



**ENERGETICS**

A graphic showing a green and white globe of the Earth with a white power plug icon on the left side. The word "ENERGETICS" is written in large, bold, yellow, slanted letters across the globe.

**ENERGY  
IS LIFE!**

A graphic with a white background and a red border. It features several energy-related symbols: a yellow sun, a green leaf, a grey power plug, a blue water drop, and a grey wind turbine. The text "ENERGY IS LIFE!" is written in large, bold, red, slanted letters in the center.



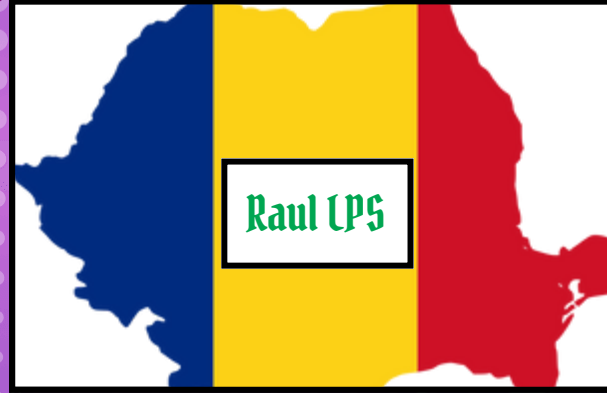
YOUTH HAS  
THE MIDAS  
TOUCH



Book Realized by



Vera JNP



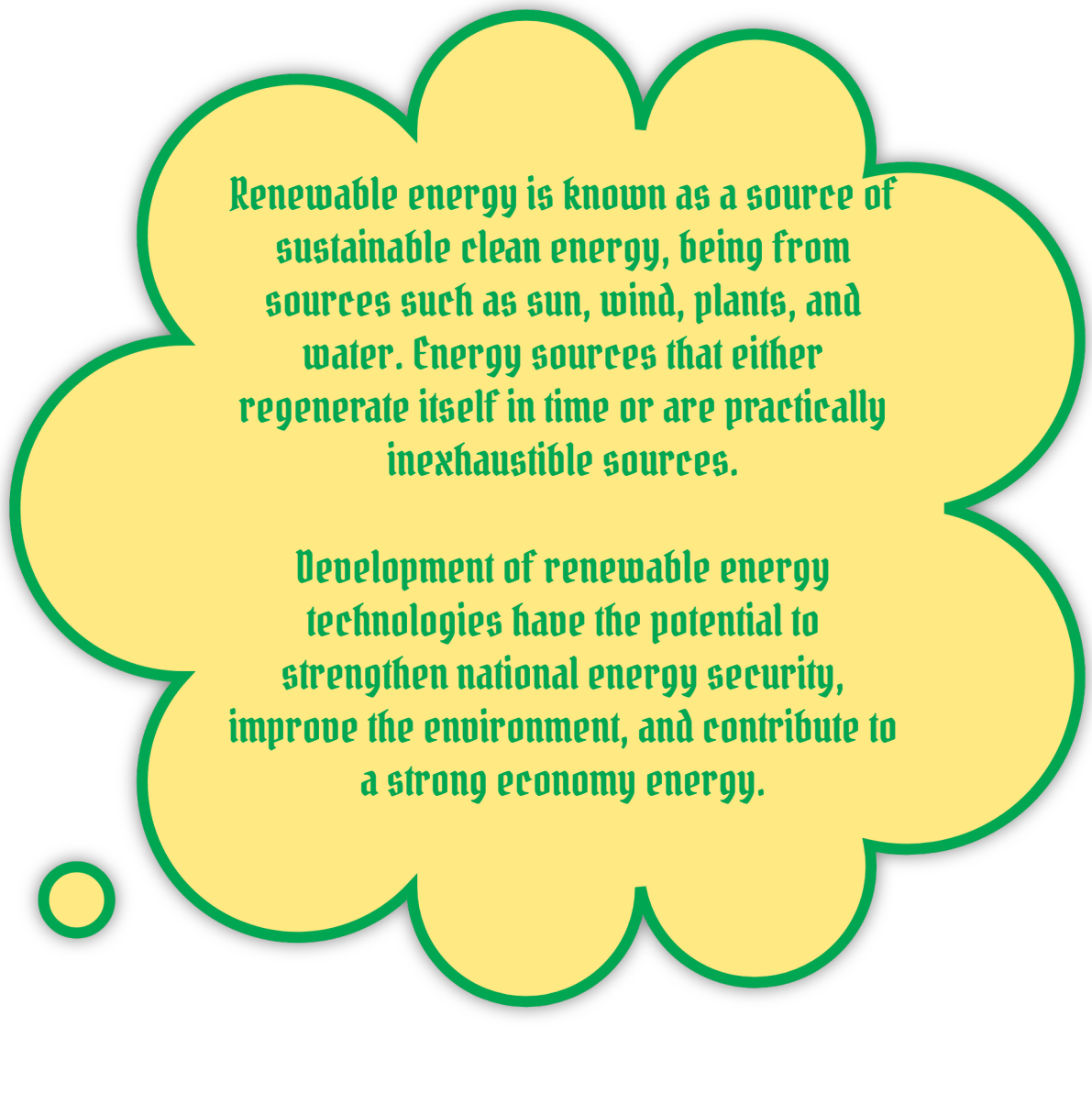
Raul LPS



EMRE ŐEYİNTAL



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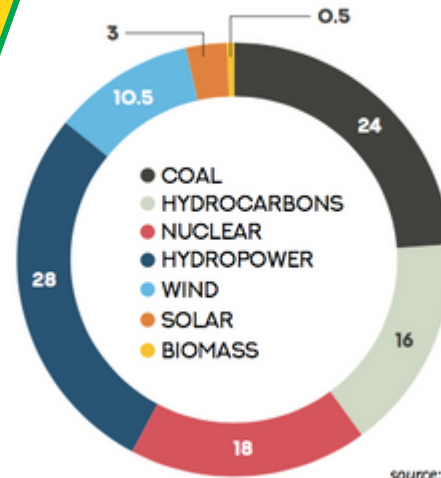
