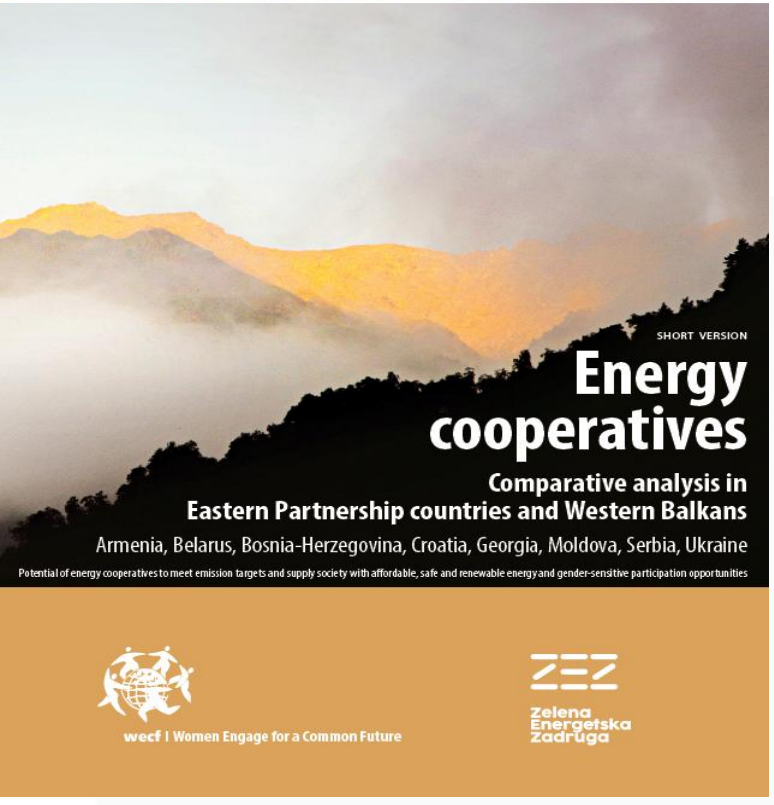

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3. International Renewable Energy Cooperatives Conference

Potential to meet emission targets and enable access to affordable, decentralized and renewable energy, focusing on gender-just participation and women's empowerment

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Izmir 10th Sept 2018

MAKE EUROPE SUSTAINABLE FOR ALL

EUROPEAN UNION

HEINRICH BÖLL STIFTUNG

Analysis of Potential of Energy Cooperatives

Estimating the potential of energy cooperatives to

- meet emission targets,
- supply society with decentralized, affordable, safe and renewable energy,
- offer gender-sensitive participation opportunities
- in Eastern Europe and the Western Balkans.

Target group: Political decision makers,
Energy and community stakeholders

Desk research and two-step data collection (QNR and expert interviews) exploring:

- national climate and energy policies,
- degree of gender equality,
- situation of civil society,
- legal framework for cooperatives and existing pilots,
- viable business models and suitable RE technology

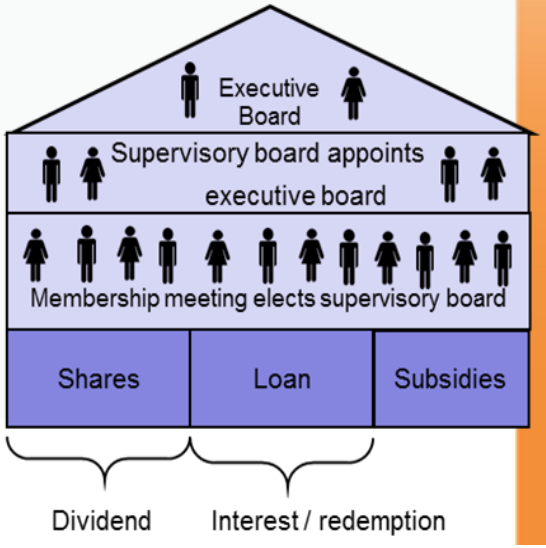
Georgia, Armenia, Ukraine, Moldova, Belarus, Croatia, Serbia and Bosnia and Herzegovina

