



STATUS OF THE RENEWABLE ENERGY SECTOR AND REGULATION IN NORTH MACEDONIA

**ENERGY, WATER SERVICES AND MUNICIPAL WASTE MANAGEMENT SERVICES
REGULATORY COMMISSION OF THE REPUBLIC OF NORTH MACEDONIA**

Regulations for RES

***Energy Law** - procedure, documentation and bylaws

By-laws which refer to electricity producers from renewable sources:

Rulebook on licenses – procedures, conditions and documentation for getting a license

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.

Regulations for RES – support scheme

***Energy Law** - procedure, documentation and bylaws

By-laws which refer to electricity producers from renewable sources:

Rulebook on licenses

Rulebook on Renewable Energy Sources

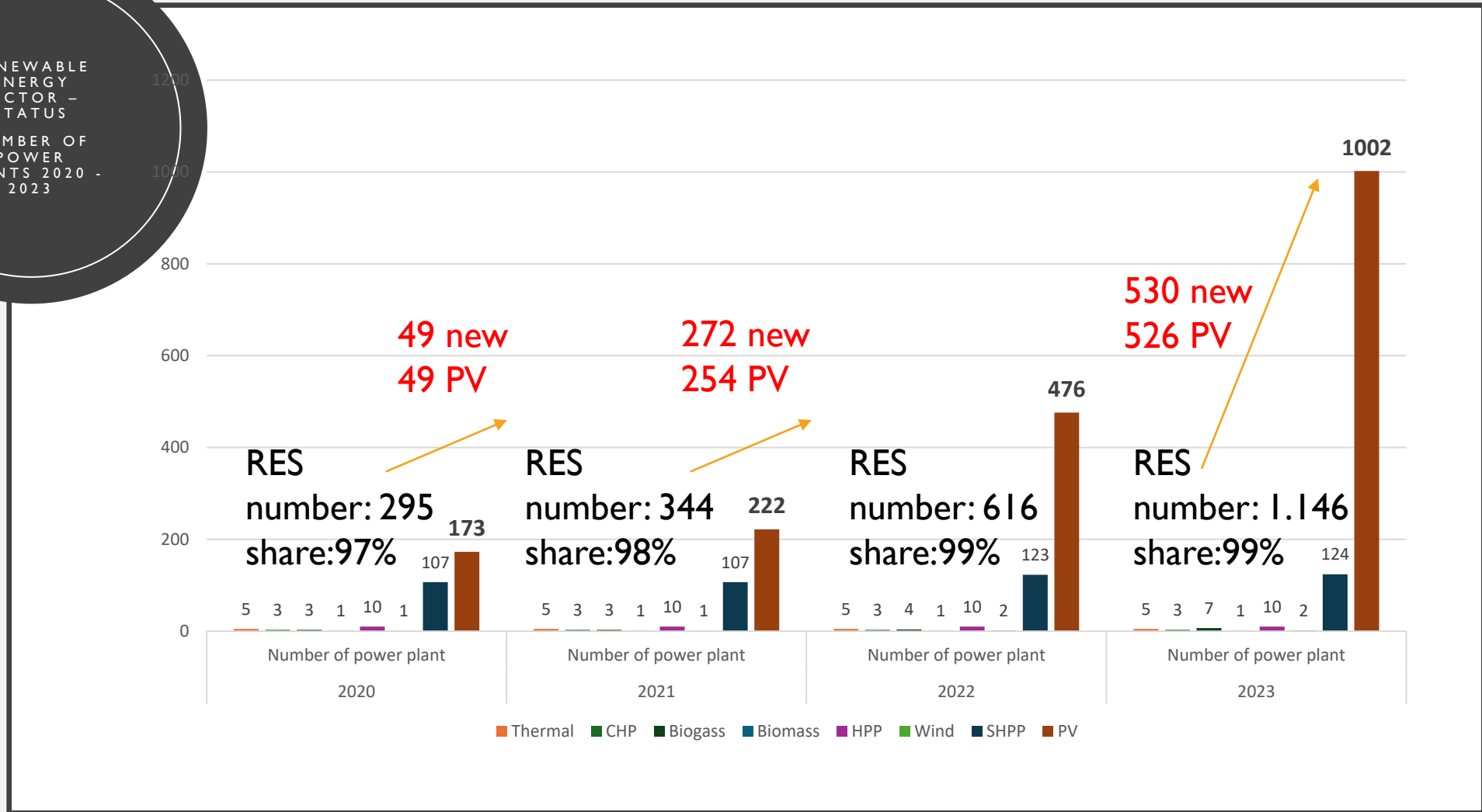
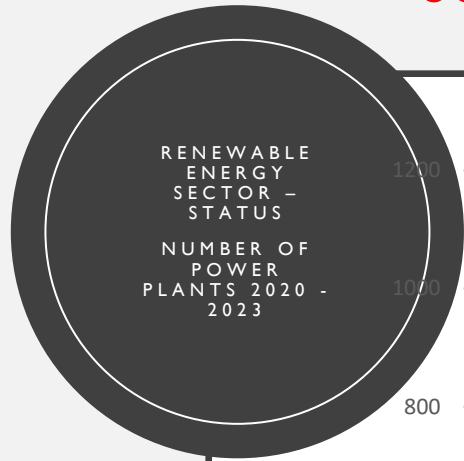
By-laws which refer to preferential electricity producers from renewable sources:

