Co-funded by the
Erasmus+ Programme
of the European Union

Let’s Use Energy Usefully
№2018-1-IT02-KA229-048029_3

Renewable energy in our region

What are the trends?

2007 ← A NEW ENERGY POLICY FOR EUROPE

2009 ← PACKAGE "ENERGY / CLIMATE" 2020

2020 ←
20% RESEARCH IN THE END USE OF ENERGY
20% REDUCTION OF CO2 EMISSIONS
20% SAVINGS OF ENERGY

ELECTRICITY MIX 2018 BULGARIA

SOURCE	PRICE, LV / MWH
Nuclear power	42
Coal TPP	85 - 95
Cogeneration	104 - 188
Wind turbines	145 - 185
Solar panels	758 - 823
Average	**65**

What is the energy policy in our region?

The Cascadas Middle Iskar project envisages the construction of nine small HPPs with a total capacity of 25.7 MW along the Iskar River, 40km north of Sofia.

- The aim is to generate 74,196 tons of carbon dioxide annually by reducing the electricity generated from fossil fuels to electricity produced from hydroelectric sources - a renewable energy source that does not emit greenhouse gases.
- The Kyoto Protocol sets up a market where governments and private companies that have cut greenhouse gas emissions can give up or sell carbon credits.
- The project is included in the UNFCCC system after a long approval period and requires multiple implementation and environmental assessment documents, which often lead to dropping out other projects for the network
- Cascade Middle Iskar is the second project in the world to be included in the Joint Implementation Project, which is being developed by the UNFCCC as a method to increase the transparency of procedures

We did it!

- Installed power - 42 MW;
- Average Net Productivity: 183 GWh / yr;
- Total investment: 142 million euros.

RENEWABLE ENERGY SOURCES - FULL, BUT STILL!!

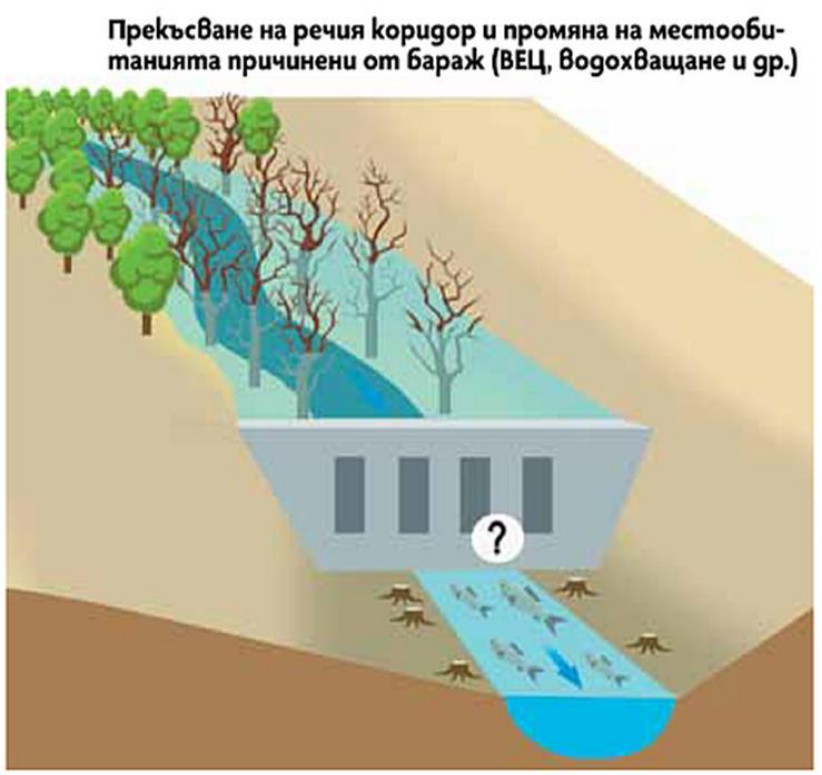
Advantages

- Minimum emissions
- Lower national energy dependence
- Trend of improvement

Disadvantages

- High costs
- Environmental and agricultural issues
- Noncompetitiveness - need for support
- Insufficient technological development

How does HPP harm rivers and nature?



- disrupt all the most important functions of the rivers and they cease to act as bio-corridors;
- has a serious impact on the aquatic organisms that carry out migrations;
- can destroy the populations of these species in a very short time;
- the barrages of the river lead to a change in its hydrological regime;
- type of thermal contamination;
- enhancement of erosion processes

Conclusion: the energy produced by HPP can not be called "green"

Keep the rivers alive and clean!

This project has been funded with support from the European Commission.

This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.