CEESEN partnership conference

Engaging citizens in local energy planning and investment implementation – experience of Croatian project partners within project ENES-CE

Danijela Vrtarić (Senior project manager)
Niki Radiković (Energy Expert Associate)

Medjimurje Energy Agency Ltd.

Ptuj, 18 – 19 May 2022

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ENES-CE | Medjimurje Energy Agency Ltd. | Danijela Vrtarić (Senior Project Manager)

MEDJIMURJE ENERGY AGENCY LTD.

CITIZEN ENGAGEMENT AS KEY TO BUILDING PUBLIC SUPPORT FOR THE ENERGY TRANSITION

MEDJIMURJE COUNTY, CROATIA

ABOUT ENES-CE PROJECT

MEDJIMURJE ENERGY AGENCY LTD., MENEA

START UP

Established in 2008 within the project Creation of the energy agencies in Lleida (ES), Medjimurje (HR) and Montpellier (FR)	Establishment financed by Intelligent Energy Europe IEE programme	Establisher and sole owner: Medjimurje County regional authority

MAIN ACTIVITIES

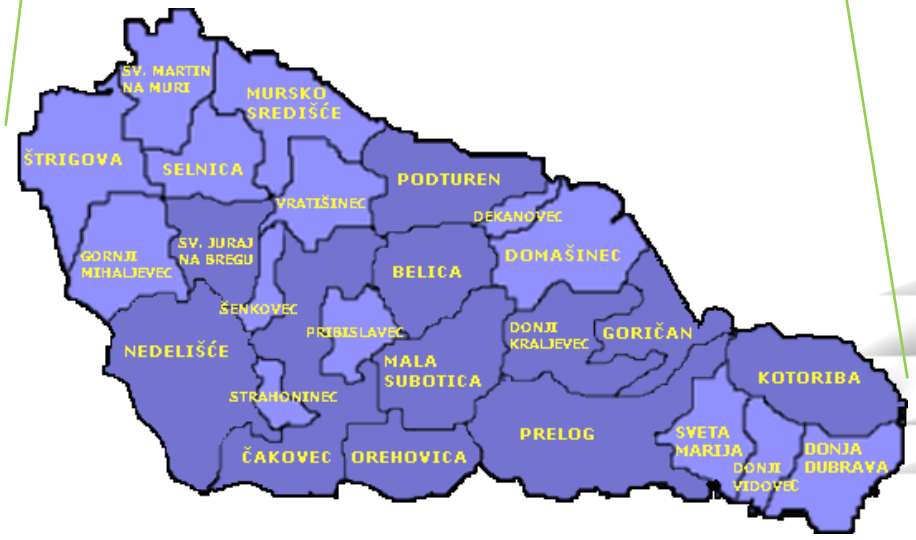
Promotion of the idea of sustainable development according to actual needs of Medjimurje County	Promotion of implementation of RES and EE projects	Satisfaction of informational and technical needs of public and private sector on issues of renewable energy and EE

OBJECTIVES

Advisory role in defining local and regional strategies	Preparation of project proposals invarious nationa, and EU programmes	Provide information and advice support for RES and EE for public and private sector	Development of local and regional energy and climate action plans and other documents in energy sector

Administrative building of Medimurje County Knowledge Center complex
Bana Josipa Jelačića 22
40 000 Čakovec
Croatia

MEDJIMURJE COUNTY, CROATIA



- Population: 105 863 (2021)
- Area: 729.58 km^2
- Population density: 145,22 inhabitants/km^2
- Administrative divisions: 3 cities and 22 municipalities
- Number of villages: 131
- Status of county obtained in 1992
- Day of County: April 30

MENEA IN NUMBERS AND PREVIOUS EXPERIENCES

3	15	24	135
Ongoing projects	Implemented projects	Developed strategic documents	Systematic energy management in buildings owned by Medjimurje County

- Establishment of local energy agencies (**Intelligent Energy Europe**)
- **Operational Programme Slovenia-Croatia** (followed by **European territorial cooperation Slovenia-Croatia**)
  - IR-OVE (IPA SI - HR)
  - BIOREGIO (ETC SI-HR)
  - EUpeR (ETC SI-HR)
- **Cross - border Co-operation programme Hungary-Croatia**
  - EE SUN - Energy Efficient Sustainable Urban Neighborhood
  - CO-EMEP - Improvement of cooperation for better energy management and reduction of energy poverty in HU-HR cross-border area
  - SEPlaM-CC - Raising capacity of cross-border public institutions in sustainable energy planning and management and climate change mitigation
- **Interreg Danube Transnational Programme**
  - RuGeoHeat - Analysis of the shallow geothermal energy exploitation potential and its´ use in heating of rural and semirural area
- **Interreg Central Europe**
  - Dynamic Light - Towards Dynamic, Intelligent and Energy Efficient Urban Lighting
  - RURES - Promote the Sustainable Use of Renewable Resources and Energy Efficiency in Rural Regions
  - ENES-CE - Collaboration between public bodies and citizen energy groups in implementing local energy strategies in Central Europe
- **Horizon 2020**
  - CEESEU – Central Eastern European Sustainable Energy Network

FIELD OF INTEREST

Nearly zero energy buildings - NZEB

Use of geothermal energy

Smart metering and automatization

Energy-efficient public lighting (use of advanced EE technology solutions, remote monitoring, smart dimming and scene setting,
intelligent energy metering)

Autonomous systems with advanced batteries

Social aspects (energy poverty, education of young people, social entrepreneurship)

Financing instruments for implementing EE and RES

CONTACT:

Phone: +385 40 39 55 59; **E-mail:** info@menea.hr; **Web:** www.menea.hr

Address: Bana Josipa Jelačića 22, HR-40000 Čakovec, Croatia

MEDJIMURJE ENERGY AGENCY LTD.

WHY CITIZEN ENGAGEMENT?

MEDJIMURJE COUNTY, CROATIA

ABOUT ENES-CE PROJECT

WHY CITIZEN ENGAGEMENT MATTERS?

Better understanding of citizen needs

It leads to more equitable, sustainable public decisions and improved liveability of local communities

Contributes to a better image of local authorities in terms of caring for citizens, respecting their views to the extent that they implement measures that benefit them and the community

Considered to be a key to building public support for the energy transition

Understand the main impacts of energy consumption, increase of energy prices, climate change on the population beyond climate and energy data

IT IS ALL ABOUT CO-CREATING THE FUTURE

PROJECT ENES-CE BACKGROUND

WHAT ARE THE MAIN PROBLEMS IN ENGAGING CITIZENS IN DEVELOPMENT OF SEAPs/SECAPs RECOGNIZED ???