Terminology: citizen's and community energy

- Combination of **civic participation and decentralized energy generation** (based on RE), combined with energy efficiency.
- Community energy is a **collective bottom-up approach** to tackling challenges related to energy, sustainability and climate change.
- The actors unite to plan, invest in and implement RE projects in varying forms:
  - Cities, municipalities, private persons, Public Citizen Partnership (PCP)
  - SME, e.g. energy cooperatives or communities
  - ESCO model for public sector
  - Crowdfunding (investment or donation based)

Energy cooperatives: established for the purpose of producing and distributing energy, mostly from RE.

- offer a suitable model to plan, finance and implement RE projects.
- decentralized alternative to the existing fossil and wood energy industry.
- allow a de-monopolization and democratization of expert knowledge and the entrance of new actors



Unlock private capital with and match countries and communities needs for climate solutions

Key findings I

- Countries have much to gain from a regional approach for energy security
- Available data on energy citizen projects in the target countries is limited. Identifying good practice cases and measuring their impact requires platforms and knowledge transfer.
- Energy cooperative projects do not stand alone, but are part of a comprehensive ‘community developing’ policy.
- Insufficient knowledge to understand the extent to which the this organizational form is able
  - to unify a broad group of actors to promote RE: **societal power**,
  - to gather capital for elaborating renewable energy supply structures: **economic power**
  - to meet international climate and SDG targets: **ecological power**

Key findings II

National climate and energy policies	Degree of gender equality	Situation and power of civil society	Legal framework for coops	Existing pilots, business models and technologies
All countries ratified the Paris Agreement and have GHG emission reduction and RE targets	Gender mainstreaming is included in some National Strategies on Gender Equality	Low trust (including trust in non-profits) by influx of non-indigenous forms of civil society	All target countries recognize the legal form of cooperatives, yet energy cooperatives remain uncommon	In all countries – except Belarus – initiatives have already started small-scale decentralized RE projects with public participation
Energy communities could assist in meeting the objectives of the UN agreement	Gender budgeting is used in pilots just in Ukraine, Moldova and Serbia.	Strong correlation between socio-economic development and the overall enabling environment for civil society	Lack of knowledge and missing support are main barriers	Still struggling with strong monopolistic structures, lack of funding and experience in the model, they show reasonable and successful energy solutions
	Similar challenges with addressing gender inequality. Existing instruments are often not in practice			

Energy Cooperatives in Eastern Partnership Countries and Western Balkans

25 people who are active in the field of developement work or renewable energy answered a questionnaire. Here are the main results:

Community energy and Energy cooperatives

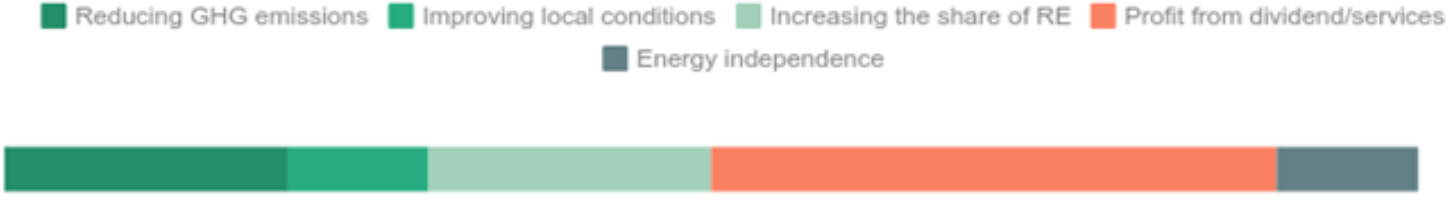
Despite a general lack of knowledge of concepts for decentralised energy in most of the analysed countries, there are well informed and motivated people who could potentially start initiatives.

