Citizen energy experiences from Croatia

4th Renewable Energy Cooperatives Conference, Milas 15th June 2019.

Boris Pavlin, PhD Zelena energetska zadruga (ZEZ)



















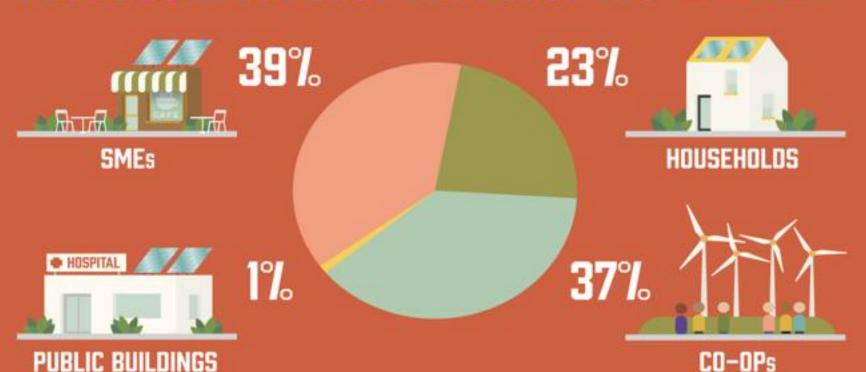
EREF

EUROPEAN RENEWABLE ENERGIES FEDERATION

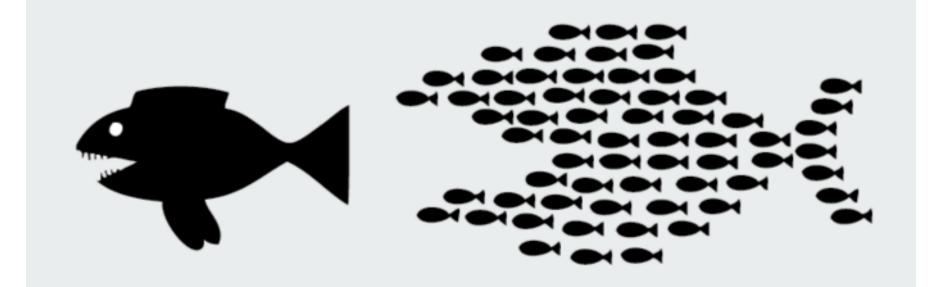


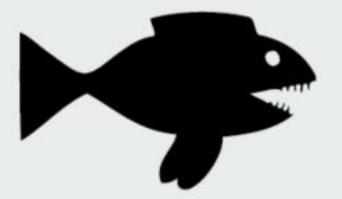
COULD BE PRODUCING THEIR OWN ELECTRICITY

THE EU'S CITIZEN-OWNED ELECTRICITY IN 2050











Who is **ZEZ**?



ZEZ – Cooperative, 20 members-experts on energy, economy, environmental protection, sustainable development



Realization of community RES powerplants



Promoting the concept of citizen owned RES in Croatia and the region



































EU projects

Different H2020, ESF projects











Members of EIT Climate-KIC



- Studies, conferences, workshops...







OUR EXAMPLES



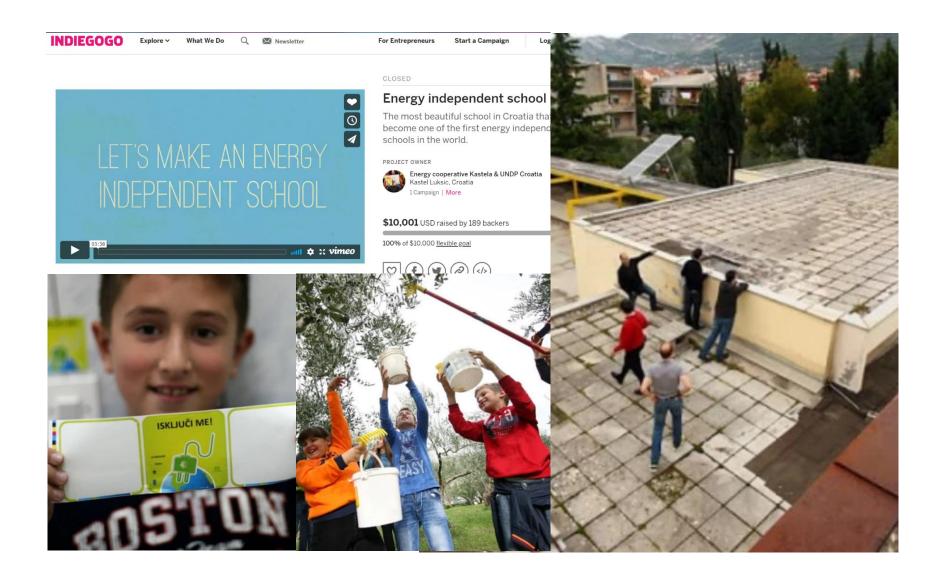
Digital platform for community RES projects