- many challenges for local authorities in implementing the plans
- top down approach for local energy governance
- citizens involved only at the end of the process
- lack of quality citizen engagement models

ENES-CE IN NUMBERS

10 PARTNERS

Municipality of Forlì
Medjimurje Energy Agency Ltd.
Town of Prelog
E-institute
Municipality of Koper
Energiaklub Climate Policy Institute and Applied Communications Association
City of Budapest, District 14 Zugló Municipality
Municipal Utilities Pfaffenhofen
Citizen-energy-cooperatives in district of Pfaffenhofen a.d.Ilm
Lubelskie Voivodeship

1st of April 2019 → 30th of June 2022

1.847.374,50 €

6 COUNTRIES

Croatia
Italy
Hungary
Poland
Slovenia
Germany

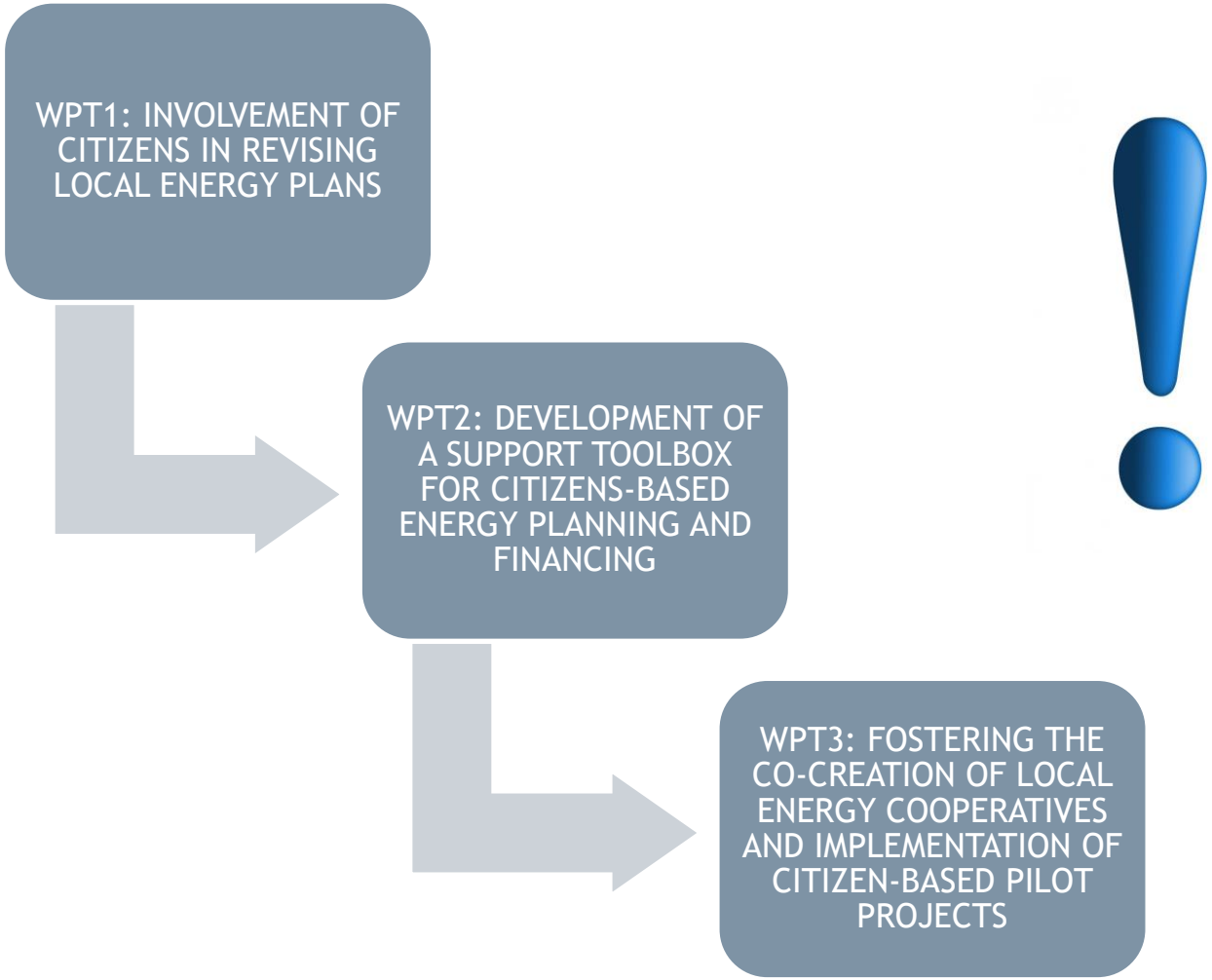
5 PILOT PROJECTS

Town of Prelog
Municipality of Forlì
City of Budapest, District 14 Zugló Municipality
Lubelskie Voivodeship
Municipality of Koper
Municipality Pfaffenhofen

ABOUT ENES-CE PROJECT - OBJECTIVES

- To include citizens from the earliest stage of energy planning strategies
- Develop energy cooperatives and other forms of citizen energy groups
- Increase the acceptance of low carbon investments and the achievement of existing SEAPs/SECAPs and other local strategies and energy action plans

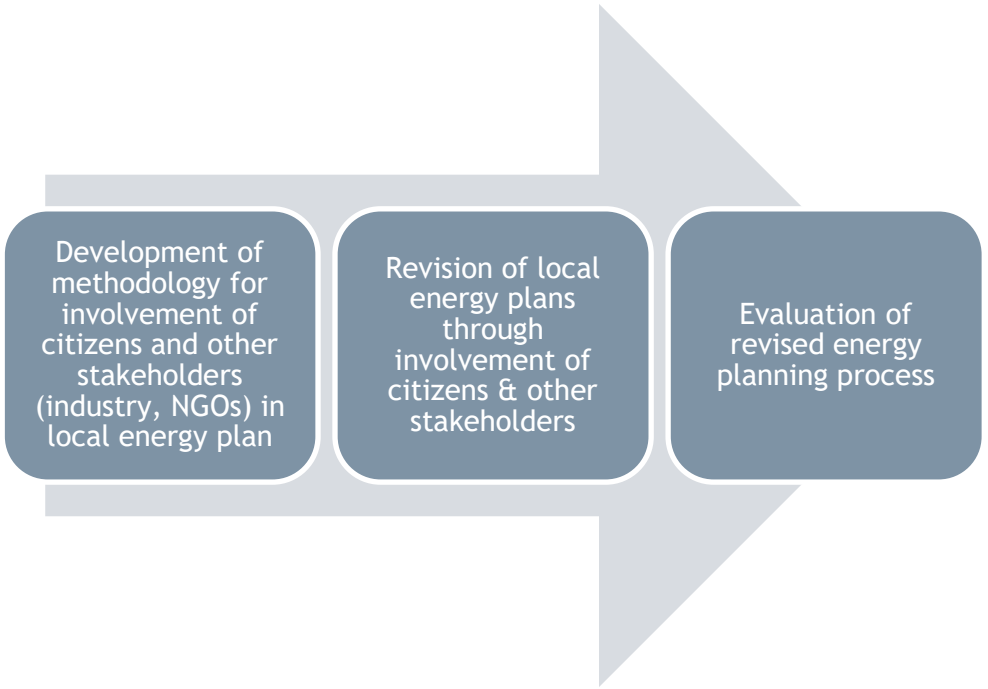
ABOUT ENES-CE PROJECT - ACTIVITIES AND EXPECTED RESULTS



