

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



An introduction to the Macedonian power market and market reform

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The background features a stylized illustration in shades of blue and orange. It depicts various elements of an electricity market: wind turbines on the left, a large industrial power plant with cooling towers in the center, high-voltage transmission towers and power lines stretching across the scene, solar panels on the right, and residential buildings and a car at the bottom right. The overall theme is energy and infrastructure.

Electricity market in the Republic of North Macedonia

Electricity market

The electricity market is composed of two segments: REGULATED and LIBERALIZED ELECTRICITY MARKET.

Regulated electricity market participants:

- the preferential electricity producers,
- 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, MEMO JSC Skopje,

Electricity market

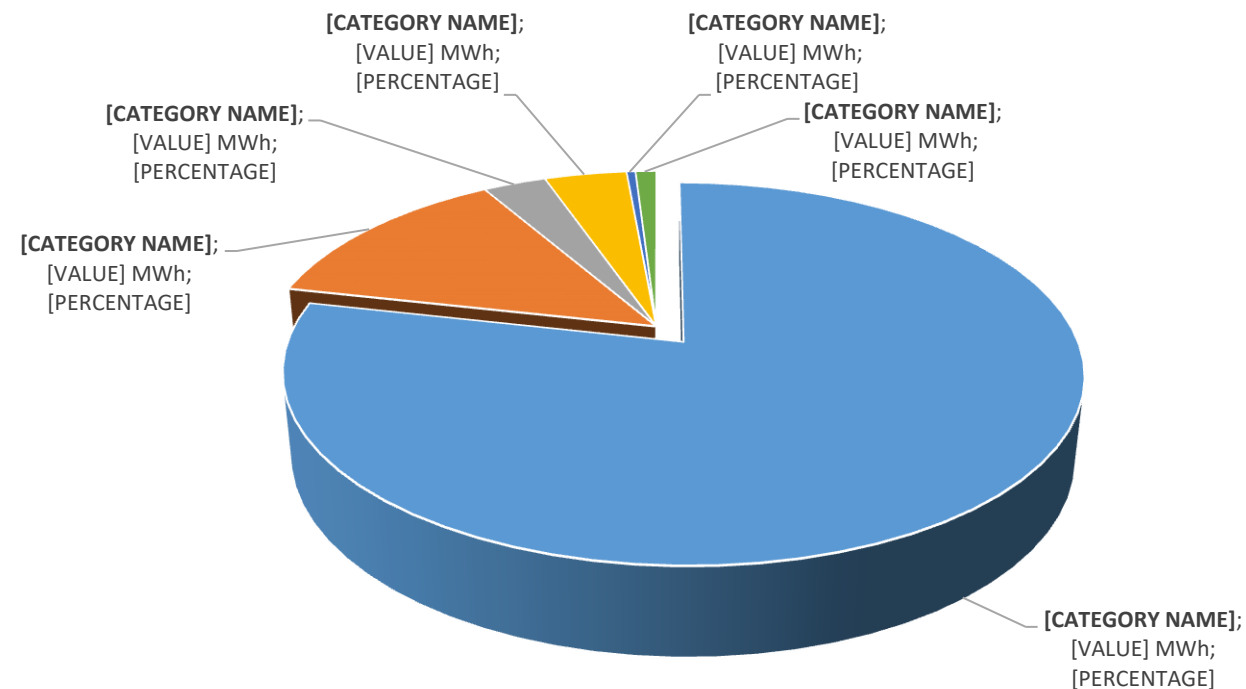
Liberalized electricity market participants can be:

- electricity producers,
- the universal supplier,
- the electricity supplier of last resort,
- 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.

