



Kick-Off Event: Energy Communities in Moldova

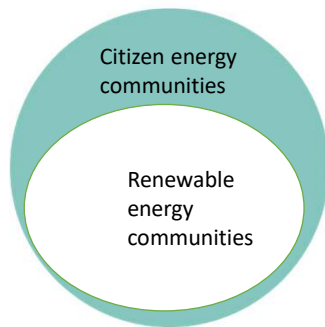
Chisinau, 22 April 2024,
12.00-12.30

Dr. Janez Kopač



**Organizational structure and finances
(legal form, members/shareholders, ...)**

Energy communities framework



Discrepancies	CEC	REC
Participation and control of the private sector	Small enterprises, citizens, local communities	Small enterprises, citizens, and local communities. Participation does not constitute their primary commercial or professional activity
Effective control Geographic proximity criteria	Effectively controlled by members or shareholders	Effectively controlled by members or shareholders located in the proximity of the renewable energy projects that are owned and developed by the legal entity
Energy sources	Electricity	Renewable energy
Activities	Generation, consumption energy storage, aggregation Energy sharing <u>Supply</u> Energy efficiency services or charging services for electric vehicles or providing other energy services to its members or shareholders. Countries can allow to manage <u>distribution networks</u>	Produce, consume, store, and sell renewable energy. Energy sharing

Energy communities are an energy and social innovation



- RECs and CECs are social concepts with a common legal framework
- Open legal concept
 - Any form of entity
 - Open and voluntary participation
 - Effective control by members or shareholders
- Primary purpose is to provide an environmental, economic, or social community
 - **benefits** for members or shareholders rather than financial profits
- RECs and CECs are **Market Participants**
 - Generation, consumption, energy storage, energy sharing



Main benefits

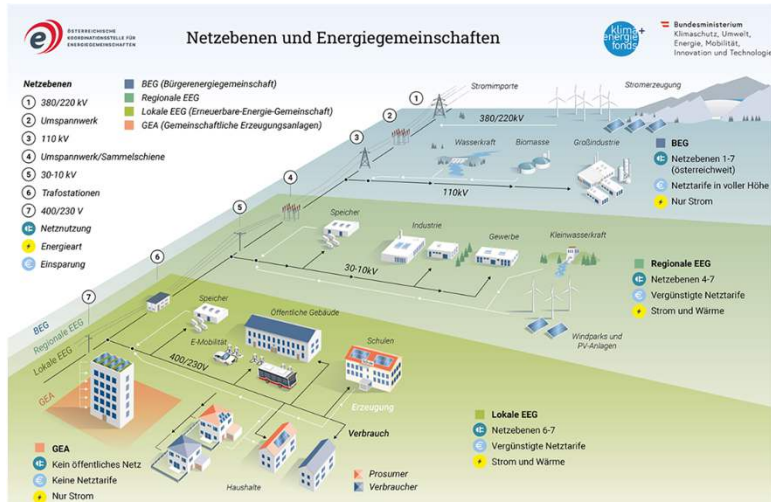
- Increased energy independence;
- Lower costs for electricity;
- Local economic development;
- Bringing people together to cooperate locally;
- Job creation;
- Reduced greenhouse gas emissions.



Incentives

- Power plants might receive public subsidies;
- Consumption-based grid tariff (no costs for generators);
- Reduced grid tariff for the electricity generated and consumed inside REC - assumption: for the REC energy only the lower voltage levels are used and therefore the higher voltage levels are excluded from the total system costs (reduction in Austria up to 64%);
- Energy used within the REC is relieved from the energy tax;
- Administrative support for development and founding (one-stop shop);
- Net metering monthly;
- Cheap loans from state funds.

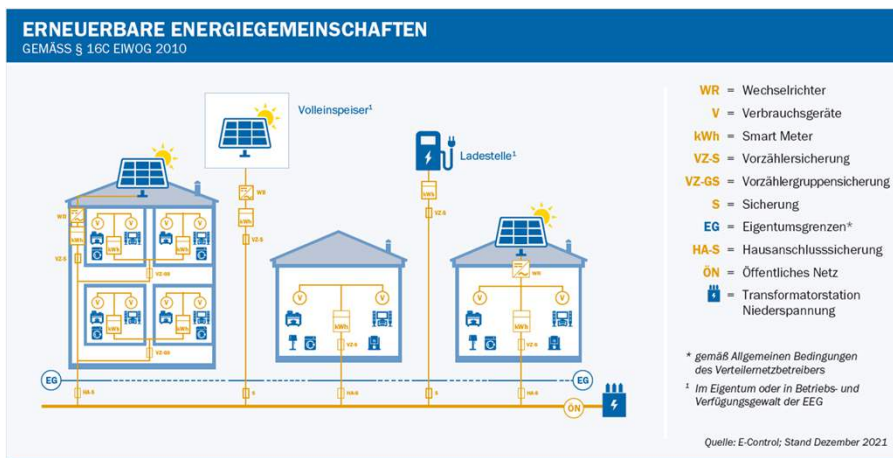
Austria



Source: energiegemeinschaften.gov.at

Voltage level	Community
0,4	Jointly used production plant (GEA)
0,4	Local REC (EEG)
10-30	Regional REC (EEG)
0-400	CEC (BEG)

