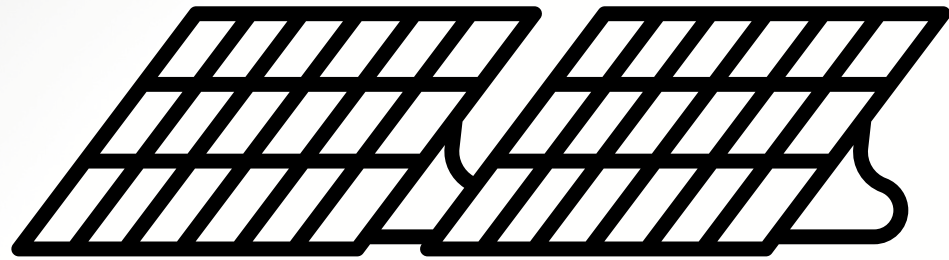
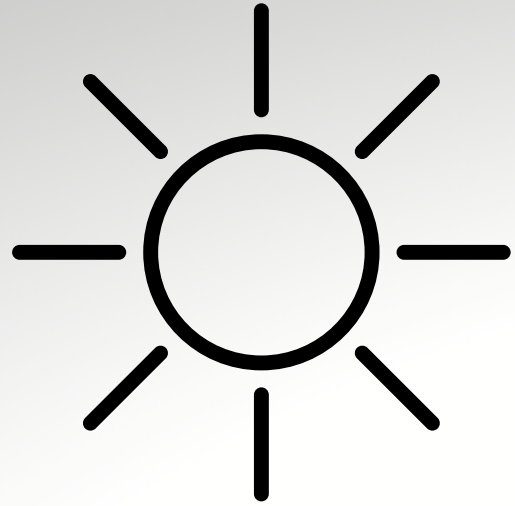


RENEWABLE ENERGY IN THESALLY



GEOGRAPHIC AND NATURAL CONDITIONS FOR ACQUIRING RENEWABLE ENERGY

- Solar energy - it is best obtained in places with high solar intensity (close to the equator)
- Wind energy - land limitations (natural, technological) are the barrier
- Hydropower - Due to the physical characteristics of the country - falls and hydrological conditions.