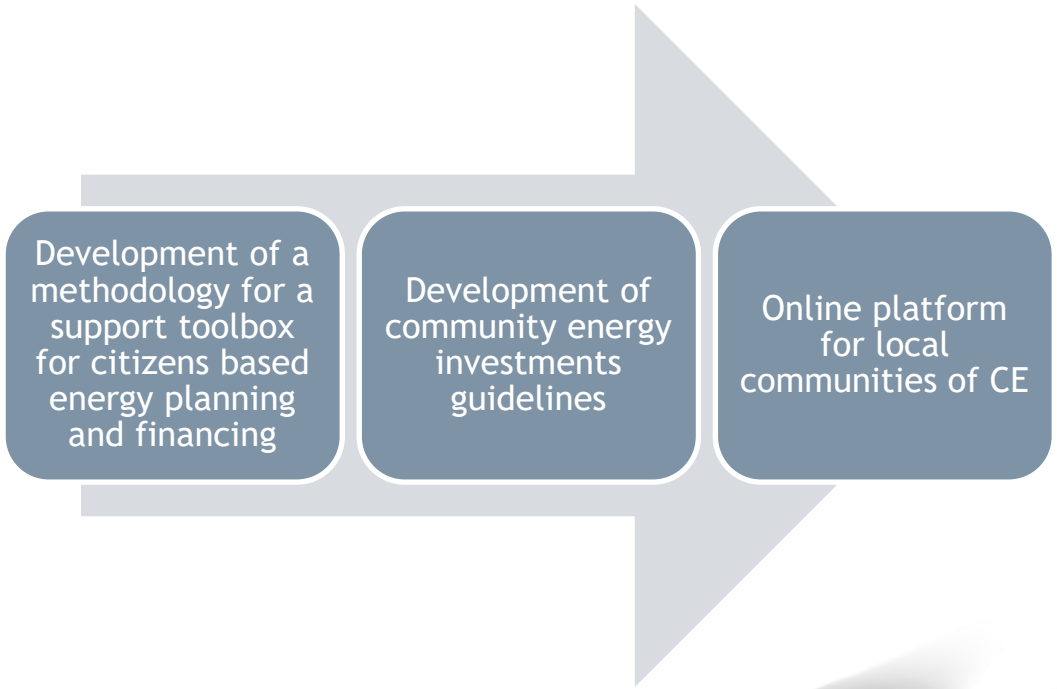
- ✓ creation of framework for engaging citizens in revision of existing energy plans (SEAPs)
- ✓ creation of a toolbox for developing citizen investments
- ✓ a revision of existing energy plans (SEAPs)
- ✓ citizens involved thanks to a bottom up approach
- ✓ establishment of energy groups/energy cooperatives able to support the planning, implementing and financing energy initiatives

ABOUT ENES-CE PROJECT - ACTIVITIES

INVOLVEMENT OF CITIZENS IN REVISING LOCAL ENERGY PLANS

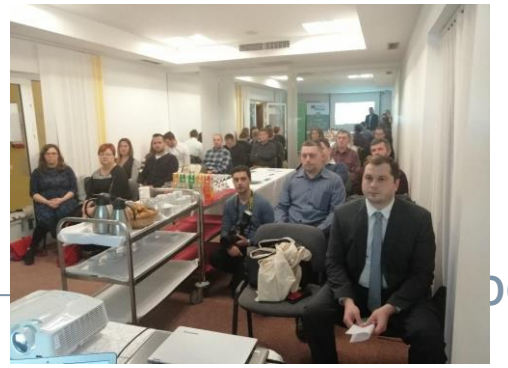


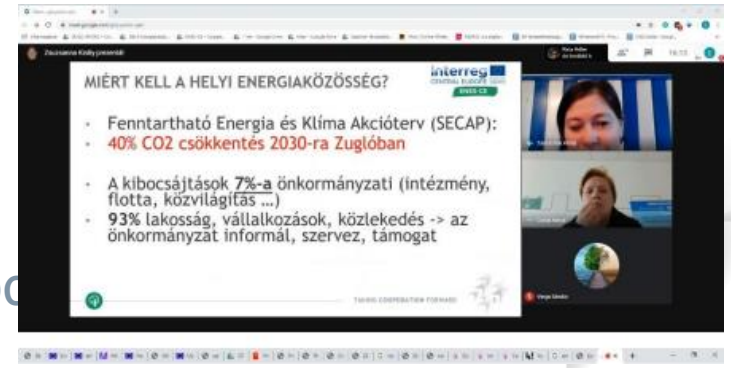
DEVELOPMENT OF A SUPPORT TOOLBOX FOR CITIZENS-BASED ENERGY PLANNING AND FINANCING



WPT1: INVOLVEMENT OF CITIZENS IN REVISING LOCAL ENERGY PLANS

1. Assessment of existing local energy plans
2. Assessment of need for the establishment of citizen energy groups in partnering municipalities
3. Organization of series of 3 interactive workshops
   - Ideation and visualisation workshops
   - Technical workshop on the revised energy plans
   - Presentation of the new energy plans to the wider public





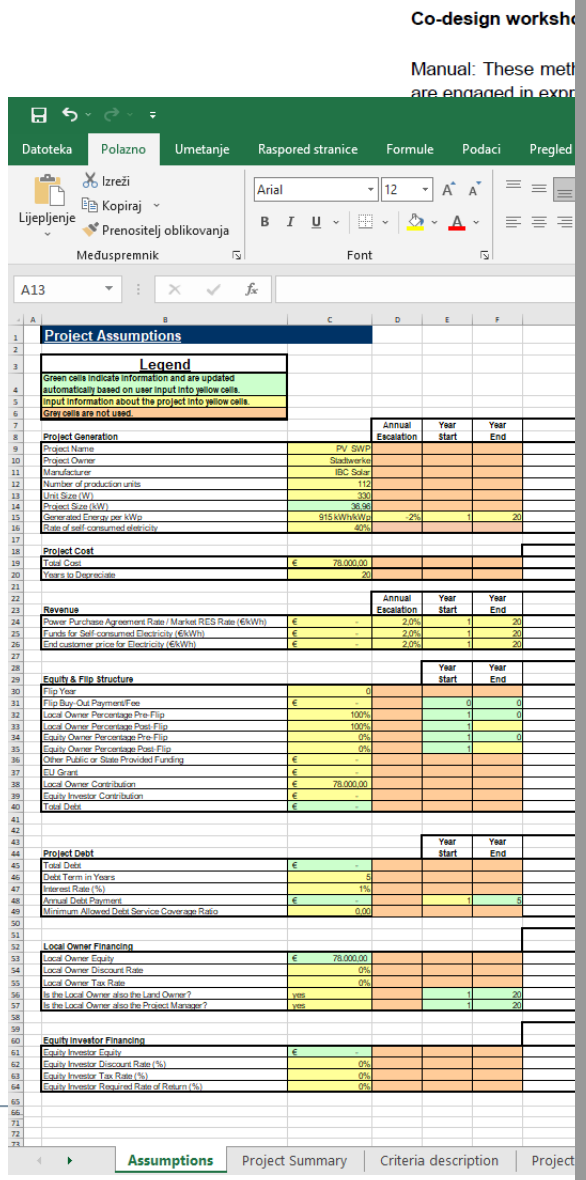
WPT2: DEVELOPMENT OF A SUPPORT TOOLBOX FOR CITIZENS-BASED ENERGY PLANNING AND FINANCING