Electricity generation

Generation (MWh)		2016	2017	2018
1.	ESM JSC Skopje	4.382.207	4.228.861	4.273.897
1.1	TPP Generation	2.777.217	3.289.985	2.703.379
1.2	HPP Generation	1.494.279	820.003	1.460.297
1.3	CHPP Generation	1.228	8.393	12.882
1.4	WPP Generation	109.483	110.480	97.338
2.	TE-TO JSC Skopje	550.119	794.654	716.579
3.	EVN Elektrani DOOEL Skopje	184.902	119.826	164.917
4.	Other SHPP	203.470	151.937	214.281
5.	PVPP	23.717	23.921	23.333
6.	BTPP	36.033	51.551	54.050
7.	TOTAL	5.384.146	5.377.754	5.447.057

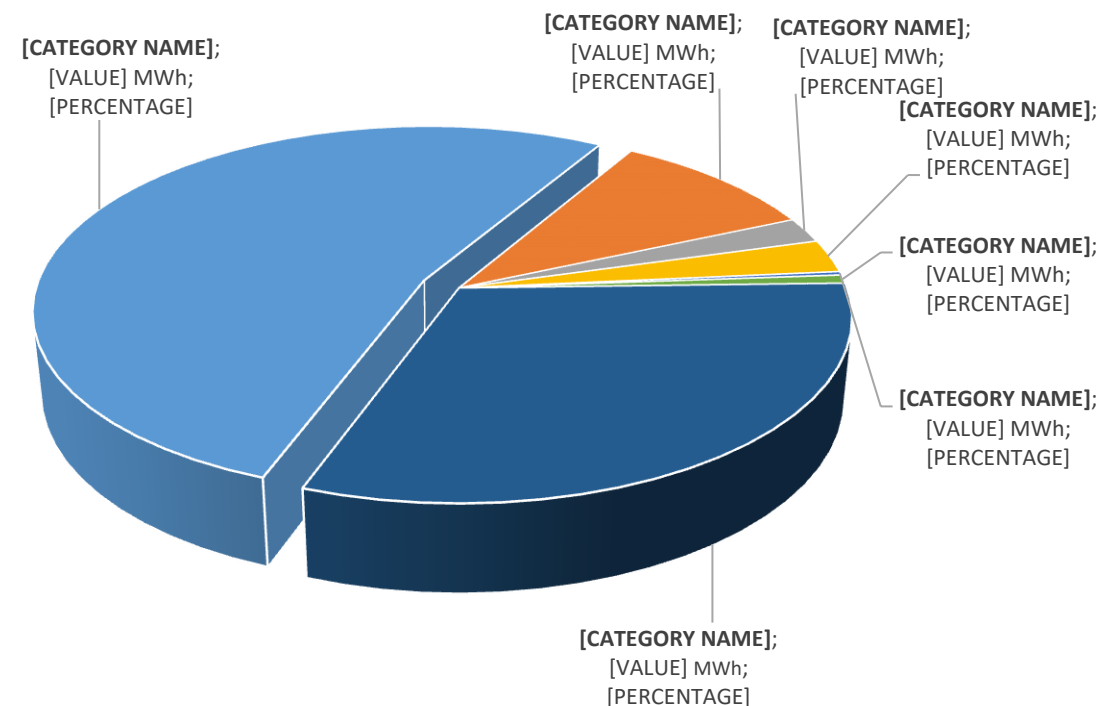
Structure of domestic electricity producers in 2018



Sale and purchase of electricity

Ord. No.	Description	2016	2017	2018
1. (2+3)	Total sale from domestic producers (domestic market and exports)	5.384.146	5.377.754	5.447.057
2.	Sale from domestic generation at the domestic market	5.224.293	5.066.728	5.117.840
3.	Exports from domestic generation	159.853	311.026	377.423
4.	Declared imports	2.190.606	2.293.571	2.297.169
5. (2+4)	Total volume of sold electricity at regulated and free market	7.414.899	7.360.299	7.415.009
6.	% participation of imports	29,54	31,16	30,98

Structure of available electricity for covering needs of the consumers in the Republic of North Macedonia in 2018

