

Supporting the EU Green Recovery: the Croatian perspective

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Setting the scene: Croatian framework

- GDP per capita among the lowest in the EU
- Negative impact of COVID-19
 - Tourism (cca 20%) and the service sector play a major role in the Croatian economy
 - Questionable tourist season in 2020
- Zagreb earthquake (March 2020)
 - Major damage to the cities historical centre and the surrounding area
- High share of fossil fuels in the heating and transport sectors
- BIG problems = BIG opportunities! 😊

Setting the scene: Sustainable energy legislation

- National Energy and Climate Action Plan (NECP)
 - Adopted in Dec 2019 by Government
 - Energy Strategy (adopted by Parliament), NECP complementary
- Long-term Building Renovation Strategy
 - Draft in public consultation in July 2020, soon to be adopted
- Full package of energy legislation
 - RES electricity – premium system
 - EE – EPC/ESCO definition, contract requirements,...
- How to finance?
 - Recovery Fund, ESIF, ITI
 - Combining public and private capital
 - Crowdfunding?
 - PPP?
 - Financial instruments and investment platforms?



Green recovery potentials

- New business opportunities identified during the COVID-19 pandemic
 - Focus on reform and investments fostering green and digital transitions
 - IT services, remote work, digitalization (schools!)
 - Most promising sectors: Energy, Agriculture, health
- COVID 19 + Zagreb earthquake – combined impact and opportunity
 - Zagreb City Advisory for earthquake recovery – Strategic long-term vision
 - Testing of a recovery model in Zagreb – potential national (and wider) deployment (green transition) - opportunity for the development of alternatives such as District heating, heat pumps, smart buildings
- Utilization of locally available resources (Local actions for local value)
 - PV + energy storage + EVs combined with a widespread renovation wave
 - Solar collectors + energy storage + smart grid
 - Biomass (forestry and agriculture + local boilers + BLTCs)

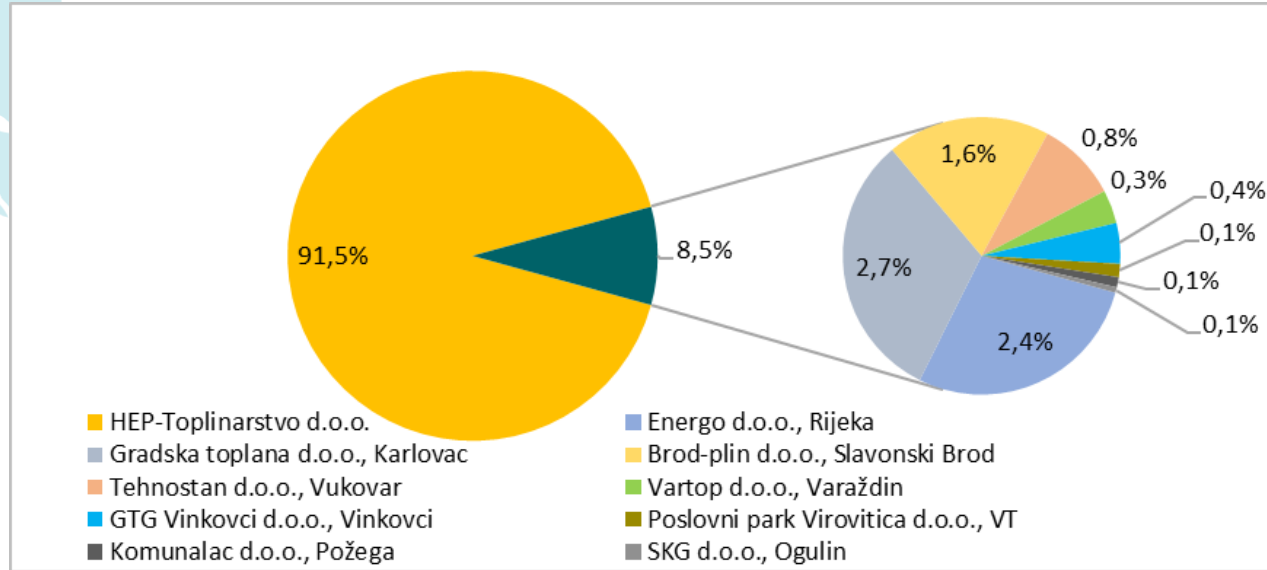
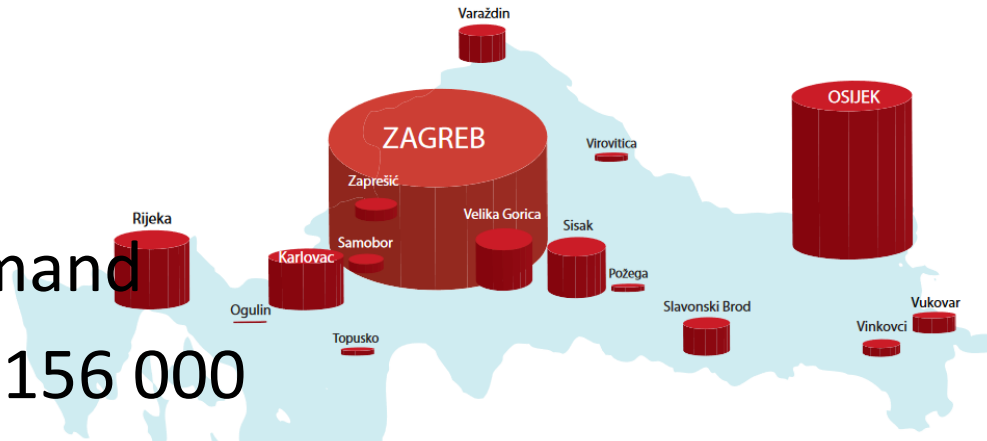