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 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, the manner of execution of the tender procedure and auction for awarding premiums.

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

Rulebook on Preferential Producers which are using Feed-in Tariff - 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.

851 NEW POWER PLANT from RES in period of 3 years



Total number of power plant by the 2020 – 303

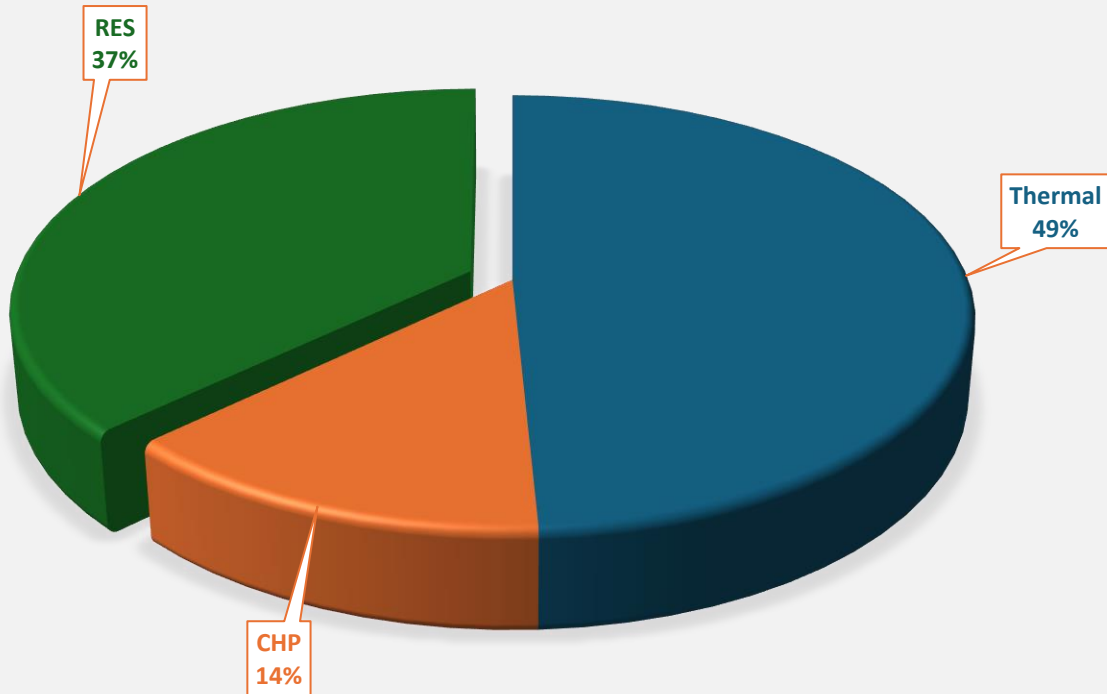
Total number of power plant by the end of 2023 -1.154