- Biomass - You need the right quality of the soil, with a good water ratio, it is not profitable to transport it - the country should meet these conditions
- Geothermal - Relevant areas on the earth, not all areas of the globe are suitable for it.



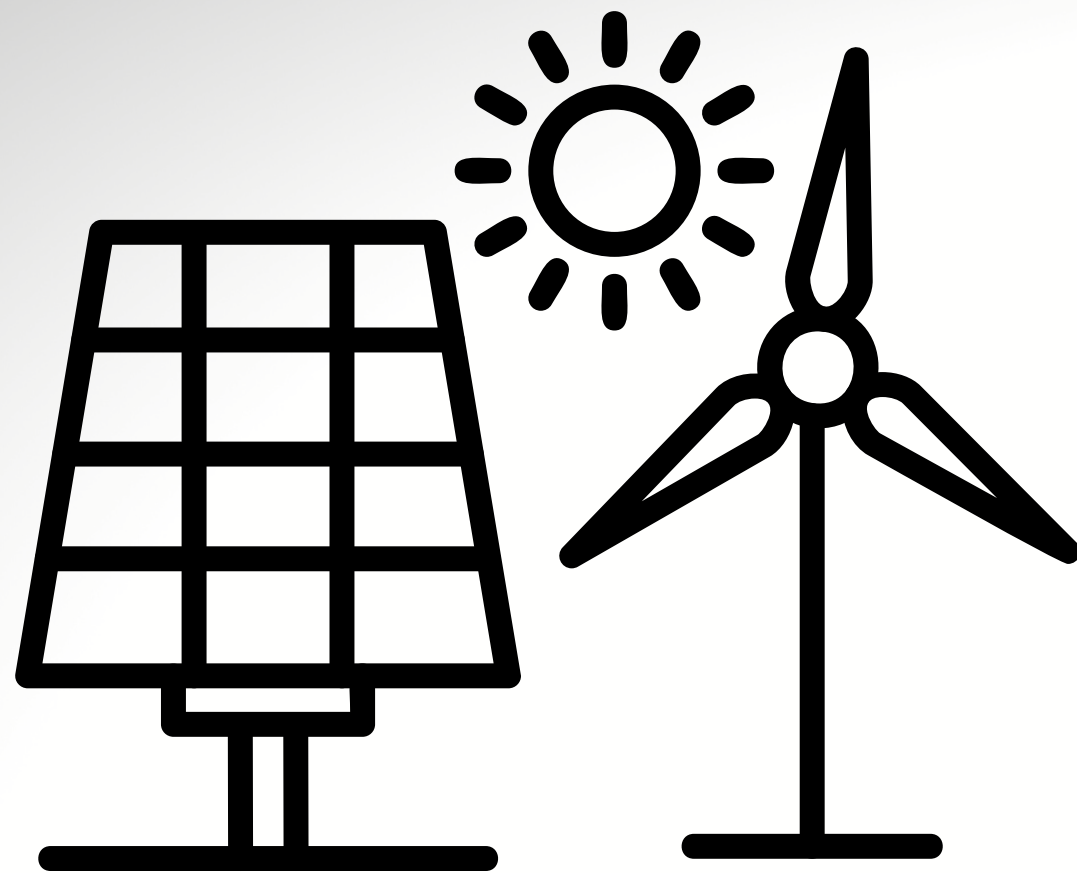
THE IMPACT OF EU SUPPORT AND LEGAL REGULATIONS ON THE PROFITABILITY OF RENEWABLE ENERGY SOURCES