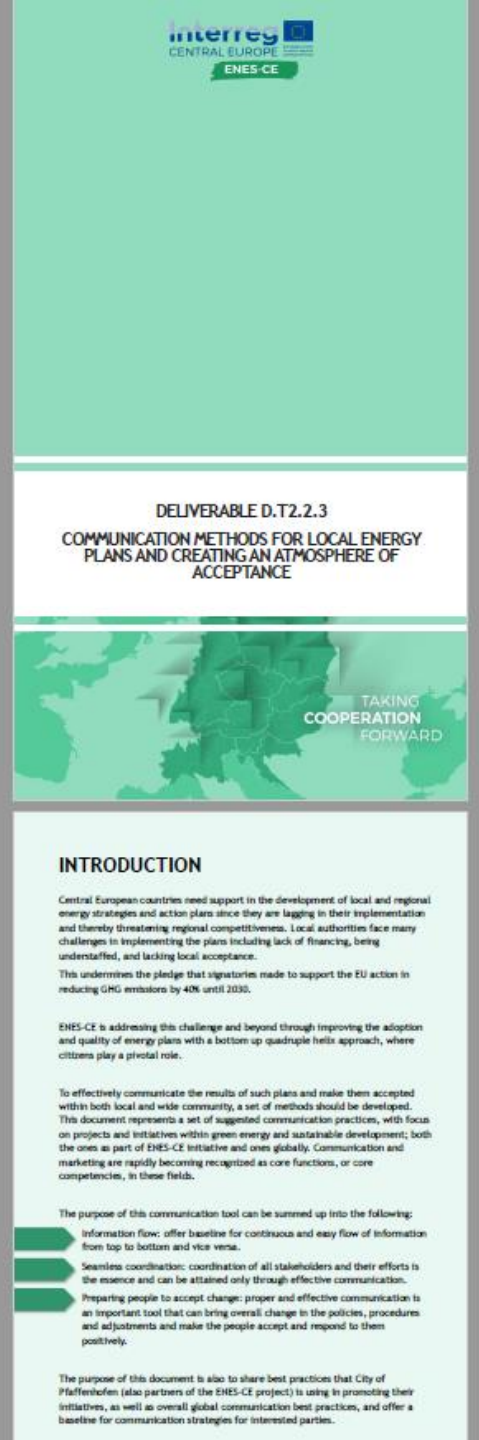
Tool 1: Co-design workshop methods for engaging participants into local energy Planning

Tool 2: Community energy investment guidelines – technical, business and legal aspects

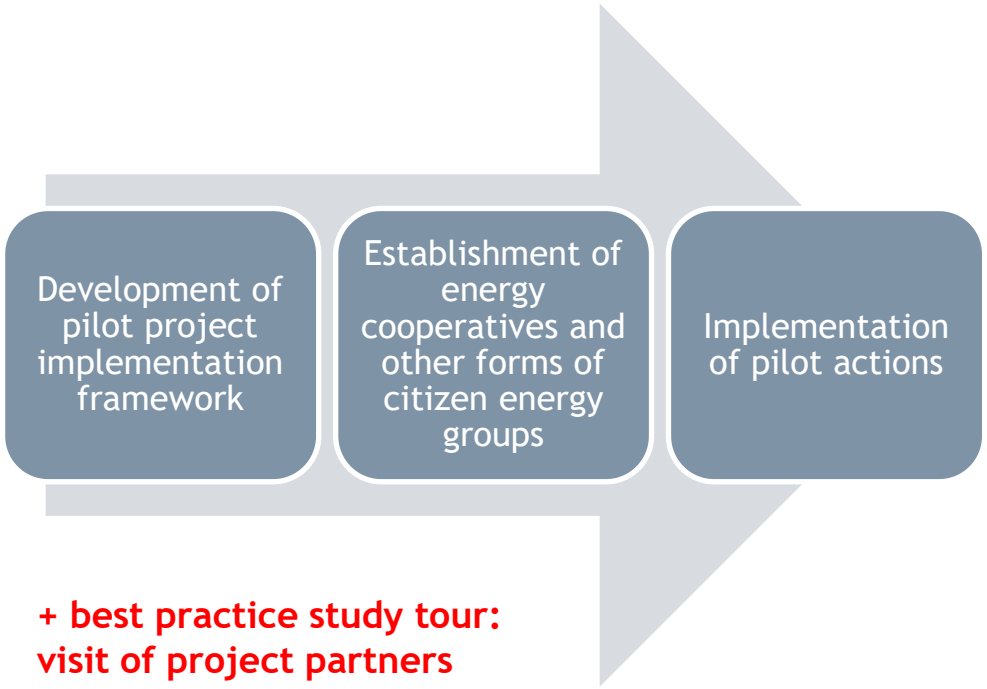
Tool 3: Communication methods for local energy plans and creating an atmosphere of acceptance

Link to the tools: https://www.interreg-central.eu/Content.Node/WPT-2.html





WPT3: FOSTERING THE CO-CREATION OF LOCAL ENERGY COOPERATIVES AND IMPLEMENTATION OF CITIZEN-BASED PILOT PROJECTS



+ best practice study tour: visit of project partners to Pfaffenhofen and other Bava best practices

1. Consumer energy group in Forli, Italy
   - Equipment for energy savings (bulbs, kits…)
2. Solar energy cooperative in Koper, Slovenia
   - Renovation of public lighting
3. Energy savings cooperative in Zuglo, Budapest, Hungary
   - Community bicycle storage; Green map; EMS
4. Citizen energy group in Prelog, Croatia
   - PV system on public building
5. Energy saving community in Niemce, Lubelskie Voivodeship, Poland
   - Education of citizens, PV installation
6. Establishment of a swarm storage project / CO2 apocalypse clock in Pfaffenhofen, Germany

