

Energy efficient municipality Bijelo Polje, Montenegro

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International training course on business planning
for energy efficiency projects





Background information

■ Montenegro

- Final energy consumption: 30 PJ
 - Electricity (from hydro, coal and import*)
 - Heat (wood based, light fuel oil, LNG, coal)
 - Transport (fossil fuels, electricity)
- Split into 21 municipalities

Bijelo Polje

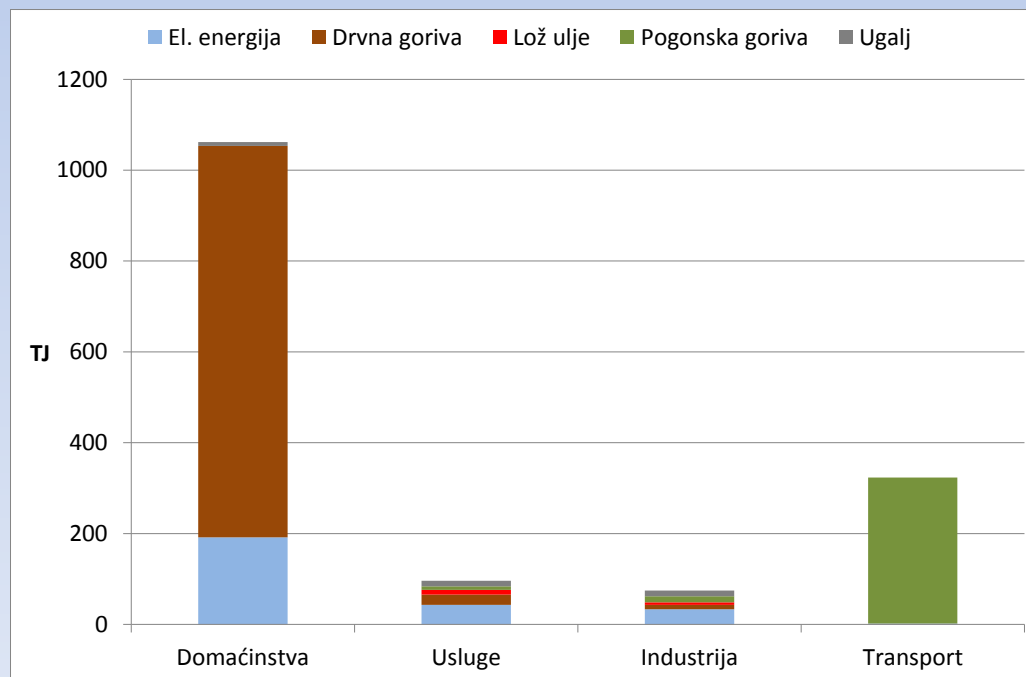
- 4th municipality by size
- One of the northern centers
- 4 % of all energy used in MNE
- Main economic sectors: services, processing industry, agriculture





Bijelo Polje

- Energy consumption by different sectors and by type of energy source used
- Public services use 4 % of all energy generation
- Local government has legal obligations to:
 - Manage energy under its responsibility
 - Develop local plans (10 yr Energy and 3yrs EE plan)
 - Follow obligation for energy characteristics in buildings
 - Support households in implementation through info and giving an example
- Local government services
 - 15 buildings and 7 heating systems using light fuel oil
 - Electricity and light fuel oil
 - Currently uses 2 % of local budget for energy bills





Project description

- **Project consists of 3 steps:**

- Develop energy management system with detailed analysis of buildings
 - Including energy audits and energy efficiency program
- Retrofit the most needed buildings (7 buildings)
 - Including external walls/roof insulation and replacement of windows/doors
- Replace or install central heating system (currently 7 heating systems, other use electricity)

- **Costs and timeline:**

- Total project costs: 700,000 €
 - Step 1: 40,000
 - Step 2: 450,000
 - Step 3: 210,000
- Timeframe:
 - start fall 2013
 - Implementation time 3 yrs



Project description (2)

▪ **Savings:**

- 37 % of all energy used on annual basis
- 34 % of money used for energy purposes – around 46,000 €
- 6.5 % of investment per year

▪ **Bank role**

- 30 % equity – 210,000 € (used for step 1 and rest disbursed among step 2 and 3)
 - 100,000 from municipality budget
 - 110,000 grant
- 70 % loan from international development bank

- ## ▪ **Strengths:**
- legal obligation
 - municipality local energy plan foresees need for this
 - existing set personal from municipality side to help

- ## ▪ **Risks:**
- potential delays in implementation due to public procurement rules



Thank you!

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