RENEWABLE ENERGY SECTOR – STATUS

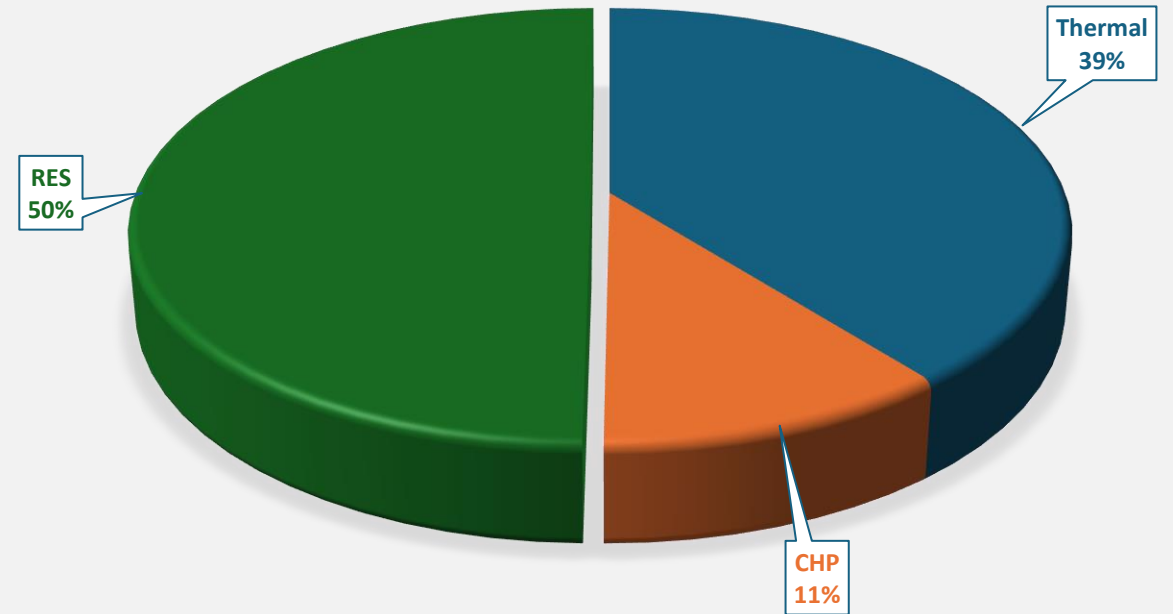
INSTALLED CAPACITY 2020 - 2023

NEW 532 MW INSTALLED CAPACITY from RES in period of 3 years

2020



2023



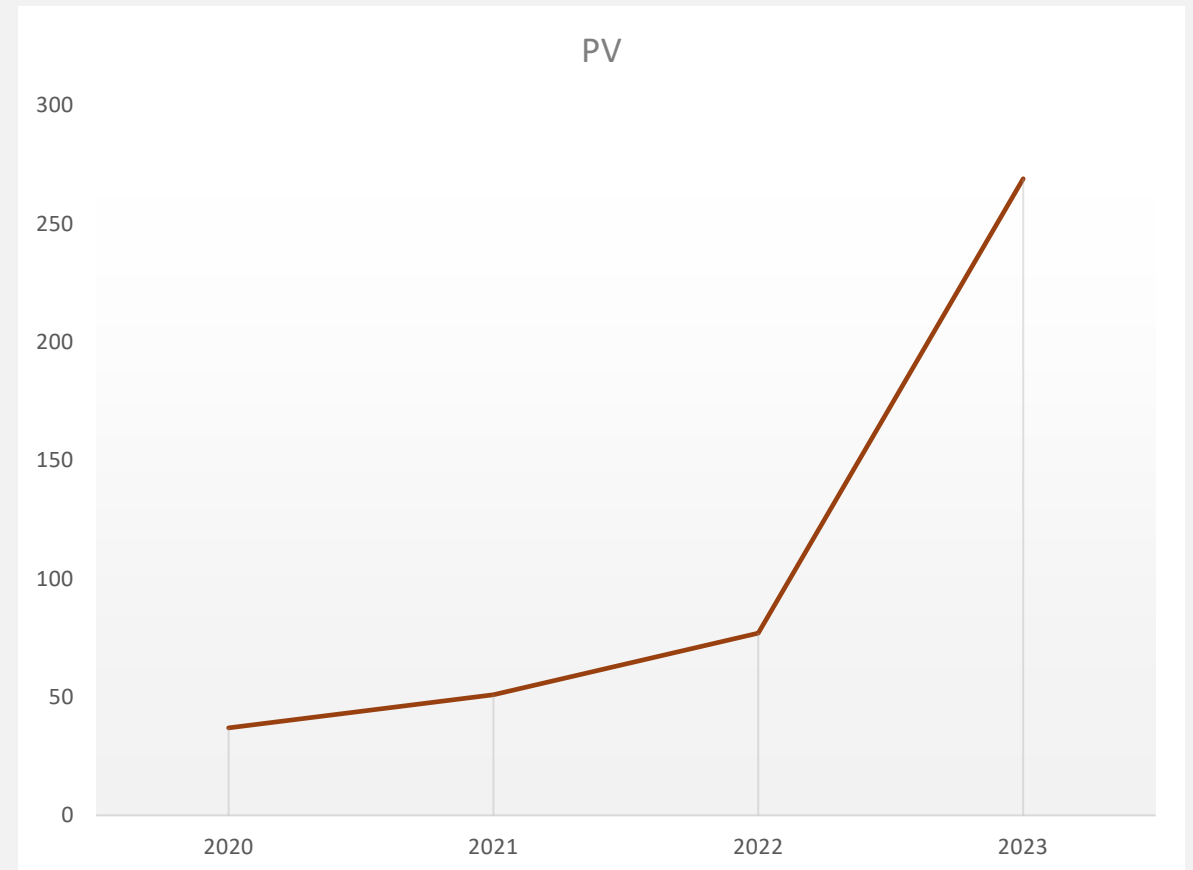
Total installed capacity by the 2020 – 2.103 MW (780 RES)