Biomass chip plant

PV plant at parking roof

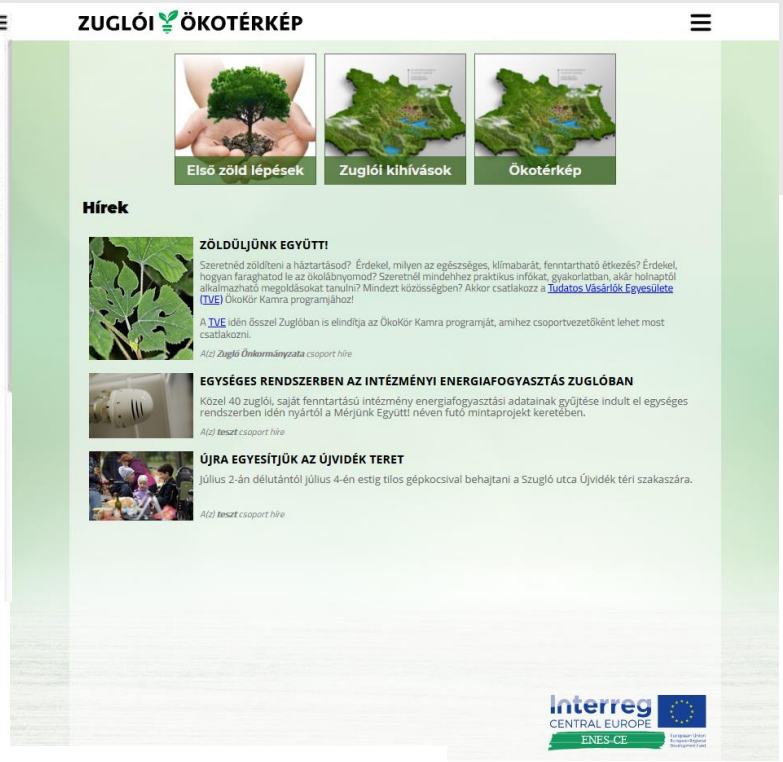
Wind turbine

Sewage treatment plant

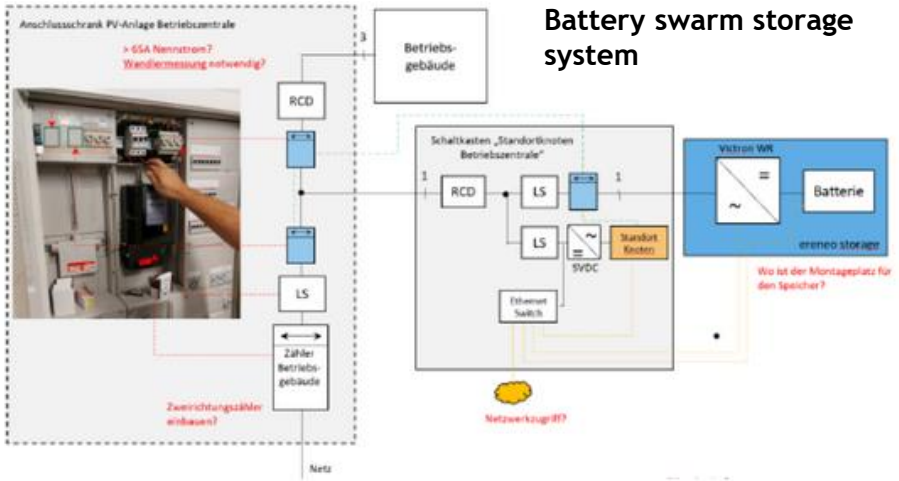
Best practice study tour to Pfaffenhofen, 25. – 27.7.2021.

CO_2 Apocalypse Clock in Pfaffenhofen

Eco-Map of Zugló district - www.zugloiokoterkep.hu



Energy Service Kit and Solar Toy, Municipality of Forli



Battery swarm storage system

First community bicycle storage facility, Zugló district

Modernisation of public lightning in Municipality of Koper

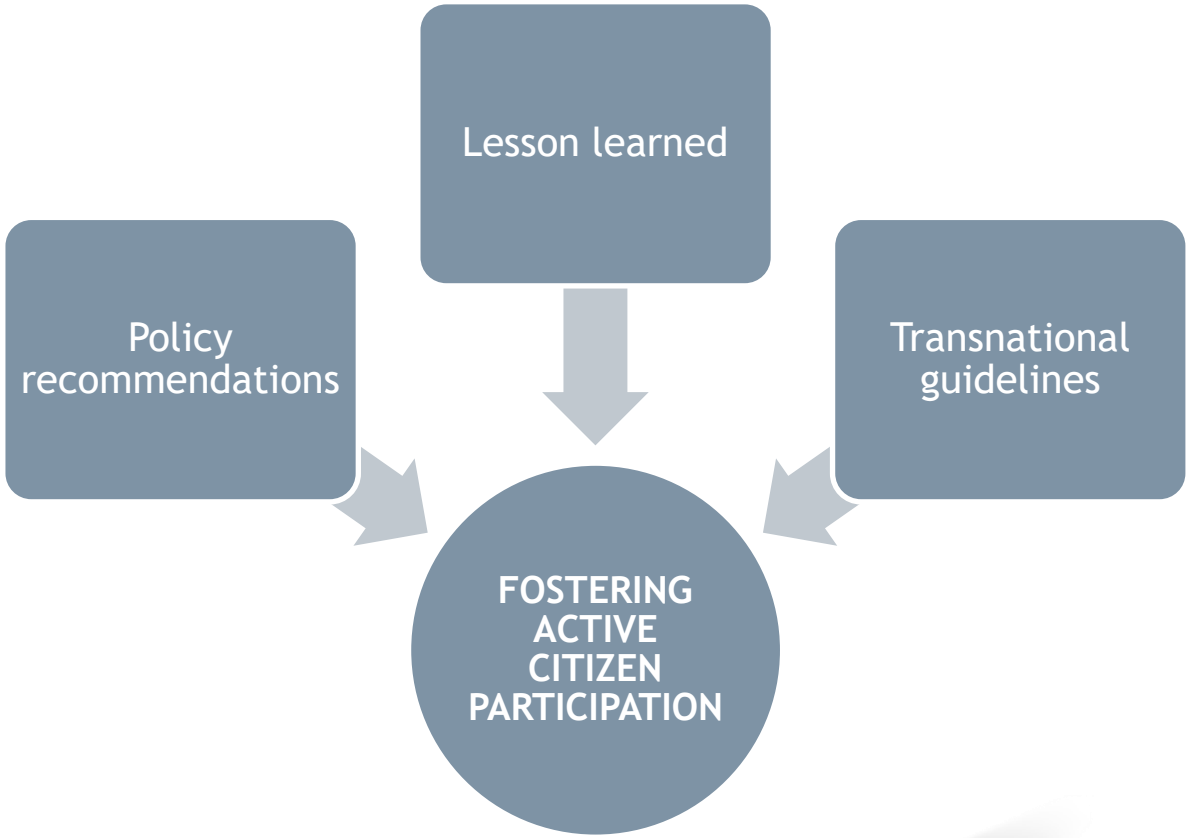
PROJECT ENES-CE -> FINAL STEPS

LESSONS LEARNED ON:

- Regulatory barriers
- Citizen engagement
- Technical issues
- Using ENES-CE participative tools for citizen engagement

IN FAVOUR OF:

- Stimulating citizen engagement in creating local energy strategies
- Fostering co-creation of local energy cooperatives and citizen energy groups
- Providing the momentum for further investments in the local energy infrastructure