The European Union has presented a "Clean Energy for All Europeans" package of measures to combat climate change and reduce the EU's dependence on fossil fuel imports and help households generate their own green energy.



Improving energy efficiency could not only reduce CO2 emissions, but also contribute to reducing energy import expenses, which amount to EUR 350 billion per year.

This is why MEPs have set a binding target to improve EU energy efficiency by 32.5% by 2030.



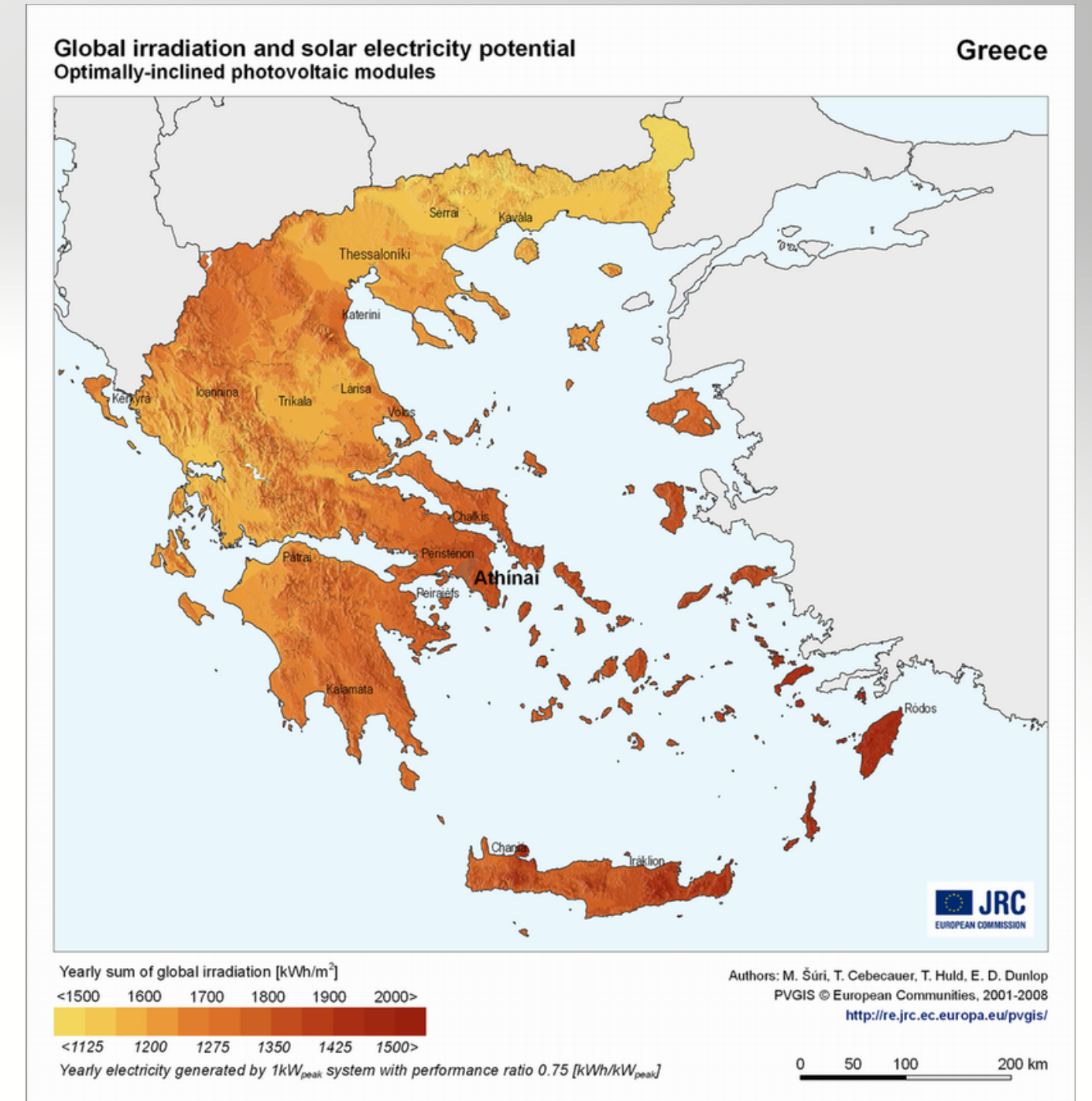
Parliament adopted new rules on the energy efficiency of buildings in April 2018. Under these rules, EU countries should prepare national long-term strategies to support the renovation of residential and non-residential buildings. The goal is to have almost no energy in buildings in the EU by 2050.