Total installed capacity by the end of 2023 -2.633 MW (1.312 RES)

RENEWABLE ENERGY SECTOR – STATUS GENERATION 2020 - 2023

GENERATION from RES in period of 4 years

Type of power plant	2020	2021	2022	2023
	(GWh)	(GWh)	(GWh)	(GWh)
Total	5,127	5,284	5,633	5,476
Thermal	2,510	2,105	3,034	2,524
CHP	1,119	1,517	967	1,157
HPP	1,003	1,132	1,034	1,011
Wind	117	103	107	145
SHPP	284	321	363	315
PV	37	51	77	269
Biogass	57	54	51	55



Renewable Support Schemes

FEED-IN TARIFF (FIT)

FEED IN PREMIUMS (FIPs)

the manner of obtaining FIT will be specified by rulebook of the ERC	<u>will be granted based on a tender procedure involving auctions.</u> The manner of conducting the tender procedure and auction for awarding premiums, concluding contracts and payment of premiums will be further specified by the Decree of the Government, the Ministry will only implement the procedure.
the market operator distributes the costs paid to the preferential producers <u>to every licensed supplier</u> , according to their market share. Consumers are paying for 100% of the RE support	the funds for the premiums: <u>from the state budget</u>
the electricity market operator <u>is obliged to purchase the electricity generated from a preferential producer</u> , following by conducting a power-purchase agreement (PPA)	the preferential producer who has acquired the right to use the premium <u>can not use a feed-in tariff</u> and is not guaranteed by the guaranteed purchase of the produced energy from the electricity market operator
the PPA is signed for the period of use of FITs determined with the decision issued by the ERC FITs are set in ¢ per kWh of electricity delivered into the electricity system and shall not include the VAT.	the manner of conducting the tender procedure and auction for awarding premiums, concluding contracts and payment of premiums <u>will be further specified by the Decree of the Government</u> , the Ministry will only implement the procedure.
the electricity market operator is balancing responsible party	balance responsible

Renewable Support Schemes – FIT (previous Energy Law)

- **SHPP** – only for plants <10MW ; The fee for electricity generated by SHPP is calculated on the basis of FITs for individual blocks according to the following dynamics:

Block: Quantity of electricity supplied in blocks (kWh)

- I $\leq 85.000\text{kWh} = 12,00 \text{ €¢/kWh}$
- II $> 85.000\text{kWh}$ and $\leq 170.000 = 8,00 \text{ €¢/kWh}$
- III $> 170.000\text{kWh}$ and $\leq 350.000 = 6,00 \text{ €¢/kWh}$
- IV $> 350.000\text{kWh}$ and $\leq 700.000 = 5,00 \text{ €¢/kWh}$
- V $> 700.000\text{kWh} = 4,50 \text{ €¢/kWh}$