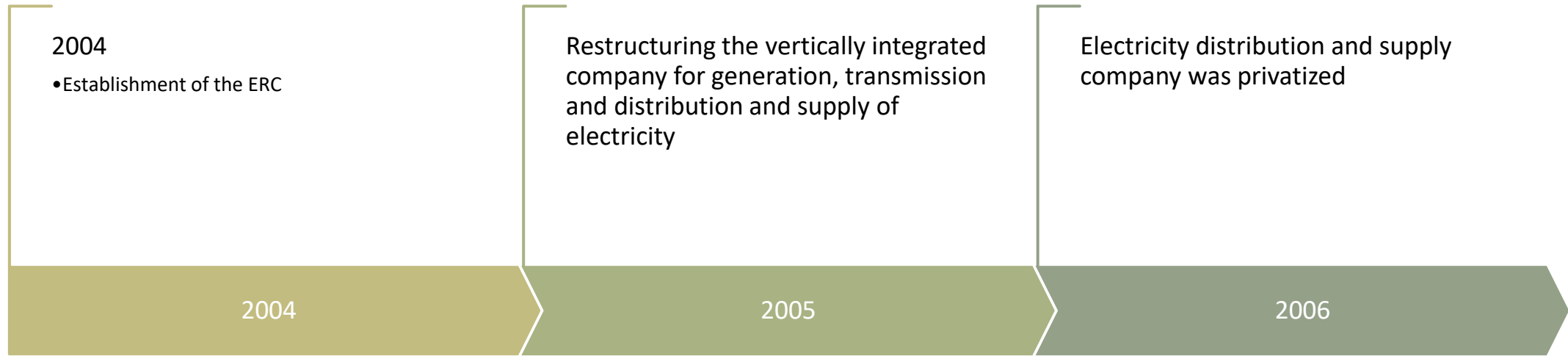
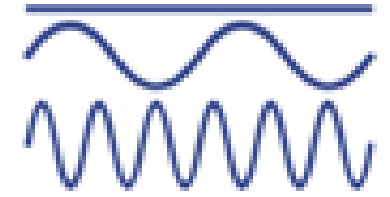


Electricity Consumption

Ord. No.	Consumers	2016	2017	2018
		(MWh)	(MWh)	(MWh)
1.	Connected to the transmission grid (110kV)	1.327.568	1.127.163	1.158.327
2.	Losses in the transmission grid	116.080	111.058	125.269
3.	Connected to the distribution system	5.127.643	5.250.091	5.206.869
4.	Losses in the distribution system	889.582	893.360	868.549
5.	Total electricity consumption (1+3)	6.455.211	6.377.254	6.365.196

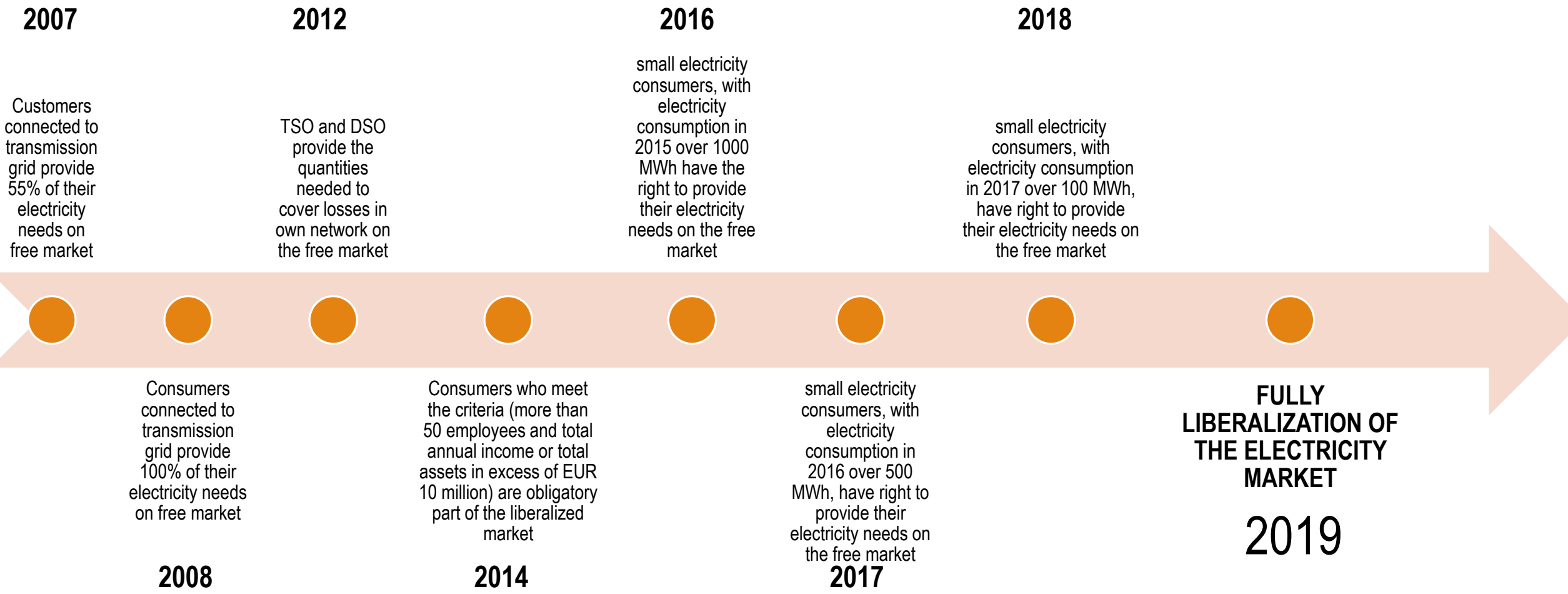
Process of electricity market liberalization in the Republic of North Macedonia





