



## **DUNICOP**

### **Deepening UNiversity Cooperation Osijek-Pécs**

**RENEWABLE SOURCE OF ENERGY FINANCED BY EU FUNDS AS  
OPPORTUNITY FOR REGIONAL DEVELOPMENT**

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Project is co-financed by European Union



- **NEW PROFITABLE ENERGY SOURCE:**
  - Independence
  - Opportunity
  - Development



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## • EUROPE 2020

- EU is depending on energy source from Middle East, Africa and Asia (Russia)
- EU is supporting development of renewable energy sources
- The main goal of EU is 20 percent increase in electricity production from renewable energy sources, reduce CO2 emissions by 20 percent and to increase efficient use of electricity by 20 percent until year 2020





- And why is this important for my subject and how can this information be beneficial for regional development?



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## • REGIONAL AND LOCAL MUNICIPALITY IN CROATIA

- huge bureaucracy
- low budgets (big obligations)
- plenty of real estates (with unsolved property issues)
- no domestic or foreign investments
- depopulation





# • EUROPE 2020 obligation and opportunity for regional development

- EU funds are supporting implementation of this strategy
- Sun is source which can be used as energy resources in almost every region (with higher or less high energy efficiency)
- EU is supporting regional development (especially with low GDP)





## • **How can regions benefit from this issue?**

- They can pull out 50 percent of needed money for this kind of investment
- They need to have good energy grid (but they can improve it through project)
- They need to have legislative background which will support and provide money from EU
- They need to have political will





# • Osjecko-baranjska county

## 1. Legislative

- National level: Law on electricity market (NN 22/13) and Tariff system (Narodne novine, br. 63/12, 121/12, 144/12)
- Regional level: County development strategy of OBC (2011-2013)

## 2. Object status

- More than 500 buildings which are property of County (schools, institutions...)
- More than 60.000 thousand legal objects in County

## 3. Financial status

- Low BDP
- Undeveloped County
- Poor budget funds





## • **Energy status**

- In 2012. population and households have spent 915,7 million kwh of electricity
- We produced only 35,6 million kwh of energy from renewable sources (it's 3,8 percent of total electric energy what we used in 2012)

**How can we use this facts and induce regional development?**



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## • Solar power plants

Power plants capacity	10 kWp	30 kWp	31.000 kWp	62.000 kWp	93.000kWp
Buidlings	1	1 or more	More than 2000	More than 4000	More than 6000
Roof	80m2	200m2	186.000m2	373.000m2	560.000m2
Energy production per year	10.400kwh	31.000 kwh	322.400.000 kwh	644.800.000 kwh	967.200.000 kwh
Cost	14.000 €	40.000 €	300 million € neto	600 million € neto (1/2)	900 million € neto (1/3)
Income (on base of eight years and without subvencions – 0,14 euro per kwh)	12.200 € neto	36.374 € neto	378.282.000 € neto	756.565.000 € neto	1.134.847.000 € neto

County has more than 500 buildings on which we can implement power plant with a capacity of over 15.000 kWh. This plants can produce more than 156 million kwh per year or 17 percent of total energy consumption in County



## • **Benefit for region**

- Energy perpetuum mobile (every eight years new investment or replacement of old solar power plants which will be financed by whole energy production)
- Usage of buildings not fields for agriculture
- Clean air (tourism and agriculture)
- New jobs (new factories and other services)
- New opportunity for investments - cheap or free energy for every investment
- Big interest of citizens for cooperation with municipality (free energy for householders with contracts)
- Education of citizens regarding to energy efficiency





## • **Potential problems**

- Solar plants can't provide energy during night
- Solar plants have much lower effect during winter
- Very high costs to dump solar panels after 25 years
- Will of municipality to go in this project





- **EU funds**

1. **Pre-accession time** – IPA, CIP (IEE, SAVE, STEER), FP7 (CONCERTO)

2. **Community programmes** – Structural funds (European regional development fund) and Cohesion funds

3. **Other fundings**

- a) JESSICA – Initiative of the European Commission for sustainable development

- b) JASPERS – Technical assistance for projects of European regions

- c) ELENA – Intelligent energy

- d) Webstedff – Bank for reconstruction and development

- e) Open regional fund for South East Europe

- f) CBOR – Croatian bank for reconstruction and development

**They all support strategy Europe 2020**



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