REC in Austria



Austria – segmented approach (depends on voltage level)



Voltage level	Community
0,4	Jointly used production plant (GEA)
0,4	Local REC (EEG)
10-30	Regional REC (EEG)
0-400	CEC (BEG)

Reduction of tariffs - Austria



Model	Community Generation Plant (GEA)	Renewable Energy Community (EEG)		Citizens' Energy Community (BEG)
		Local	Regional	
Discounts for electricity used "internally"	100% elimination of network fees and charges	Elimination of the renewable subsidy contribution and the electricity (energy) tax		
		Reduced network fees:		
		Work price-related network usage fee reduced by 57%	Work price-related network usage fee is reduced by 28% on 0,4 kV and by 64% on 10-30 kV	no discounts

The law requests the flat reduction rate

Reduction of tariffs - Slovenia

Strict cost reflectivity

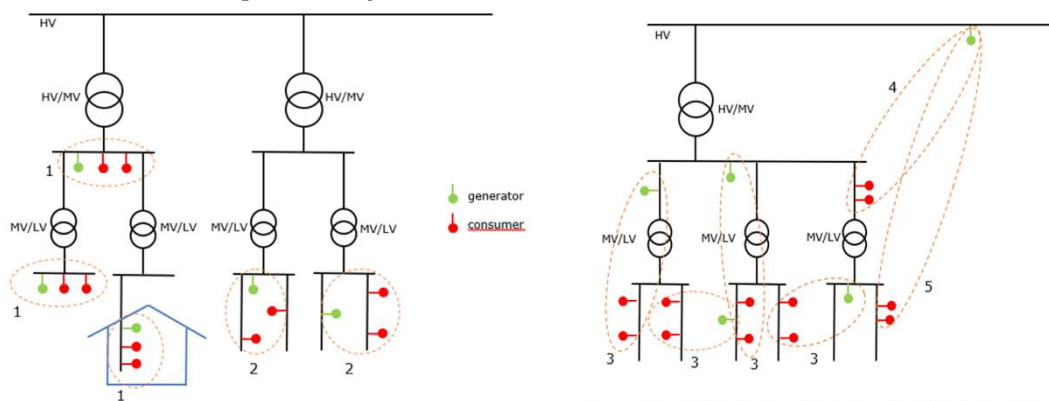
$$OMRECD_{j,b}^E = TEC_{j,b}^E \cdot g_b^{ECu} \quad [EUR]$$

$$g_b^{ECu} = \begin{cases} g_b^{ECu} & ; ce_b > g_b^{ECu} \\ ce_b & ; ce_b \leq g_b^{ECu} \end{cases} \quad [kWh]$$

$$OMREC_{i,b}^E = (Tad_{i,b}^E + Tpe_{i,b}^E) \cdot ce_b^{netu} + TEC_{i,b}^E \cdot g_b^{ECu} \quad [EUR]$$

Art 20 of the Distribution Network Tariff Methodology

Slovenia – universal approach (cases with one plant)

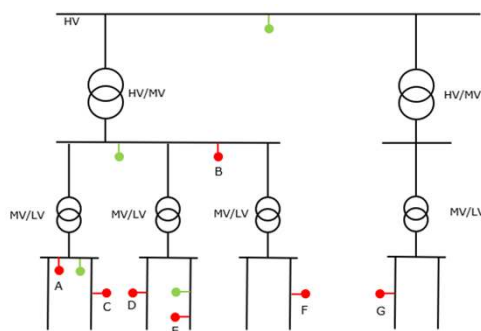


- 1 adjusted tariff = 0 (no public network is used)
- 2 adjusted tariff covers only the costs of the LV network

- 3 adjusted tariff covers the costs of the LV + MV network
- 4 adjusted tariff covers the costs of the MV + HV network
- 5 adjusted tariff covers the costs of the LV + MV + HV network



Slovenia – universal approach (case with several plants)



- A adjusted tariff = 0
- B adjusted tariff = 0
- C adjusted tariff covers the costs of LV network
- D adjusted tariff covers the costs of LV network
- E adjusted tariff covers the costs of LV network
- F adjusted tariff covers the costs of LV + MV network
- G adjusted tariff covers the costs of LV + MV + HV network



Agencija za energijo

How much does it cost?



- Austrian DSOs claim their costs per member of the energy community per year is 200 EUR but E-Control does not agree;
- Annually less collected network tariffs in Austria 110.000 EUR (all collected 2,5 billion EUR = 0,0004%)

• Source: https://www.e-control.at/documents/1785851/1811582/Kosten-Nutzen-Analyse_StromGas_Final.pdf/72838f8b-2eee-c48c-6230-17d8582639d8?t=1711022863061

Static and dynamic calculation

- **Static** – based on percentages (share) of something (past consumption, actual generation, financial participation, etc.);
- **Dynamic** - the allocation is made according to the actual measurement at the metering point of the consumption systems, i.e. to the current consumption behavior of the respective participating network users;

The fundamental question - crucial for the legal relationship with the network operators, must be regulated centrally at the level of the supply agreement!!!