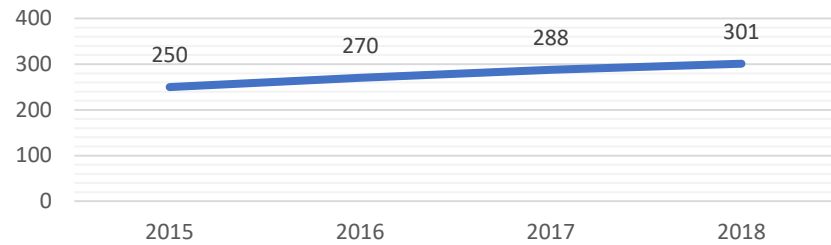
Beginning of the electricity market opening

Process of liberalization of the electricity market in the Republic of North Macedonia

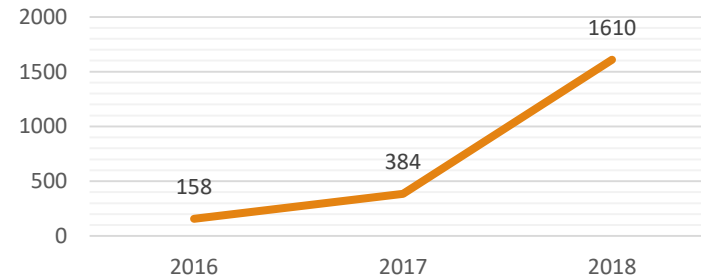


Liberalized electricity market in the Republic of North Macedonia

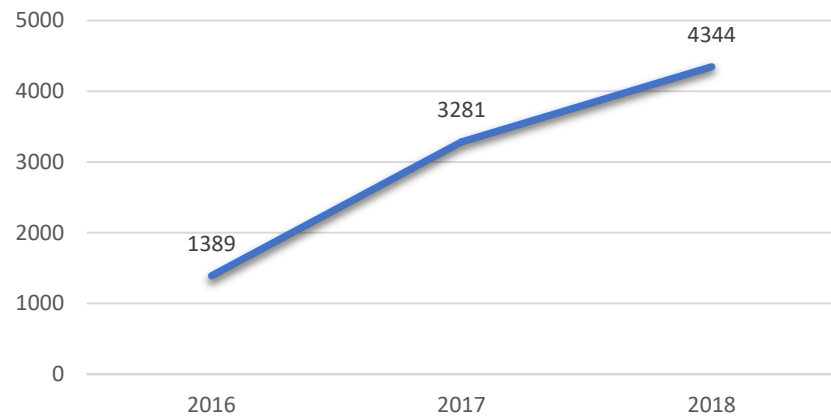
Number of consumers who meet the criteria (more than 50 employees and total annual income or total assets in excess of EUR 10 million)