Energy independent school Kaštela



Kaštel Lukšić - Crowdfunding for energy independent school



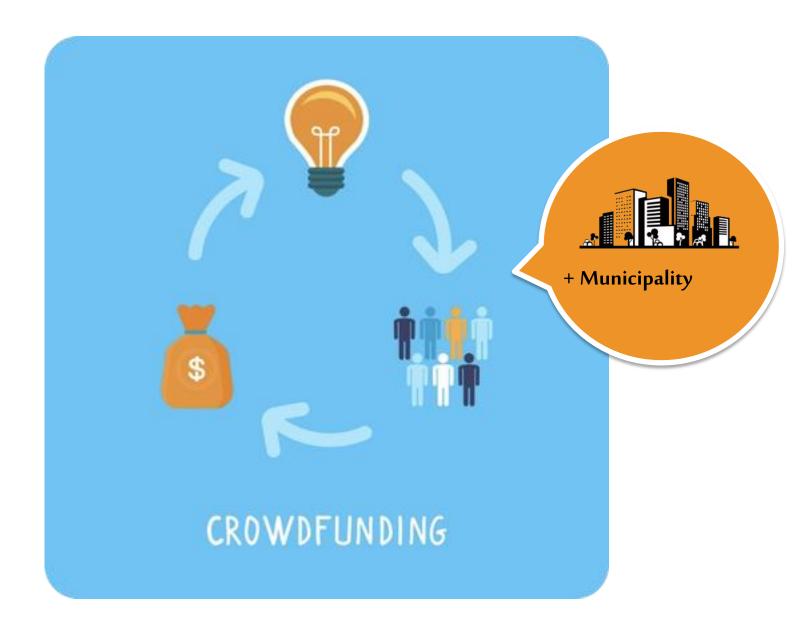
Kaštel Lukšić - Crowdfunding for energy independent school



Crowdfunding



Communal Crowdfunding = City + Citizens



Križevci Municipality – First solar powerplant financed through citizens' crowdinvesting in Croatia

KRIŽEVAČKI SUNČANI KROVOVI

DO PRVIH SOLARA ZAJEDNO!

Glavni nositelj projekta i idejni začetnik projekta Križevački sunčani krovovi je Zelena energetska zadruga (ZEZ).

Ali u tome nismo sami! Podršku nam daje **REA Sjever** u tehno-ekonomskim studijama, te uz podršku **Greenpeace-a** i **Grada Križevaca** u provođenju kampanje, te brojne međunarodne organizacije, kao što su Europska federacija energetskih zadruga (REScoop.eu) i europsko udruženje Energy Cities.

Ovim projektom omogućavamo da svatko od vas može postati ulagač u solarnu elektranu!

Kada kaže "energija u rukama građana", ZEZ misli ozbiljno.