24 of 25 respondents have heard of energy cooperatives

21 of 25 repsondents know the concept of community energy

3 of 25 respondents are members of energy cooperatives

Motivation to start an energy cooperative



Energy Cooperatives in Eastern Partnership Countries and Western Balkans

25 people who are active in the field of developement work or renewable energy answered a questionnaire. Here are the main results:

Lack of political commitment and action

While 23 out of 25 respondents say, that Energy transition is a topic in their country, only 13 say it is a political priority to foster renewables and energy efficiency.

Tool for gender equality

22 out of 25 respondents say, e-coops could support gender equality and women's empowerment. However, only 10 think women are disproportionately affected by energy issues.

Democratic and low-carbon energy supply

24 out of 25 respondents have detailed ideas how e-coops can support participation in the energy sector and help mitigation of GHG

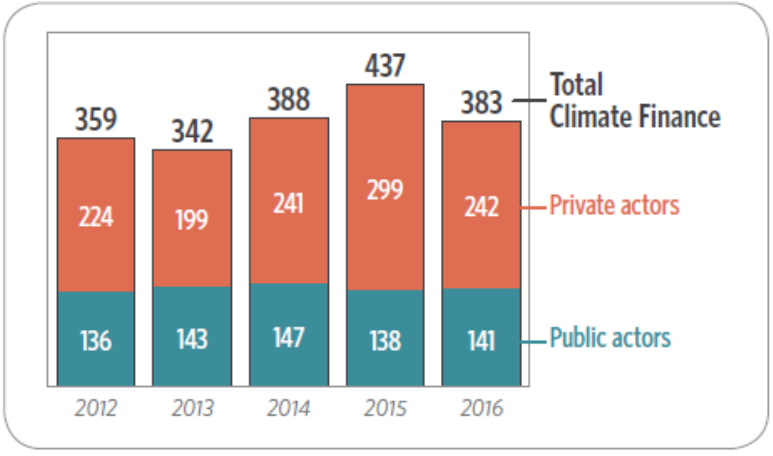
Climate financing fails to reach local level

Only about 10% of available climate finance reaches local level

Barriers preventing global development finance from reaching the local level:

- Metrics of success
- Business-as-usual intermediaries
- Limited support to build local capacity to manage funds and technologies
- Risk-averse funding
- Inappropriate co-financing targets
- Poor oversight of policies

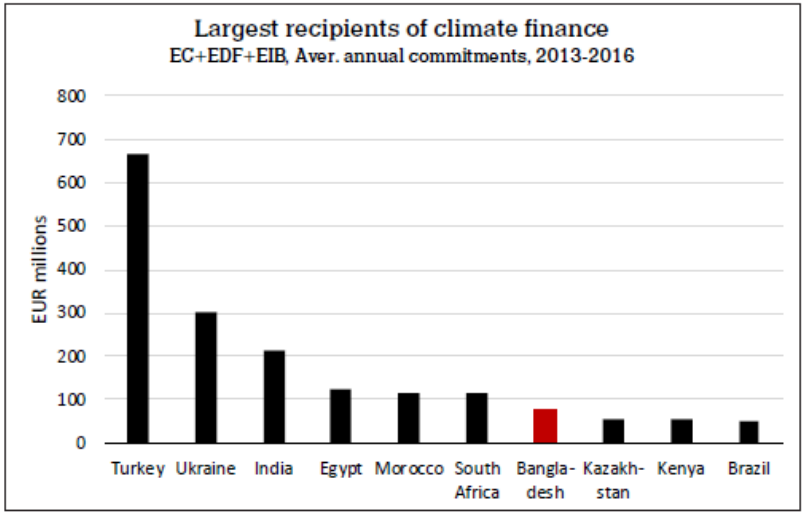
Figure 1: Breakdown of global climate finance by public and private actors 2012-2016 ($bn)