- **Biogas** – if fossil fuels in total energy value of the fuel is <10% = 18 €¢/kWh, if 10-20% = price is lower
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- **Biomass** - if fossil fuels in total energy value of the fuel is <15% = 18 €¢/kWh, if 15-30% = price is lower
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- **Wind** - $\leq 50\text{MW} = 8,9 \text{ €¢/kWh}$
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- **PV** - $\leq 50\text{KW} = 16 \text{ €¢/kWh}$; $> 50\text{KW} = 12 \text{ €¢/kWh}$.

RENEWABLE SUPPORT SCHEMES – FEED IN TARIFF

RES	2020			2023		
	number	installed capacity (MW)	generation (GWh)	number	installed capacity (MW)	generation (GWh)
Total RES	295	780	1.498	1.146	1.312	1.795
RES support measures	203	148	393	174	140	368
Share (%)	69%	19%	26%	15%	11%	21%



THE IMPACT OF RENEWABLE ENERGY SOURCES

- reduced consumption
- increased tariff for distribution
- introducing a fixed fee for distribution
- increased supply of energy during the day
- introducing low tariff for household during day from 13 to 15 o'clock

PROSUMERS

- Households, community of households, small consumers, budget user, can generate electricity for own consumption and excess of produced electricity to delivered into the grid,
- Maximum install capacity for households is 6kW and for the rest of consumers is 40kW,
- UoS is eligible to buy the excess of electricity,
- Supplier of the consumer is obliged to conclude the agreement for taking of the excess of produced electricity.
- Prosumers do not pay distribution charge for the electricity injected into the grid.
- Settlement period is six months



PROSUMERS

- In terms of available information that we have, until end of September 2023 the situation with the prosumers is the following:
 - Total metering points: 476 (thereof legal entities: 223 and households: 253)
 - Total installed capacity: 7.549 kW (thereof legal entities: 6.015 kW and households: 1.534 kW)
 - Total electricity produced: N/A (electricity produced and consumed by consumers is not measured)
 - Total electricity injected in the grid: 3.790.135 kWh (thereof legal entities: 3.150.427 kWh and households: 639.708 kWh)





VIRTUAL PRODUCER (1/2)

- A definition of the latest amendments of the Law on Energy from November 2022, "virtual producer" is a producer or supplier that is a participant in the electricity market and that commercially and technically integrates electricity producers, prosumers and electricity storage operators connected to an electricity distribution network, thus enabling centralized management of their production and their treatment as a producer participating in the electricity market
- In the new Electricity Market Rules from November 2022 the function of Virtual producer is elaborated with its rights and obligations and only for RES producers.
- RES who are previously registered as participants in the electricity market after concluding the contract with VP should submit a request for termination of the contract of participation in the electricity market,

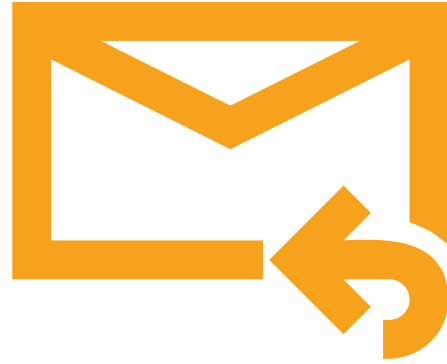


VIRTUAL PRODUCER (2/2)

- The VP commercially integrates the RES by concluding the contract to manage their produced electricity and sells it to the electricity market, in their name and on their behalf.
- A VP can integrate an unlimited number of RES producers connected to the distribution network and represents RES producers in front of TSO, DSO e EMO. The VP charges a fee from RES Producers for its services. VP sells produced electricity to the market.
- VP provides balancing services in accordance with the Rules for balancing the power system.
- VP has local EIC obtained by the TSO and separate VMT obtained by the DSO.

Next steps

- New energy law
- Separate law for renewable sources
- Priority in dispatching
- Demand side management
- Storage
- Aggregators
- Green certificates
- Contract of difference



THANK YOU FOR YOUR
ATTENTION

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