

Energy efficiency project for municipality Bijelo Polje, Montenegro

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Inter-regional Workshop on Energy Efficiency
Investment Projects Pipeline 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 23 municipalities

Bijelo Polje

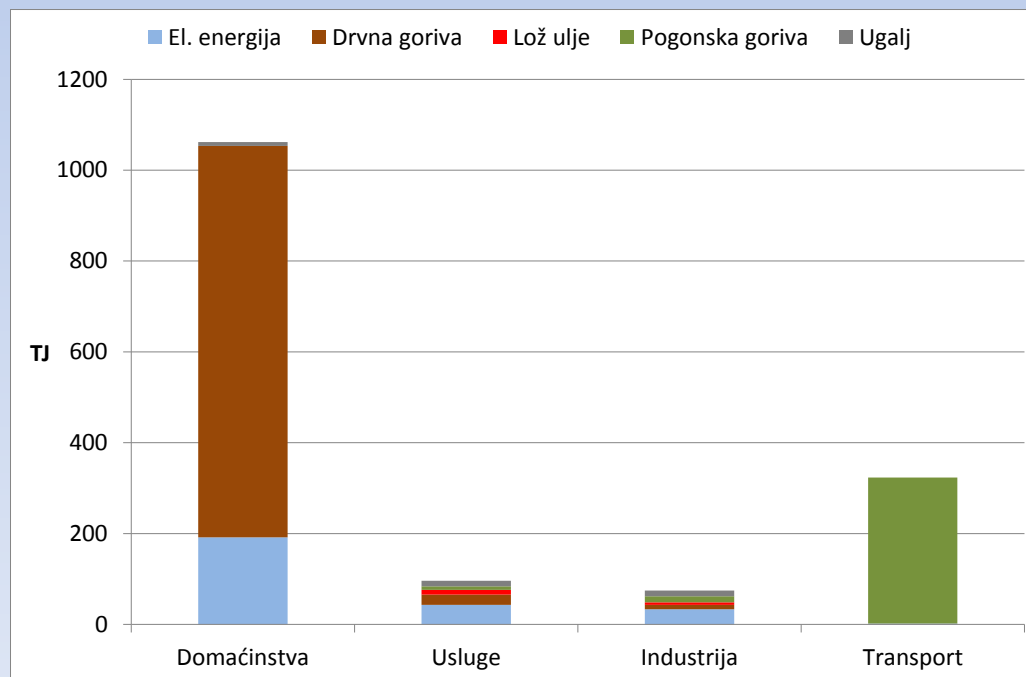
- 4th municipality by size
- One of the northern centers
- 4 % of all energy used in MNE
- Main economic sectors: services, processing industry, agriculture





Bijelo Polje

- Energy consumption by different sectors and by type of energy source used
- 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 “Energy efficient municipality Bijelo Polje”

- **Project consists of 3 steps:**

Phase 1:

Develop energy management system with detailed analysis of buildings—40,000 €

- Including energy audits and energy efficiency program

Phase 2:

Retrofit the most needed buildings (7 buildings out of 15) – 450,000 €

- Including external walls/roof insulation and replacement of windows/doors

Phase 3:

Replace or install central heating system – 210,000 €

- currently 7 heating systems, other use electricity

- **Implementation time 3 years**

- **Savings:**

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

- **Bank role**

- 30 % equity – 210,000 € - half from grant and half from budget
- 70 % loan from international development bank



Project development

- **During 2013 10 year Local Energy Plan was prepared and adopted**
- Need for management of energy and improvement of efficiency in use of energy of local government as an example was defined
- UNECE trainings in Astana, Kazakhstan and Istanbul, Turkey helped identify the main characteristics energy efficiency projects have to have:
 - Participation of local partner – equity
 - Needed pay back period and other financial characteristics
 - Presenting the project in a way most acceptable to the banks
- Project split in three phases, where energy management phase needed to be implemented first



Current status

- **First phase of the project – implementing energy management in the municipality**
 - Documentation was prepared in collaboration with an NGO and municipality
 - First phase of the project was proposed as a grant to Norwegian Embassy fund December 2013
 - Grant application was not approved – April 2014
 - Looking for new potential way to fund this part of the project – basis for further energy efficiency activities

- **Second phase of the project – refurbishment of public buildings**
 - Similar activity is already done in Bijelo Polje by World Bank project and Caritas for health and education buildings

- **Third phase of the project – Replace or install central heating systems**
 - Some of Montenegrin municipalities have a potential for district heating systems
 - March 2014 – EBRD preparing to produce a study which will show if it is economically viable to finance district heating systems on biomass in 5 Montenegrin municipalities: Bijelo Polje, Plav, Rozaje, Berane and Niksic
 - This activity along with phase 1 could help prepare needed data for investment in this activity



Obstacles

- **In receiving financing:**
 - Small budgets focus on specific supply of equipment
 - Larger budget would have to include more municipalities
 - Economic crisis – municipalities have financial problems – not able to finance smaller initial phases without support
 - Lack of willingness to support systematic approaches – rather ad hoc specific activities
 - Lack of technical knowledge and examples in the region to support the proposed ideas

- **In implementation:**
 - Lack of focus on activities that will provide continuous monitoring and help quantify effects of implemented activities
 - Energy related activities seen as short term activities
 - Ownership of activities done even when financed by international organizations



Success factors

- **In receiving financing:**
 - EU and international funds available
 - Municipality and government staff frequently introduced and educated on the application methods
 - Some initial activities regarding strategic documents and legislation exist
- **In implementation:**
 - Implementation of various energy efficiency projects since 2008
 - Staff familiar with public procurements policies and procedures
 - Specific staff in institutions and government bodies responsible for energy projects



Conclusions

- **Montenegro has high potential for implementation of energy efficiency measures**
- Based on legislation, done in accordance to EU energy policy, **municipalities more and more active** in defining energy policy and implementation of projects
- Municipality **Bijelo Polje – adopted the main energy plan for 10 years period**
- Implementation of **Energy Management, followed with needed measures for buildings and heating systems** – need for Bijelo Polje
- **Project split in phases** for which funding is needed
- Municipalities in tough **economical situation**, with some projects already implemented
- Many **EU and international funds** available but for projects of greater size
- **Energy efficiency obligatory in EU for public bodies**



Thank you!

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