prikupljeno 100% sredstava

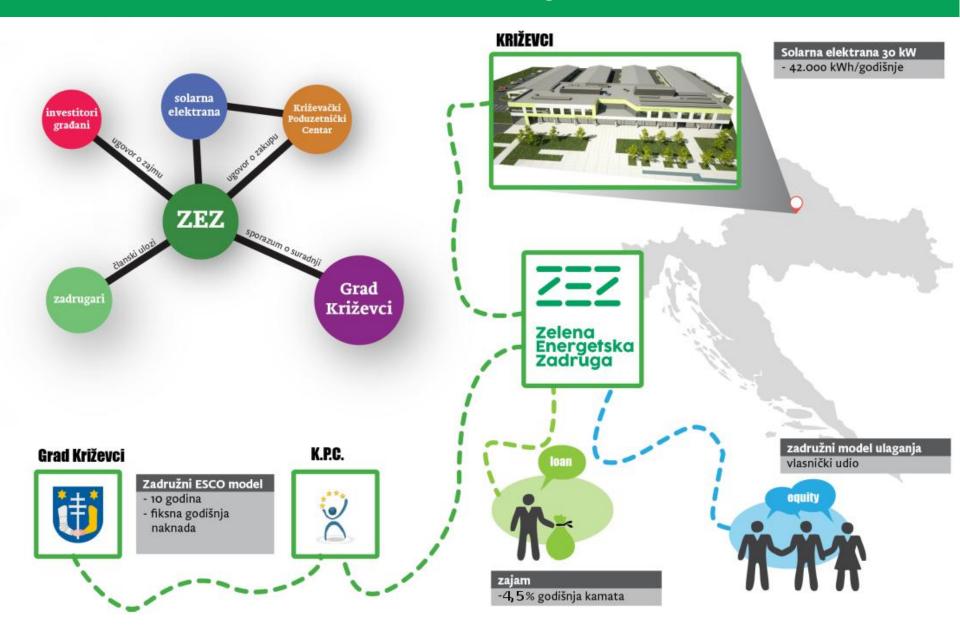
0%

Ova kampanja je uspješno financirana!



100%

Innovative financing models



Business model

- The Green Energy Cooperative, citizen-investor representative, gives solar equipment to **lease for 10 years**
- All investors sign a loan agreement with ZEZ for 10 years, for which **4.5% of the** annual interest on accrued funds is realized
- The PV system meets some of the energy needs and realize monthly savings on electricity bill
- After 10 years required to pay for the investment, the system goes into the ownership of the City **and continues to make savings**.

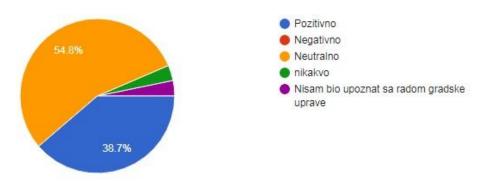
Photovoltaic power plant for own consumption Development Centre & Technology Park KRIŽEVCI



For the first time in Croatia, a project for investments in renewable energy sources through group financing

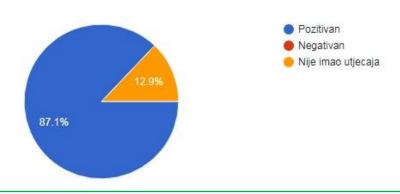
Kakvo ste mišljenje imali o gradskoj upravi grada Križevci prije kampanje Križevački sunčani krovovi?

31 responses



Kakav utjecaj je imao projekt Križevački sunčani krovovi na vaše mišljenje o trenutnoj gradskoj upravi grada Križevci?

31 responses





Pilot site: Križevci - Croatia

 What would we like to demonstrate – the goal of pilot site

The goal of pilot site is to demonstrate a combination of social (crowdfunding and cooperatives)

(applications in blockchain and artificial intelligence) in an urban microlocation which can be scaled up throughout urban areas in Croatia



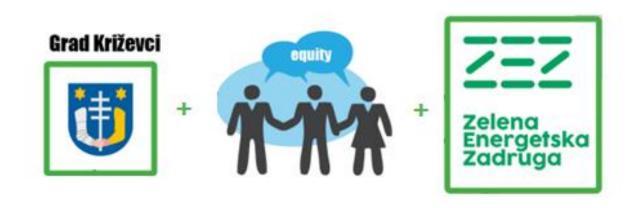
Objectives of COMPILE

- transition from a centralized system into a flexible but secure decentralized network
- Foster the creation of energy communities taking into account positive effects on the local economy and user acceptance considering vulnerable groups
- Create new ways to stimulate actors in the value chain to cooperate to maximize the societal benefit, to foster the adoption of the technological solutions and enable a large-scale replication of the developed technological solutions and business models

Result

Creation of a new energy investment cooperative with

Municipality and the citizens!