Economic questions related to the work of an energy community

- **Form:** usually cooperatives, associations, partnerships, non-profit organizations – one member, one vote, or a limited liability company.
- There are no rules for the tariffing of services between the energy community and the participating network user. The only request from the Directive is that the main purpose of the energy community may not be explicitly "financial gain,,."
- The energy community does not need any license as a supplier.
- Every member has its own contract with a selected supplier.
- Selling surplus energy (Austria) or giving it for free to the grid (Slovenia)?

Main implementation challenges

- **Identify barriers to the development of business models under development**
- **Definition of the legal concepts**
 - — Autonomous and effective control by members
 - — Primary commercial or non-profit activity
 - — Proximity criteria for RECs
 - — Purpose to provide environmental, economic, and social benefit
- **Regulatory challenges to ensure an enabling framework**
 - — Protection of consumer rights of the members of the energy community and/or the energy community itself vs. its financial strength
 - — Definition of a market activity of «energy sharing »
 - — DSO's cooperation
 - — Fair, cost-reflective, transparent, and non-discriminatory charges

Fast-growing sector, but not everywhere

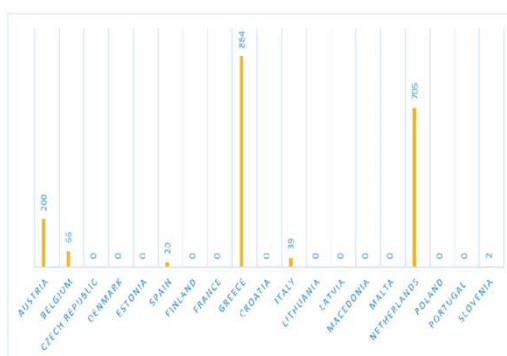
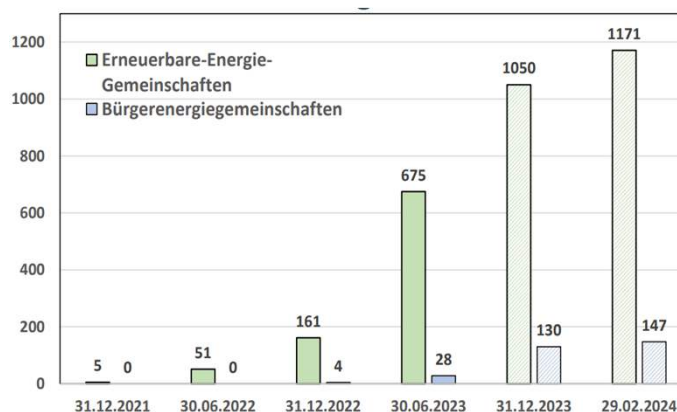


Figure 7: Number of citizen energy communities in 2022

Source: CEER



Source: energiegemeinschaften.gv.at

EU assistance and data sharing

- https://energy-communities-repository.ec.europa.eu/index_en
- https://citizen-led-renovation.ec.europa.eu/index_en
- https://rural-energy-community-hub.ec.europa.eu/index_en
- <https://www.rescoop.eu/toolbox/procurement-guide-for-community-energy>



Moldovan Law on Renewables, Art 395 (1)

- ANRE: Regulation on the organization and operation of renewable energy communities;
- REC is an autonomous entity that acts in its name, can exercise rights, and is subject to obligations independently of its members and shareholders;
- Members or shareholders of REC can be natural persons, condominium owners' associations, small and medium-sized enterprises, villages and cities, final consumers;

Moldovan Law on Renewables, Art 395 (2)

- **Rights:**

1. Members can join or leave at any time;
2. to produce, consume, store, and market energy from renewable sources, including under the contract for the purchase of electricity produced from renewable sources directly from the producer;
3. to establish rules for joint consumption of energy from renewable sources produced by the energy generation units owned by the community between its members and shareholders, based on an agreement;
4. to access all relevant energy markets, both directly and through intermediaries/aggregators, in a non-discriminatory manner;
5. to benefit from the support schemes;
6. Nondiscriminatory treatment of final consumers, producers, suppliers, distribution system operators;

Moldovan Law on Renewables, Art 395 (3)

- **Obligations:**

REC has to act on the energy markets as participant with full rights and the obligation to comply with the provisions of the normative and regulatory acts affecting the electricity market, as well as the related requirements



Moldovan Law on Renewables, Art 395 (4)

ANRE shall develop and approve regulations regarding the rights and obligations of system operators, suppliers, and other participants in the energy markets regarding the connection, joint use of energy in the community framework, electricity metering, balancing, and billing responsibilities.



Thank you

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