**Renewable energy is known as a source of sustainable clean energy, being from sources such as sun, wind, plants, and water. Energy sources that either regenerate itself in time or are practically inexhaustible sources.**

**Development of renewable energy technologies have the potential to strengthen national energy security, improve the environment, and contribute to a strong economy energy.**

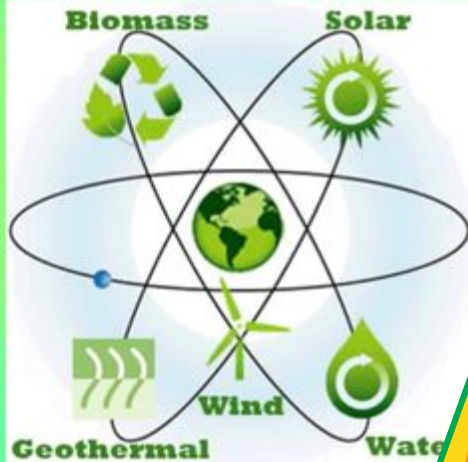
# RENEWABLE ENERGY SOURCES IN ROMANIA



PRIMARY RESOURCES 2018 (% POWER)

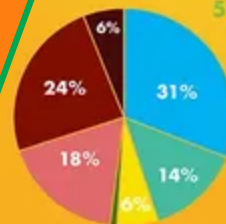


source: M

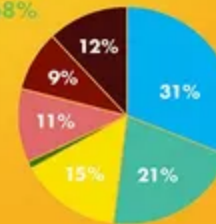


## Romania's Energy Mix

2016 ..... 2030



31%	Hidro	31%
14%	Wind	21%
6%	Solar	13%
1%	Biomass	1%
18%	Gas	11%
24%	Coal	9%
6%	Nuclear	12%