In addition, in 2017, Parliament simplified the energy labeling of household appliances such as lamps, televisions and vacuum cleaners to make it easier for consumers to compare their energy efficiency.



POSSIBILITIES OF GREECE

Due to favorable weather conditions (250 days / 3000 hours of sunshine per year, great wind potential) and mild climate, Greece has a large production capacity, mainly in the renewable energy sector.



TECHNOLOGY USED IN GREECE

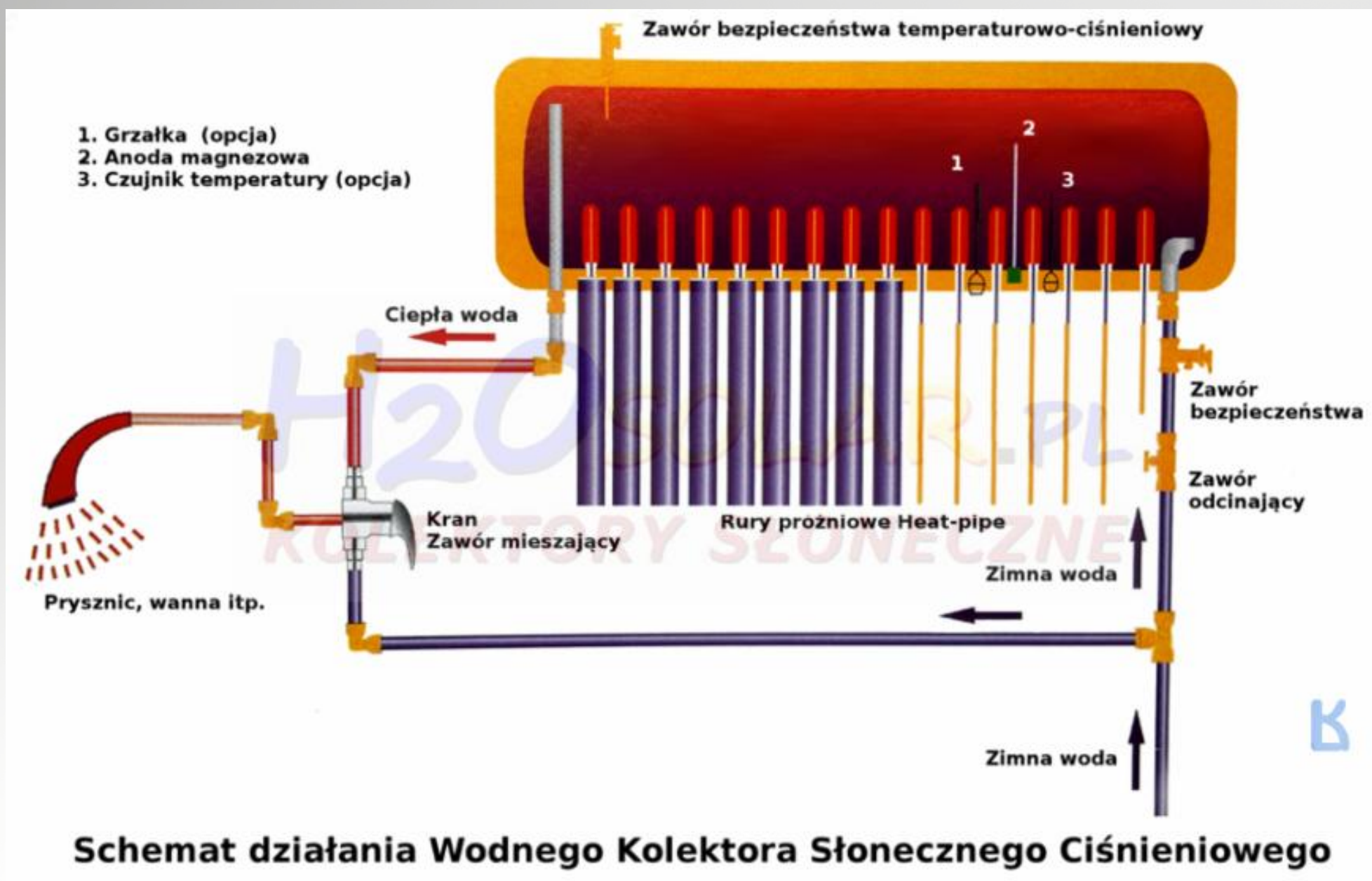
Generally, all renewable energy opportunities are used in Greece. The most popular solutions are solar panels, PV panels and wind turbines. They are used on a daily basis in private homes and mass-scale energy factories, such as solar farms.



PV in Greece

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total capacity (MW _{peak}) ^{[14][15][16]}	5	7	9	19	55	205	631	1,543	2,585	2,603	2,613
Watt/capita ^[16]							55.8	136.7	233.7	236.8	241.7

One of the main technological solutions for acquiring, among others hot tap water are pressure solar. It is an alternative solution to expensive installations. Due to the low price, the expenditure related to the purchase of such a set pays off on average in 2 to 3 years.



THE COST OF INSTALLING PV PANELS IN POLAND

The cost of the photovoltaic installation in 2022 with the installation service is +/- PLN 4,000 - PLN 6,500 per 1 kWp, depending on the size of the system. The price of an average photovoltaic for a home, with a power of approx. 3-6 kW, is an expense of approx. 15,000 - 28,000 PLN



PROFIT

Profits from the installation appear with time and length of operation. There are two options in Poland regarding on-grid installations. One is to return the difference in energy imported and taken from the grid, which is usually the most cost effective.