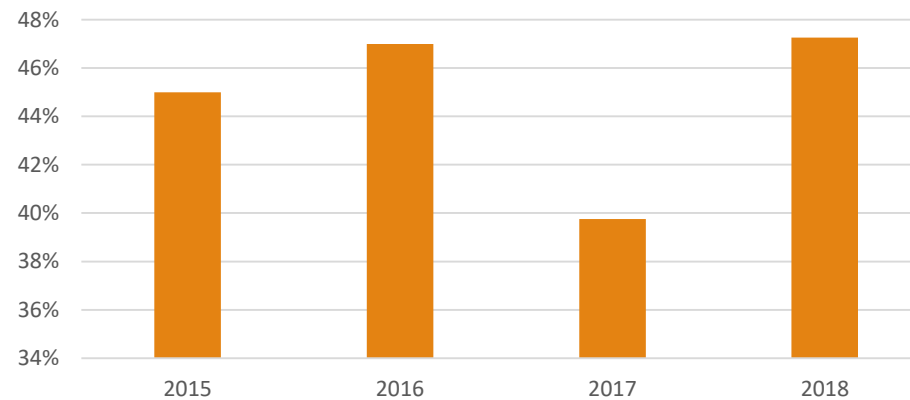
Number of small electricity consumers (according quantity criteria)