ZEZ INVEST - Digital platform for RES project investment



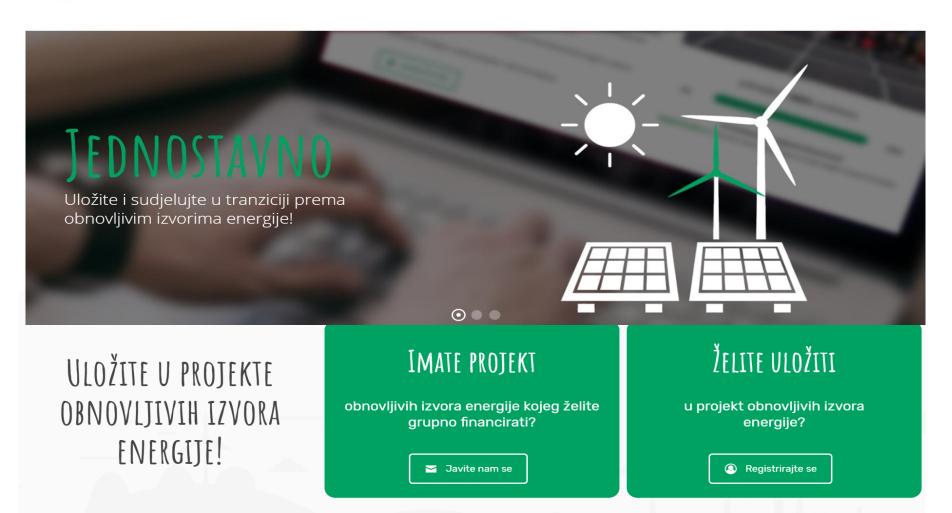
A NASLOVNA

⊟ PROJEKTI

@ FAQ

■ KONTAKT

PRIJAVI SE



Why communal RES projects through citizen crowdinvesting?



Citizen engagement – citizens co-creating public projects



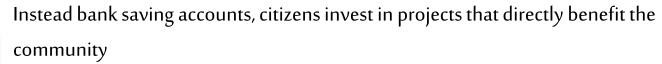
Supplementing city budgets and attracting new sources of financing



Increased RES use – getting closer to energy independence and clean technology



Strong marketing tool and Municipality promotion





Transparent model – public-civil partnership



Fulfillment of climate and energy action plans





CONNECTING INNOVATION, INVESTMENT AND CIVIC ENGAGEMENT FOR CLEAN ENERGY PRODUCTION AND CONSUMPTION

Solar Cities aims to boost solar energy projects and citizen involvement in the energy transition **BY JOINING MAYORS**FROM ALL WORLD TOGETHER TO SIGN THE SOLAR MAYORS CHARTER - an international declaration of Mayors pushing for the adoption of solar powers in urban environment.

Read the full Charter

- ✓ The Solar Mayor's Club an initiative for collaboration between local-level governments, civic actors, private sector and citizens, openness and efficiency of institutions, as well as to stimulate innovation and cross-sectoral collaboration with the private sector.
- ✓ The digital platform Solar Mayor's Club will collect bottom up experiences for installing solar power; and promote crowdfunded solar energy projects (at least one per city) that will be hosted on crowdfunding platforms.
- ✓ The Solar Mayor's Club will reflect the philosophy that the
 development and transformation of cities must be achieved
 through an effective bottom-up strategy of citizen involvement.



International Conference

Good Energy and Economy/REScoops and Local Authorities: transforming communities through collaboration









Takeaways

Capacity Building (Local communities and governments)

- Capacity Building should be made by enabling framework where cooperatives could show its influence while raising awareness
- While going down the ladder NGOs are great carriers of capacity building for informing the citizens, but it should be a bottom-up approach
 - While communicating with lowest level local content is needed to get attention of citizens and provide examples of pilot projects.

Takeaways

Creating enabling frameworks for citizens energy cooperatives and local authorities

- Cooperatives should use examples of good practice to promote its work and new partnerships are often overlooked.
- What is lacking to build energy cooperatives? Trust and recognition
- Main benefit of being a part of cooperative is to have networking culture which should be shared in between the community of cooperatives
- The gap between the cooperatives could be filled with specific and tailored roles of local government bodies (in example: mapping of public buildings, integration of citizen energy, communication, youth involvement and creating local incentives)
- Energy cooperatives should keep its main frame of non-profit; profits should be used to make new projects or to share it within community



Thank you!



Zelena Energetska Zadruga

E: boris.pavlin@zez.coop

www.zez.coop