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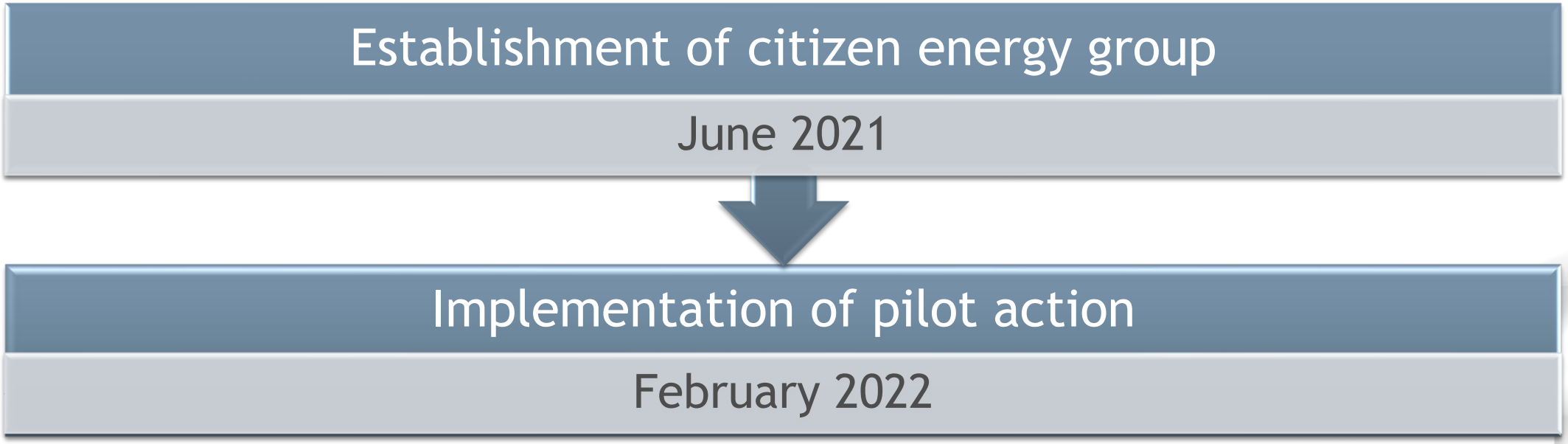
- Organization of 3 workshops -> activating citizens and all interested stakeholders, determining the legal form of the citizen energy group
- Defining a pilot action
- Establishment of a local citizen energy group
- Implementation of a pilot action

Timeline of pilot action activities



SPECIFICATION OF ENES-CE PROJECT PILOT ACTIONS

1. Consumer energy group in Forli, Italy
   - Equipment for energy savings (bulbs, kits…)
2. Solar energy cooperative in Koper, Slovenia
   - Renovation of public lighting
3. Energy savings cooperative in Zuglo, Budapest, Hungary
   - Community bicycle storage; Green map; EMS
4. Citizen energy group in Prelog, Croatia
   - PV system on public building
5. Energy saving community in Niemce, Lubelskie Voivodeship, Poland
   - Education of citizens, PV installation
6. Establishment of a swarm storage project / CO2 apocalypse clock in Pfaffenhofen, Germany

TOWN OF PRELOG

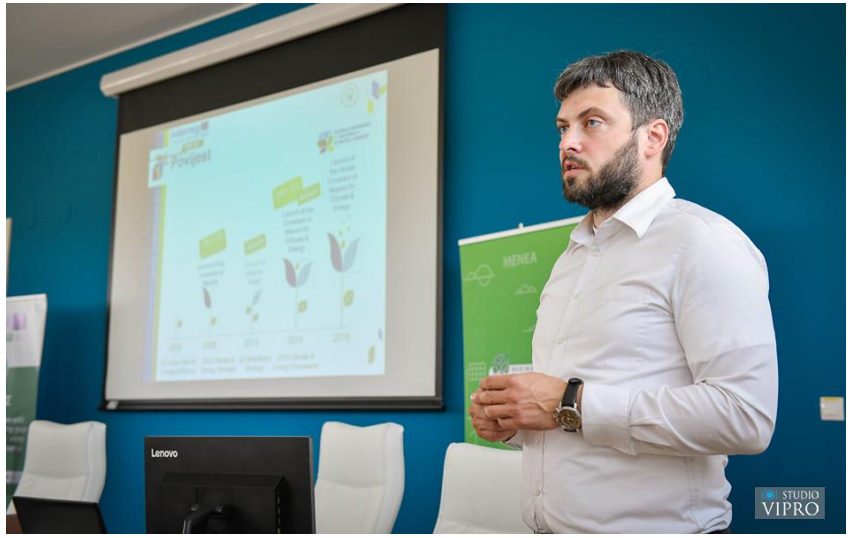
- Population: 4.041 inhabitants (7.041 surrounding settlements)
- 1.317 households (2.259 surrounding settlements)
- Area 63,7 km^2