Source: IIED (2017): Delivering real change - Getting international climate finance to the local level

Funding potential of community energy

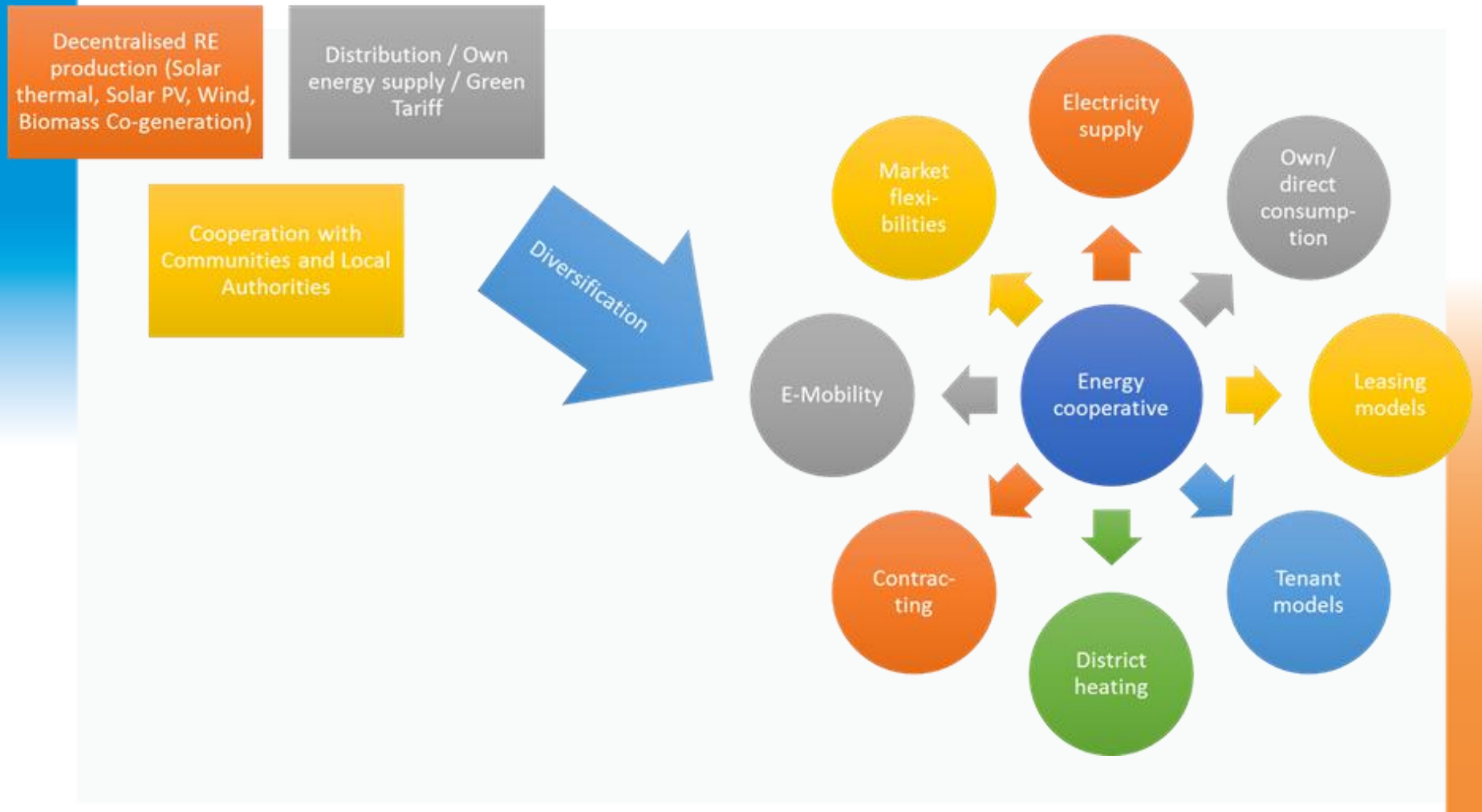
- Local capital unlocked
- De-risking with local equity
- Meeting local development and national strategies
- Capacity building for managing funds and projects