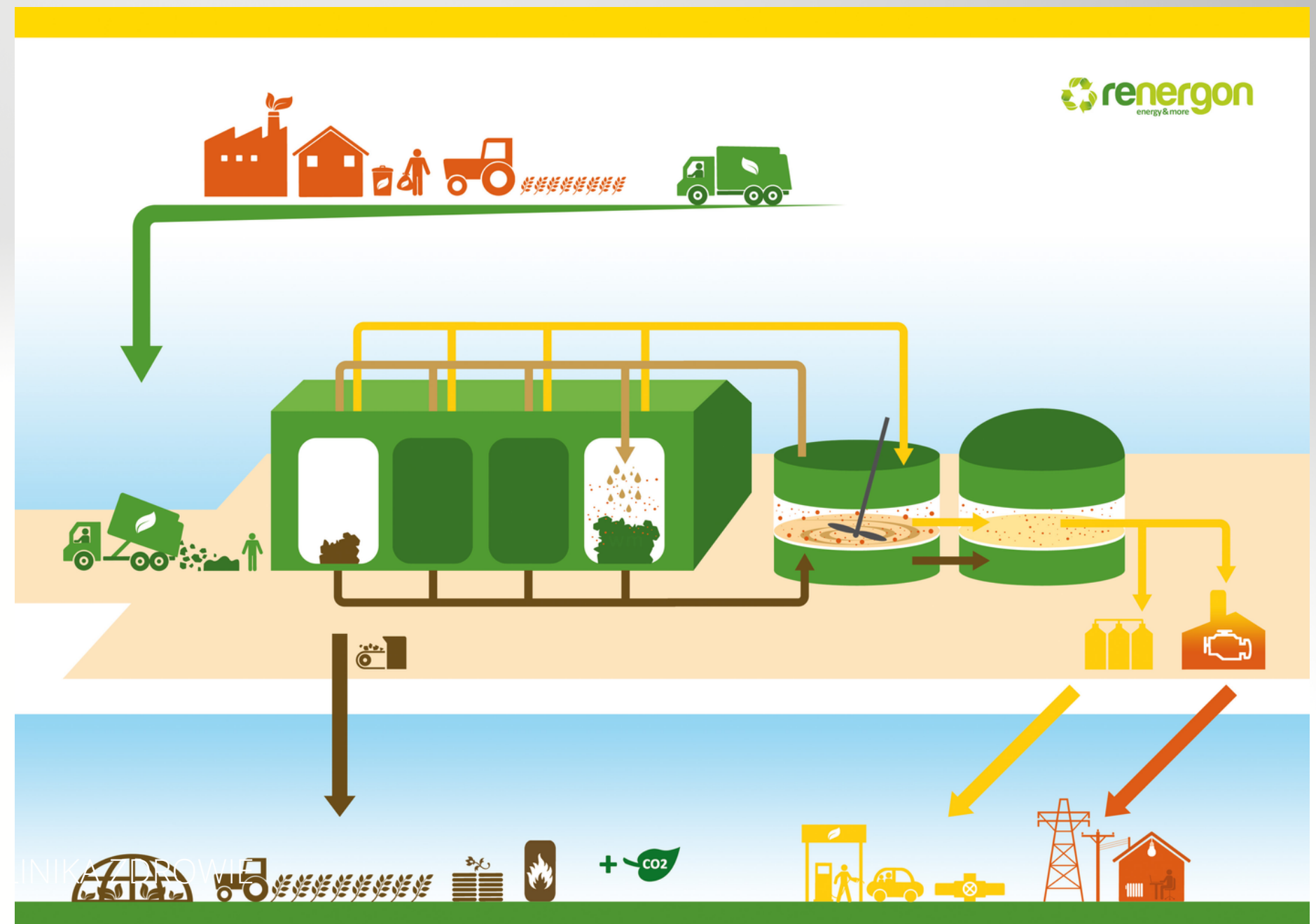
COSTS OF INSTALLING PV PANNELS IN GREECE

The average cost of a solar system in Greece is 15,02 PLN per watt. To account for the typical energy consumption of an average home in Greece, most homeowners require a 4.2 kilowatt system. Using the per watt figure above, a solar PV plant costs about 43,107.53 PLN or 31,902,06 PLN after applying the federal solar tax credit of 30%.



WAYS TO USE RES ON THE EXAMPLE OF BIOIGAS

The main substrate for the production of agricultural biogas is slurry (a mixture of animal faeces and urine with water and feed residues). The production of biogas takes place in agricultural biogas plants, which contribute to the protection of the environment, obtaining energy and ecological fertilizer.



USE OF RES IN AGRICULTURE

1. Solar panels

- Drying of cereal grains
- Water heating
- For watering crops

2. Biogas plant

- Anaerobic decomposition of organic matter



NATIONAL AND LOCAL PROBLEMS AND CHALLENGES

1. **Problems:**

- High fuel consumption
- High dependence on imports
- Requires an optimal energy mix
- Greece's Potential to Become a European Gateway

2. **Challenges:**

- The impact of a solar eclipse
- Stock prices of electricity
- Producing more electricity

THANK YOU FOR YOUR ATTENTION

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