24

TOWN OF PRELOG

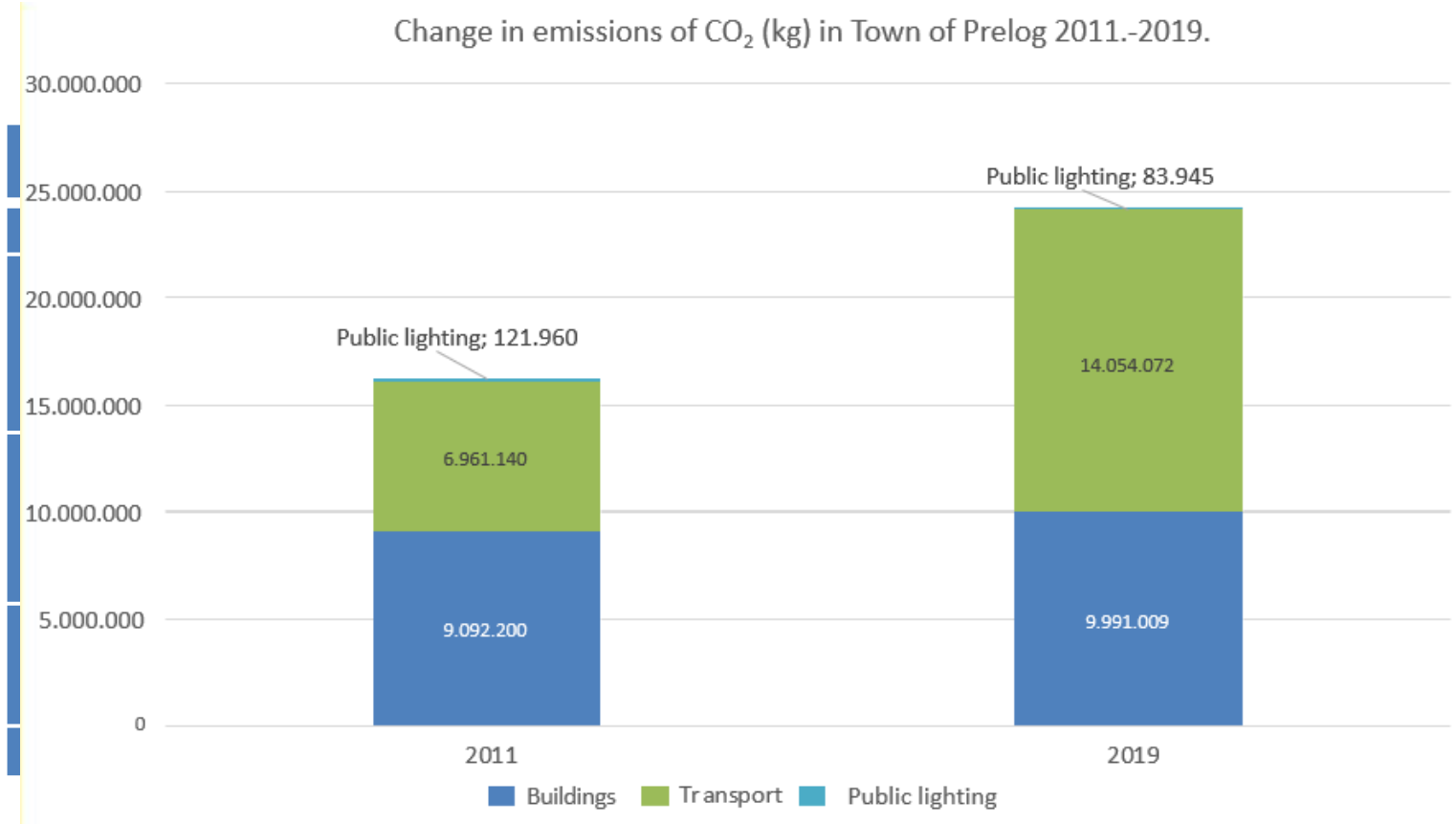
WORKSHOP JULY 22th 2020

- Presentation of ENES-CE project
- Presentation of CoM and the process of developing SECAP from SEAP by Cooperative for Ethical Financing (ZEF)



- Energy production and consumption analysis in Town of Prelog
- Presentation of identified measures

WORKSHOP JULY 22th 2020



WORKSHOP FEBRUARY 17th 2021

Cooperation with citizens and other relevant stakeholders

2014 - developed SEAP for Town of Prelog

ENES-CE 2019/2020 revision of SEAP

18 measures defined within newly developed SECAP for Town of Prelog to decrease CO_2 emission by 40% until 2030

SECAP Prelog

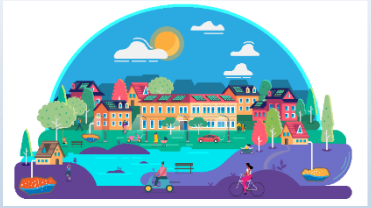
In communication with the Town of Prelog, citizens and other local stakeholders **3 most relevant measures were singled out**:

Bike sharing project and construction of bike lanes	Crowdfunding project for solar panels	Workshops for local entrepreneurs on financing energy projects

Total CO_2 emissions savings by 2030. - **13.936,84 t**	% savings compared to 2011. - **40,16%**	Reduce energy consumption by 2030. - **71.064,51 MWh**	Estimated total investment ≈ **150.000.000 €**

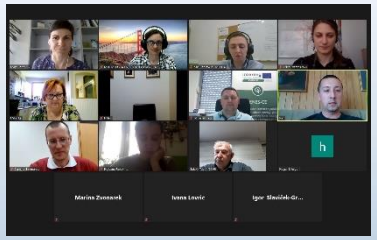
WORKSHOP APRIL 22th 2021

virtual platform Zoom



Preparatory steps in establishing citizen energy group

- Creation of visual identity



Best practice examples - citizen energy groups

- Goals and activities of the groups
- Establishment steps, requirements

Teamwork

- Presentation of ideas of the participants
- Identification of potential establishers
- Voting to select a pilot action

Constitutional meeting of the Green Energy Club Prelog

Goals:

- gather citizens who want to contribute to the sustainable development in Town of Prelog
- development and implementation of energy / green projects in their local community

WORKSHOP JULY 15th 2021

Presentation of newly establishment Green Energy Club Prelog

Presentation of the planned pilot action

Citizen energy communities - legislative

From idea to realization (teamwork)

3rd WORKSHOP JULY 15th 2021

- Citizen energy communities and new Electricity Market Act in Croatia - introduction by Green Energy Cooperative (ZEZ)
- Procedures, limitations and benefits

PROJEKTI

Za održivi razvoj

Grad Prelog i Međimurska energetska agencija d.o.o., u suradnji sa Zelenom energetskom zadrugom, održali su 15. srpnja treću radionicu za predstavljanje lokalne energetske grupe - Energetska udruga građana „Zeleni Prelog". Udruga je osnovana u sklopu projekta „ENES-CE - Povećanje kapaciteta javnih institucija u planiranju i provođenju lokalnih energetskih strategija i planova u suradnji s građanima". Cilj udruge je okupljanje građana koji žele doprinijeti održivom razvoju grada Preloga i time staviti svoj grad na kartu zelenih i zdravih gradova Europe.

Građani tako mogu razvijati i realizirati energetske, odnosno zelene projekte, u svojoj lokalnoj zajednici koji će pridonijeti energetskom razvoju samoga grada i time učiniti Prelog energetsko neovisnim gradom. Radionica je bila održana u nekoliko modula, a najvažnije stavke su predstavljanje projekta ENES-CE i pilot investicije izrade sunčane elektrane na krovu DV-a „Fijolica", zatim ciljevi, djelatnost i članstvo Energetske udruge građana "Zeleni Prelog", upoznavanje sudionika s pojmom energetske zajednice te grupni rad pod nazivom „Od ideje do realizacije". Svi zainteresirani građani s područja Preloga, Međimurske županije, ali i cijele Hrvatske, mogu se učlaniti u udrugu te aktivno sudjelovati u stvaranju boljih uvjeta za život te u očuvanju okoliša. **(kb)**

Sudionici radionice (snimio Studio 'Vipro')

MEĐIMURJE • 19. SRPNJA 2021.

DEVELOPED TOOLS

Tool 1 **Co-design workshop methods for engaging participants into local energy planning**

https://www.interreg-central.eu/Content.Node/200117-1950-D.T2.2.1-Tool1-Co-design-workshop-methods.pdf