	Estimated invest with exist. pilots		Worst case scenario 5 years			Best practice scenario 5 years		
Country	Exist. Pilots	Investm. In €	No. Coops	Invest	Jobs	No. Coops	Invest	Jobs
Georgia	SWH, PV	100.000	10	950.000	10	25	1.425.000	75
Armenia	PV, Wind	200.000	5	2.875.000	10	15	8.625.000	38
Ukraine	Biomass, PV	200.000	8	840.000	8	30	3.150.000	60
Moldova	SWH	100.000	2	40.000	2	10	200.000	20
Belarus	PV					5	375.000	10
Croatia	PV, Biomass	250.000	15	1.575.000	30	50	5.250.000	100
Serbia	PV, Biomass	250.000	3	315.000	3	20	2.100.000	40
BiH	PV, Biomass	150.000	2	210.000	2	15	1.575.000	30
Total		**1.250.000**	**45**	**6.805.000**	**65**	**170**	**22.700.000**	**373**

Source: act alliance eu 2017: Analysis of climate reporting of EU

Possible business models



Own compilation / Energieagentur Rheinland-Pfalz

Good practice (1)

INDIEGOGO Explore What We Do START A CAMPAIGN Sign Up

ENERGY COOPERATIVE KAŠTELA AND UNDP ARE WORKING TOGETHER TO MAKE AN ENERGY INDEPENDENT SCHOOL

CLOSED

Energy independent school

The most beautiful school in Croatia that wants to become one of the first energy independent schools in the world.

Energy cooperative Kastela & UNDP Croatia
Kastel Luksic, Croatia
About

$10,001 USD raised by 189 backers

100% of $10,000 flexible goal

Good practice (2)