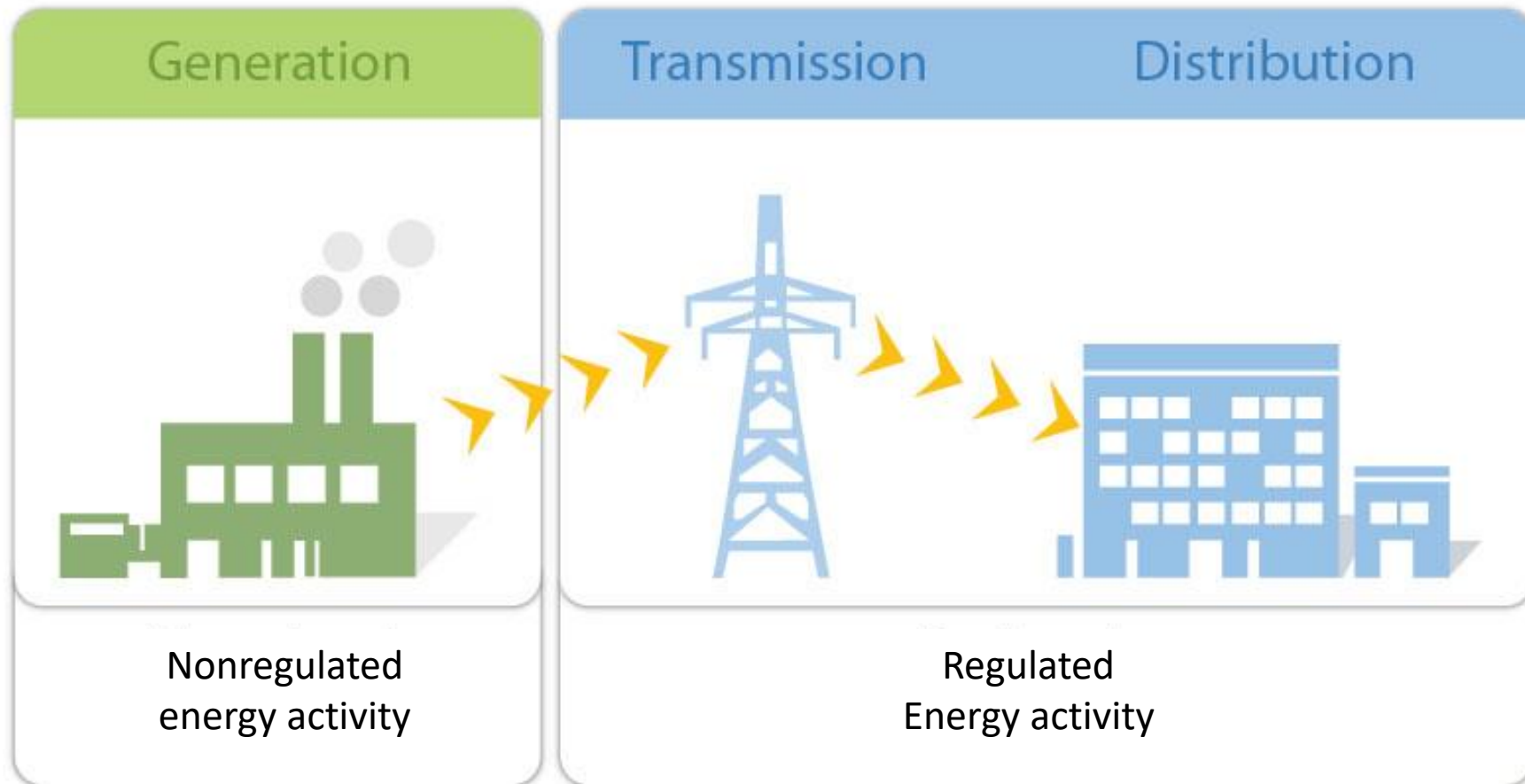
Number of supplier switches



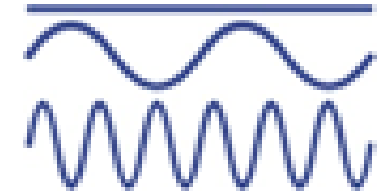
Percentage of real market liberalization



New Energy Law - fully harmonized with European legislation (third energy package)



Benefits from market liberalization



Liberalization has enabled end consumers to buy electricity at realistic prices, which reflect the real costs of the service provided.

The biggest benefit was felt by the so-called industrial consumers who decided to provide their electricity needs on the free market from 1 January 2019 - their total electricity costs have dropped by 20% to 30%.

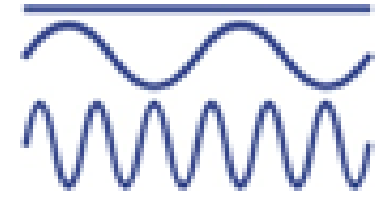
In order to protect small consumers and households from high electricity prices on the wholesale and price shocks, the new Energy Law provides protection for these categories of consumers by providing JSC ESM as the highest installed electricity generator in the Republic of North Macedonia, it is obliged to offer to the universal electricity supplier:

- 1) in 2019 at least 80% of the total annual needs of the supplier,
- 2) in 2020 at least 75% of the total annual needs of the supplier,
- 3) in 2021 at least 70% of the total annual needs of the supplier,
- 4) in 2022 at least 60% of the total annual needs of the supplier,
- 5) in 2023 at least 50% of the total annual needs of the supplier;
- 6) in 2024 at least 40% of the total annual needs of the supplier;
- 7) in 2025 at least 30% of the total annual needs of the supplier.