PV potential

- PV installation (Eurostat 2019): 15 W/capita
 - Among the lowest in the EU = BIG potential!
- Cost of PV investment decreased significantly
 - Financially feasible even without subsidies, BUT if allowed to sell electricity to grid at same (or slightly reduced) price
- Energy Supply Contracting model (Bračak Hospital)
 - Replication potential!!!
 - Public buildings – no debt, no risk!
 - Commercial/industry buildings – ESC company taking the risk
 - Residential buildings

Croatian DH sector

- Active since 1960s
- Covers 15% of total heat demand
- In total – 110 DHS systems / 156 000 end-users
 - Total delivered heat: 2 TWh
- Highest share on the market
 - HEP Toplinarstvo – national DHS company
- Solar collectors – DH integration!
 - Prosumers
 - Storage
 - Smart buildings, grid, equipment,...



Pre-COVID19 FIs for energy efficiency

ESIF
FINANCIJSKI
INSTRUMENTI

Operational Programme
Competitiveness and Cohesion
2014-2020

Reduction of energy consumption of
the public sector buildings and residential
buildings (multi apartment buildings
and family houses)

Republic of Croatia
MINISTRY OF CONSTRUCTION AND PHYSICAL PLANNING

HBOR
HRVATSKA BANKA
ZA OBNOVU I RAZVITAK

- 1 ESIF Energy efficiency loans
- 2 ESIF Public lighting loans
- 3 Environmental Protection, Energy Efficiency and Renewable Energy Resources
- 4 Energy Renovation of Buildings

Biomass potential

- App. 47% of Croatian land territory covered with forests
 - Among the highest % in EU
- Long tradition of biomass for energy utilisation
- Agricultural biomass (woody and non-woody) mostly unutilised
- National program announced by Ministry of Agriculture in October 2020
 - Establishment of biomass logistic/trade centres
 - Collection of agricultural biomass
 - Biomass boilers in public buildings in rural parts (800+ MW total potential)
 - Energy supply contracting model, state company Hrvatske šume d.o.o.
 - Short-rotation crops as supplementary fuel source
 - Potential to use waste from wastewater treatment plants as fertilizer (!)

Croatia's contribution to the EU

- Positive experience in the implementation of the ITI (integrated territorial investments) mechanism – decentralization of funding management to local authorities based on *ex-ante* evaluations
- Positive examples of sustainable development in adverse conditions
 - Considering overall economic situation + COVID-19
- Swift containment of COVID-19 outbreak, quick reaction on all levels resulting in low numbers of infected and deceased
 - Economic recovery much better than expected!
 - Positive impact of digitalisation and implementation of IT solutions in public administration
- SEIF Croatia: 28 October 2020