RES coops + investment based crowdfunding

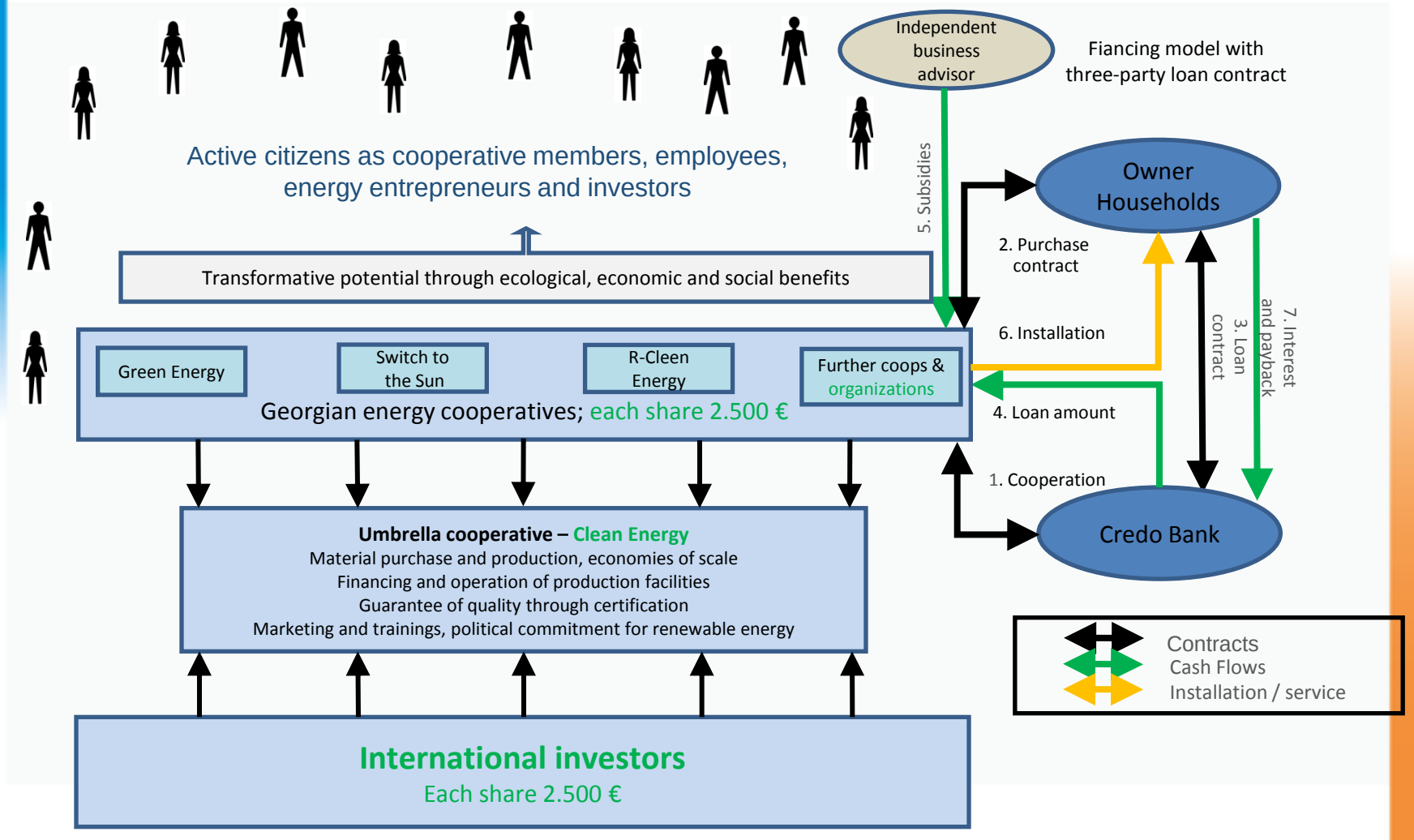
- Technology Centre Križevci

- 2017-2018
- 50 kW PV system in cooperation with the city of Križevci, first Croatian citizen investment based community project

RAZVOJNI CENTAR I TEHNOLOŠKI PARK KRIŽEVCI

Zelena Energetska Zadruga

Good practice (3)
Georgian energy cooperative



Good practice (4) - Ukraine

Ternopil raspberry energy cooperative in Losyan village (Kremenets district)

- Already two cooperatives for production of raspberries and strawberries
- Used to burn huge stacks and stems of raspberry: environmental problems
- Establised biomass cooperative to produce briquettes to heat their homes
- Supported by UNDP and EU, they purchased a briquette press
- The production is placed in a shed together with coops's refrigeration chamber
- Farmers pay only the cost for the installation of the press
- Turning out essentially cheaper than gas with more predictable costs.