source: www.elfin.org / www.enrgetics.org

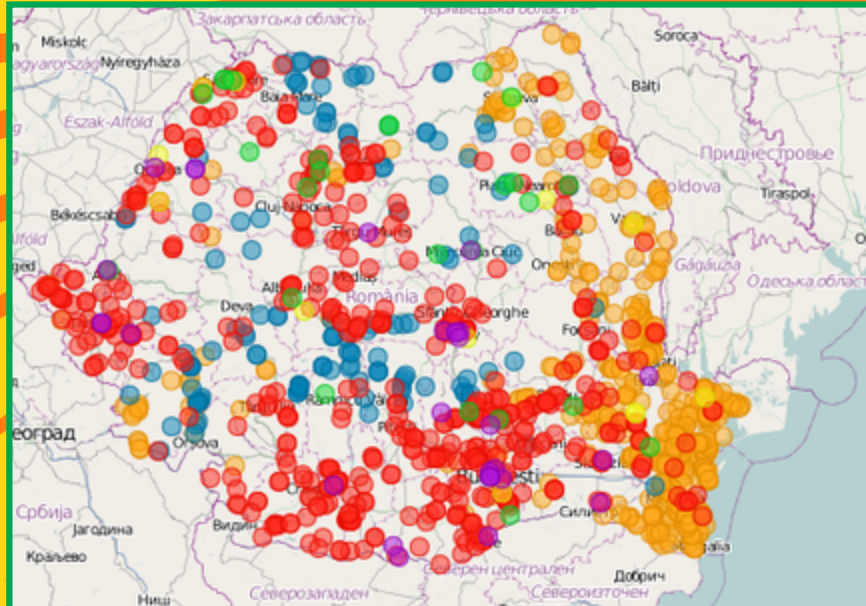


## Renewable potential in Romania



## Renewable focus

- I. Danubio area – Solar
- II. Dobrogea – Wind and Solar
- III. Moldova – Micro Hydro, Wind, Biomass
- IV. Carpati – Micro Hydro, Biomass
- V. Transilvania – Micro Hydro
- VI. West Campia – Geothermal
- VII. Subcarpati – Solar, Biomass, Micro Hydro
- VIII. South Campia – Biomass, Solar, Geothermal



## Interactive map of Renewable Projects in Romania

Geothermal Resources Map in Turkey

Renewable  
ressources  
in Turkey



TARGETS FOR 2023



The whole economically feasible hydropower potential of Turkey will be provided for generating electrical energy.



20,000 MW capacity of wind power plant will be in operation



Minimum 3000 MW of solar energy capacity will be reached



Minimum 600 MWe geothermal will be implemented

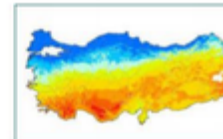
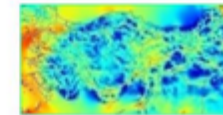


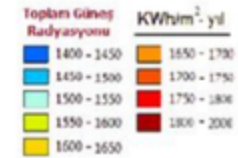
1500 MWe installed capacity for Biomass energy

RENEWABLE POTENTIAL OF TURKEY

Turkey has substantial amount of renewable energy potential and utilization rates are growing. Hydro, wind and solar energy resource the major portions of our renewable portfolio.

- Turkey has at least;
- 160,000 GWh/a. economic hydro,
- 48,000 MW wind capacity
- 1,500 kWh/m<sup>2</sup>-year of average Global Solar Radiation
- 31,500 MWt geothermal capacity
- 8.6 MTOE biomass
- 1.5-2 MTOE biogas





- According to Strategy Paper of Energy Ministry, Turkey's aim in solar energy is to have 3.000 MW solar power plant integration by 2023.

### Regional Distribution of Biomass:





Enefit Green is one of the largest producers of renewable energy in Estonia and the Baltic countries.

Part of the international Enefit Group, Enefit Green's production portfolio includes wind, solar, hydro, and biomass. Enefit Green produces electricity and heat from wind, water, solar, and biomass, as well as municipal waste burned in the Iru power unit that would otherwise be delivered to the grid. In addition, Enefit Green owns a pellet factory in Lääne-Nigula.