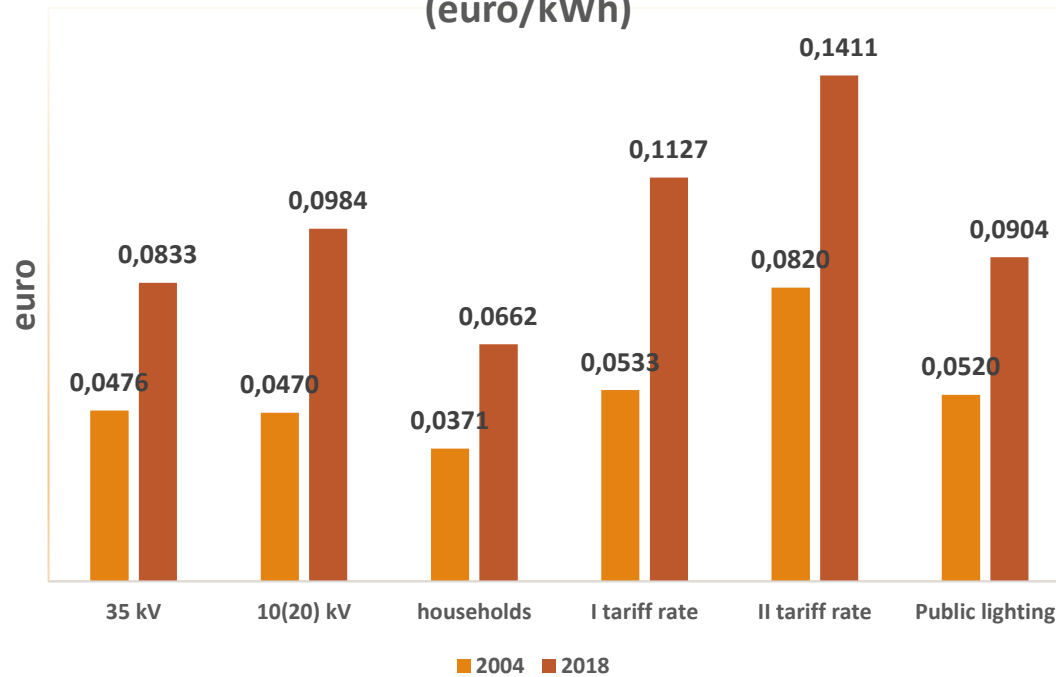
Electricity Market Liberalization started for all consumer category from 1 January 2019

Even though households as a category of electricity consumers have acquired the right to provide their electricity needs on the free electricity market, neither the suppliers have shown interest in bidding for this category of consumers, nor have the households shown an interest in being supplied by suppliers of the free electricity market.

Regulated prices

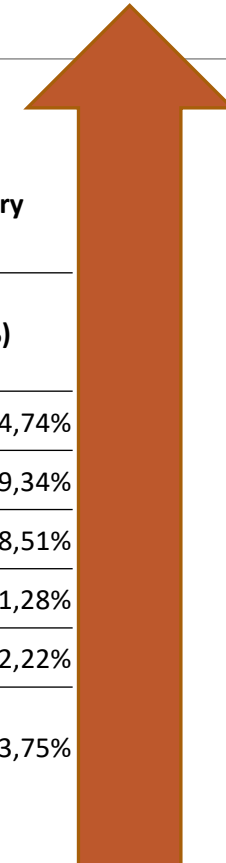


Electricity price by categories of consumers
(euro/kWh)

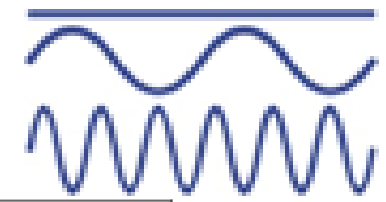


Change in prices per consumer category

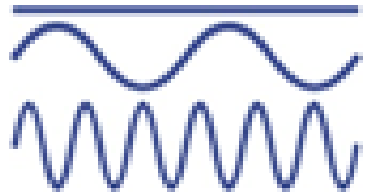
consumers categories	2018/2004 (%)
35 kV	74,74%
10(20) kV	109,34%
Households	78,51%
I tariff rate	111,28%
II tariff rate	72,22%
Public lighting	73,75%



Cross-subsidies and effects of their Removal (2015)



Consumers category	Prices determined by ERC (€/MWh)	Cost reflective price (€/MWh)	ERC price - real price (€/MWh)	% of cross-subsidies
35 kV	86,60	68,68	↑ 17,92	26,10%
10(20) kV	81,85	68,68	↑ 13,17	19,18%
Households	69,62	94,23	↓ -24,62	-26,12%
I tariff rate	98,27	72,67	↑ 25,60	35,22%
II tariff rate	142,03	94,23	↑ 47,80	50,72%
Public lighting	90,89	72,67	↑ 18,22	25,07%



**ENERGY AND WATER SERVICES REGULATORY COMMISSION
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**THANK YOU
FOR YOUR ATTENTION!**

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