Raspberry briquettes

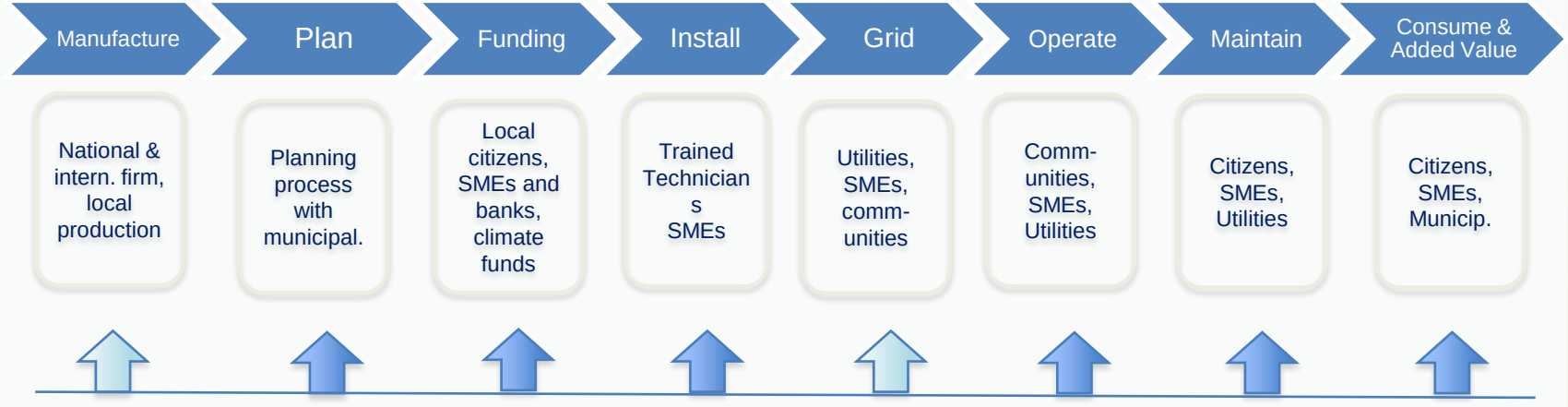
Cooperative's briquette shop

Energy Communities and Cooperatives Participation in whole value chain

wecf International

Sustainable Communities

Different roles for members of communities
- Mobilizing / Awareness raising / Trainings
- Market development
- Value addition (agro, food, etc.)
- Improving value chain
- Women's empowerment
- Access to finance / unlocking local and private capital



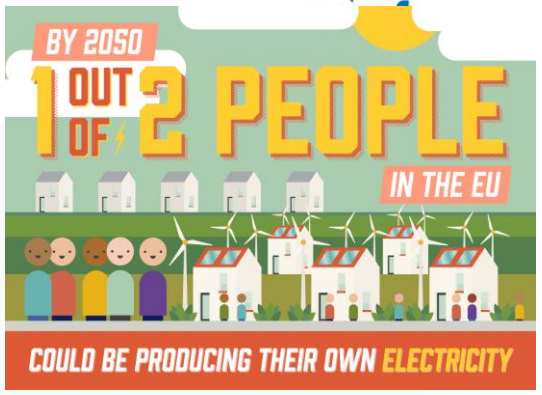
Empowered and sustainable energy cooperatives and communities can take over different roles of the energy value chain

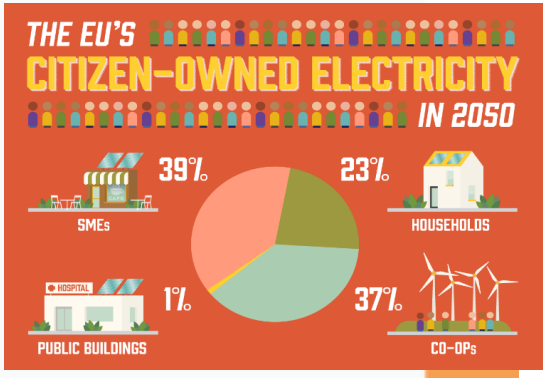
Main barriers for citizen's energy

- Unexplored market, lacking demand and skills
- Excessive regulations and missing legal framework for citizens energy/clear definition of e-coops
- Authorities are not so interested, still high corruption
- Strong monopolistic power of utilities
- It needs time and money to initiate projects in the long term
- Lack of information, experience, visible pilots and trust
- Lack of access to finance for citizens and cooperatives

Community energy in EU

- Report “Putting citizens at the heart of the energy transition” (REScoop 2016) estimates 264 millions of EU citizens could be producing their own electricity by 2050
- Cooperatives could contribute 37% of the electricity produced by energy citizens
- 2018: Agreement on EP and Council on explicit role for citizens and communities and strong definition of “renewable energy communities” and “self-consumption”





Recommendations (1)

Adopt enabling policies:

- Strengthen the right to self-produce, self-consume and fair payment for excess electricity
- Law on energy cooperatives
- Retire from polluting, inflexible coal and nuclear plants
- Enabling environment for civil society

Ambitious targets:

- Establish binding targets for renewable energy and community energy.
- Establish binding targets in 2030 national renewable energy action plans.
- Establish clear targets to meet the SDGs, linked with energy and climate goals.

