Board – ECRB and the working groups for Electricity, Natural Gas and Consumers and Retail Markets, as a full member,
- Energy Regulators Regional Association – ERRA and the Committee for Licenses and Competition, the Committee for Tariffs and Prices and the Working Group for Customers and Retail Market, as a full member,
- Council of European Energy Regulators – CEER and the working groups, as an observer,
- European Water Regulators – WAREG, as a full member and
- Balkan Advisory Forum, as a full member.

Energy Regulatory Commission in 2019 is going to take part at the meetings of the newly established working group of the ECRB for implementation of the Adapted Regulation (EU) 1227/2011 regarding the integrity and transparency at the wholesale energy markets (REMIT), which is to start applying within the Energy Community.

During 2019 the Energy Regulatory Commission will apply for participance in the working groups of the Agency for the Cooperation of Energy Regulators - ACER.