Tool 2 **Community energy investment guidelines - technical business and legal aspects**

https://www.interreg-central.eu/Content.Node/WPT-2.html

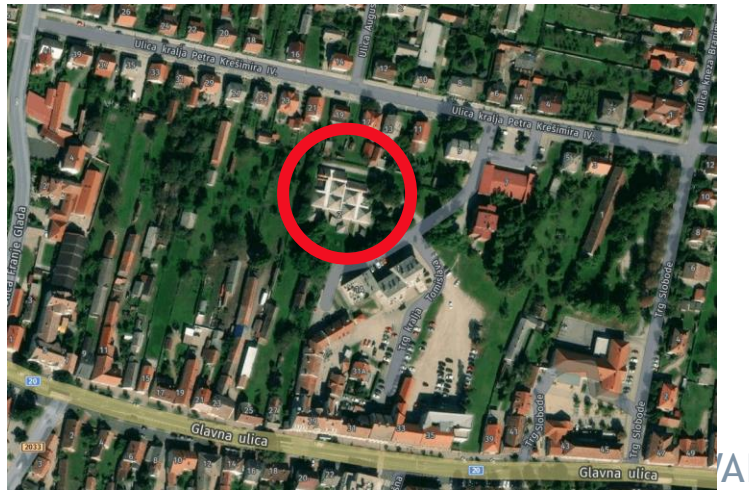
Tool 3 **Communication methods for local energy plans and creating an atmosphere of acceptance**

https://www.interreg-central.eu/Content.Node/Communication-Tool-final.pdf

PILOT ACTION IN TOWN OF PRELOG

PV system on roof on kindergarten „Fijolica” Prelog

- Building owned by Town of Prelog
- Renovated building in 2019
- Estimated power of the PV plant 50 kW
- Produces electrical energy for own consumption



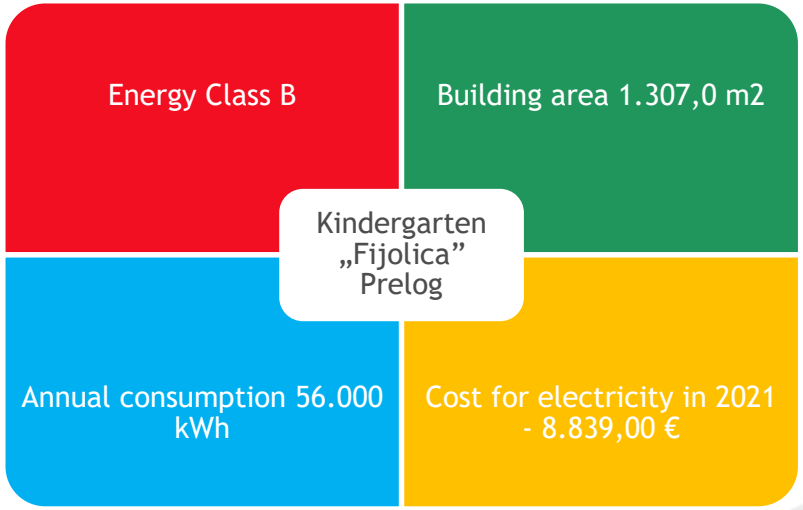
https://www.djecjivrticfijolica.hr/index.php/about-us/nasi-objekti

PILOT ACTION IN TOWN OF PRELOG

- 162 children in 10 groups
- 35 employees

- Estimate production of power plant - 58.350 kWh/annual
- Purchase price 0,115 €/kWh

Facts about building

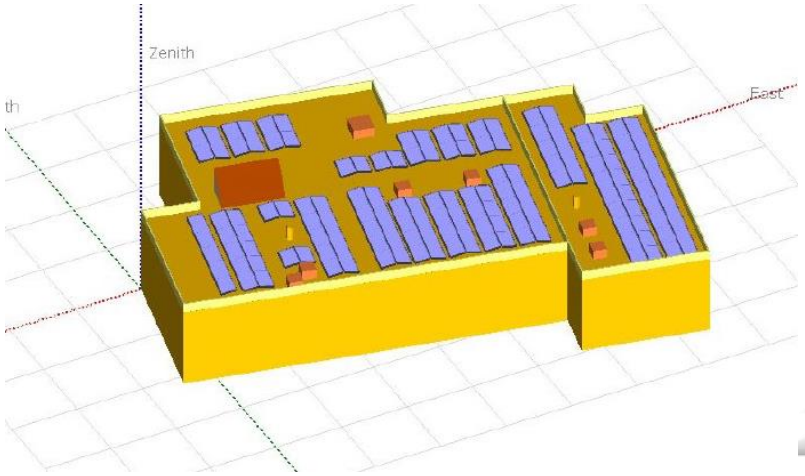


PILOT ACTION IN TOWN OF PRELOG

Administrative building of the Town of Prelog

- The procurement of a electric vehicle for employees of Town of Prelog in progress
- Charging station is planned to be installed on kindergarten building

- Resolved permission to connect to the network
- Technical documentation for the power plant and charging station has been completed
- Powerplant should have been done by June, 2022



https://www.djecjivrticfijolica.hr/index.php/about-us/nasi-objekti

PILOT ACTION IN TOWN OF PRELOG

- Contract on works signed on 23th of March 2022
- Value of the investment - 55.950,00 €

'SUNCOLOVKA' NA KROVU VRTIĆA

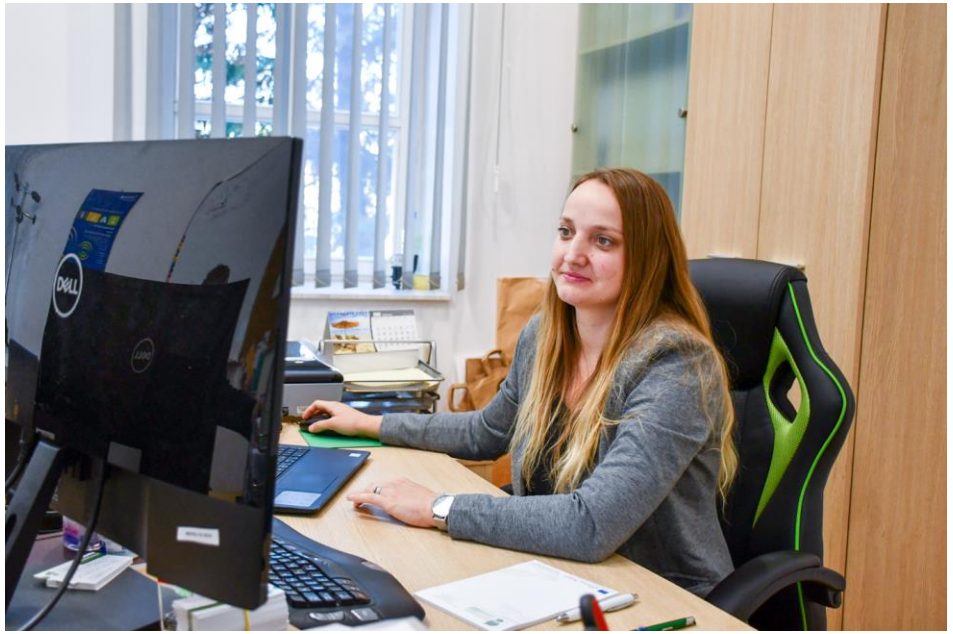
Zelena struja za mališane

Ugovor su potpisali Đuro Ujlaki i Goran Oreški

CONCLUSION

Main lessons learned

- In addition to financial resources for larger investments, the town administration often lacks professional assistance
- Involving citizens in investment planning and selection processes encourages further private investment and initiatives
  - Example: procurement of an electric car for the town administration, installation of charging station on kindergarten building
- Next steps - mutual sharing of energy between market participants - Green Energy Club Prelog



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Questions ?


THANK
YOU!