Practical – making it easy and fair:

- Guarantee priority grid connection for energy citizen projects
- Simplify administrative procedures for registering and operating such projects
- Include gender-mainstreaming and gender-budgeting for energy projects

Ensure funding:

- Encourage innovative financing solutions for energy community projects.
- Provide opportunities for low-income communities to become energy citizens
- Provide financial support for preliminary investigations, works and implementation of community energy projects.

Recommendations (2)

Clear communication:

- Ensure that the true benefits of citizen's energy are communicated transparently
- Set-up information hub/support centres/energy agencies for citizen energy
- Organise and support national and cross-border citizen's energy conferences and dialogue
- Highlight and scale up successful pilot projects

Local level:

- Cross sectoral approach: Local governments use planning power to integrate obligatory RE and energy efficiency into construction and renovating processes
- Providing infrastructure for RE projects

Recommendations for Civil Society and citizens: **it's possible - let's do it!**

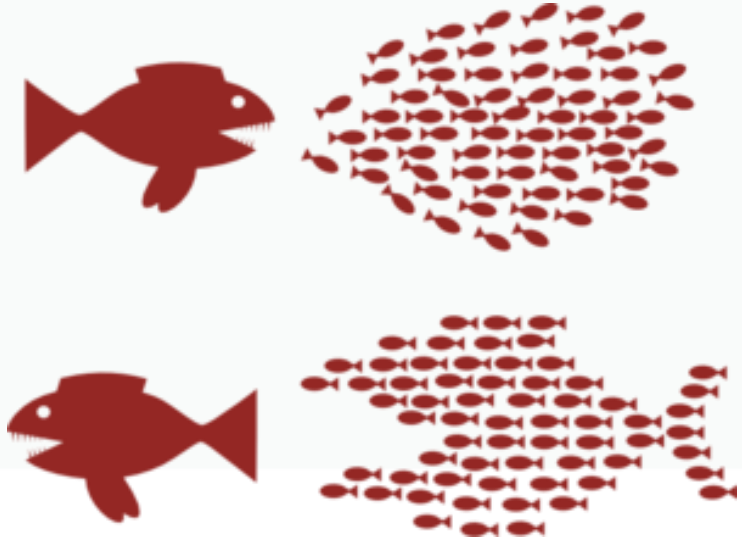
- Ask for guidance, networking and documentation from existing coops and start the process with a group of interested people
- Design proper business plans to approach members and investors
- Refer to WECF handbook, etc. for more information on starting e-coops

Citizen's Energy support local local communities

- **Big investments are important, but investors** using local resources mainly for their profit

vs.

- **Local communities and financing** using local resources (sun, biomass, wind, water) for own consumption, and growing local economy, produce more sustainable results and provide access to clean energy



Transformative potential – Catalyst

Energy system with higher share of renewable energy shows multiple benefits

"Affordable and safe energy is available". Showing best practice from bottom up and good appropriate legal framework from top down will bring social and cultural change.

Economic impact: better trade balance, increased economic activity, stable energy prices, new employment opportunities

Community and democracy: Joint effort shows opportunities to act. Fostering decentralized RE production

Ecological impact: Reduced pressure on natural resources, Reduced GHG emissions – support NDC targets, Collective climate action

Resilience: Creating resilient communities, not depending on foreign resources, improved energy security

Capacity building: Active and aware citizens: consumers, producers, investors, developers, etc.

Social Innovation: Offering a space to develop new ideas and systems of energy supply

Questions or comments?

Thank you for your attention!

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