# RENEWABLE ENERGY IN ESTONIA



Eesti Energia started producing renewable energy in 2002.



Enefit Green owns 20 wind farms in Estonia and Lithuania and has a total of 165 wind turbines.



The total capacity of the wind farms is 398 MW and they produce almost 1 terawatt-hour of electricity per year.

## Solar energy

The use of solar energy is picking up momentum around the world. By the end of 2018, there were over 500 GW worth of grid-connected solar panels installed globally, capable of supplying 2.2 percent of the world's electricity needs.

The diversification of solar power is also one of Enefit Green's strategies in order to fulfill ambitious plan of growth. At this moment, Enefit Green has 39 solar plants in Estonia and Poland with the total capacity of 26 MW.

Solar energy is becoming increasingly affordable to consumers, which is why we are developing new solar parks and providing our customers with modern solar energy based power solutions.

This is a convenient and comprehensive service for business customers, covering the installation, operation, maintenance and financing of the system.

[ASK FOR A QUOTATION](#)



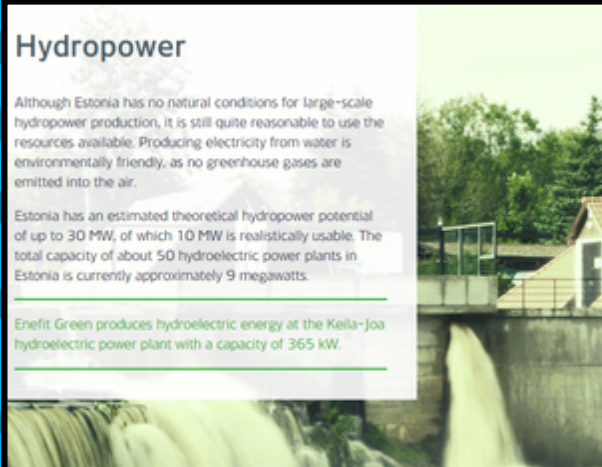
The solar panels generate energy even in cloudy weather, and in autumn and winter they provide 10-20% of the total annual electricity generated.

## Hydropower

Although Estonia has no natural conditions for large-scale hydropower production, it is still quite reasonable to use the resources available. Producing electricity from water is environmentally friendly, as no greenhouse gases are emitted into the air.

Estonia has an estimated theoretical hydropower potential of up to 30 MW, of which 10 MW is realistically usable. The total capacity of about 50 hydroelectric power plants in Estonia is currently approximately 9 megawatts.

Enefit Green produces hydroelectric energy at the Keila-Joa hydroelectric power plant with a capacity of 365 kW.



## Waste-to-energy

The Iru waste-to-energy unit can produce heat and electricity from up to 250,000 tonnes of mixed-municipal solid waste a year. The large-scale landfilling of mixed-municipal solid waste in Estonia has ended largely owing to the Iru waste-to-energy unit. Nearly 300,000 tonnes of mixed municipal solid waste is generated in Estonia after domestic sorting every year. The calorific value of such waste is equivalent to that of oil shale and wood chips.

The Iru waste-to-energy unit produces up to 310,000 MWh of heat and up to 134,000 MWh of electricity in a year, which roughly corresponds to the electricity consumption of the town of Paide and its surrounding villages. The Iru waste-to-energy unit can also burn chipped-waste tires to obtain energy, thus helping solve a major environmental issue. The unit can process up to 5,000 tonnes of scrap tires a year without any additional environmental impact.



Enefit Green generates electricity and heat from wind, water, biomass, sun, as well as household waste, which we burn for energy in an incinerator.

## Renewable energy produced by Eesti Energia

The balance of wind, water and biomass in 2009



## Renewable energy

- ▶ Renewable energy production is in Estonia on good level but there are some potentials to develop forward
- ▶ Supports for produce of renewable energy in Estonia are good for local municipalities, NGOs,
- ▶ **But there isn't any support or advantage for using renewable energy at home economics**

