Interreg Danube Region

Co-funded by the European Union

NRGCOM

Specific Objective 3

D.3.2.1 Report on the success of the mentoring method

Table of Content

1. Executive Summary

Activity 3.2 of the NRGCOM project tested the jointly developed mentoring scheme (D.3.1.1) for the creation of renewable energy communities (RECs) in five Danube Region countries: Hungary, Croatia, Serbia, the Republic of Moldova, and Germany. This report provides a comparative assessment of the pilot operations, evaluating the effectiveness of the mentoring method and documenting outcomes, challenges, and lessons learned across all sites.

In total, nine distinct pilot communities were mentored: three municipal-level initiatives in Hungary (Kunsziget, Nemesvámos, Budapest Freeport), one institutional-county energy community in Croatia (Istria County), two complementary models in Serbia (residential in Arandđelovac, industrial in MIND Park Kragujevac), two pioneer initiatives in Moldova (rural in Sireți, urban in Chișinău), and one large-scale regional utility in Germany (Regionalwerke Passauer Land).

2. Introduction and Activity Context

2.1 Objectives of Activity 3.2

The primary objective was to test the jointly developed mentoring scheme by providing technical, legal, and organisational assistance to selected target groups to start their own energy community creation process. Designated partners acted as mentors, sharing practices and techniques, and helping address concerns throughout the REC establishment journey. The pilot results serve as practical validation of the strategies and tools developed in earlier project phases.

2.2 Overview of Pilot Sites

Country	Pilot Site(s)	Mentor	No. of Communities	Legal Form
Hungary	Kunsziget, Nemesvámos, Budapest Freeport	STRIA	3	Non-profit LLC
Croatia	Energy Community of Istria County	IRENA	1	Association
Serbia	Arandđelovac (residential), MIND Park Kragujevac (industrial)	REDASP	2	Non-profit association
Moldova	Sireți (local community), Vasile Lupu Chișinău (urban)	AEER	2	NGO
Germany	Regionalwerke Passauer Land	DIT	1	Communal company (gKU)

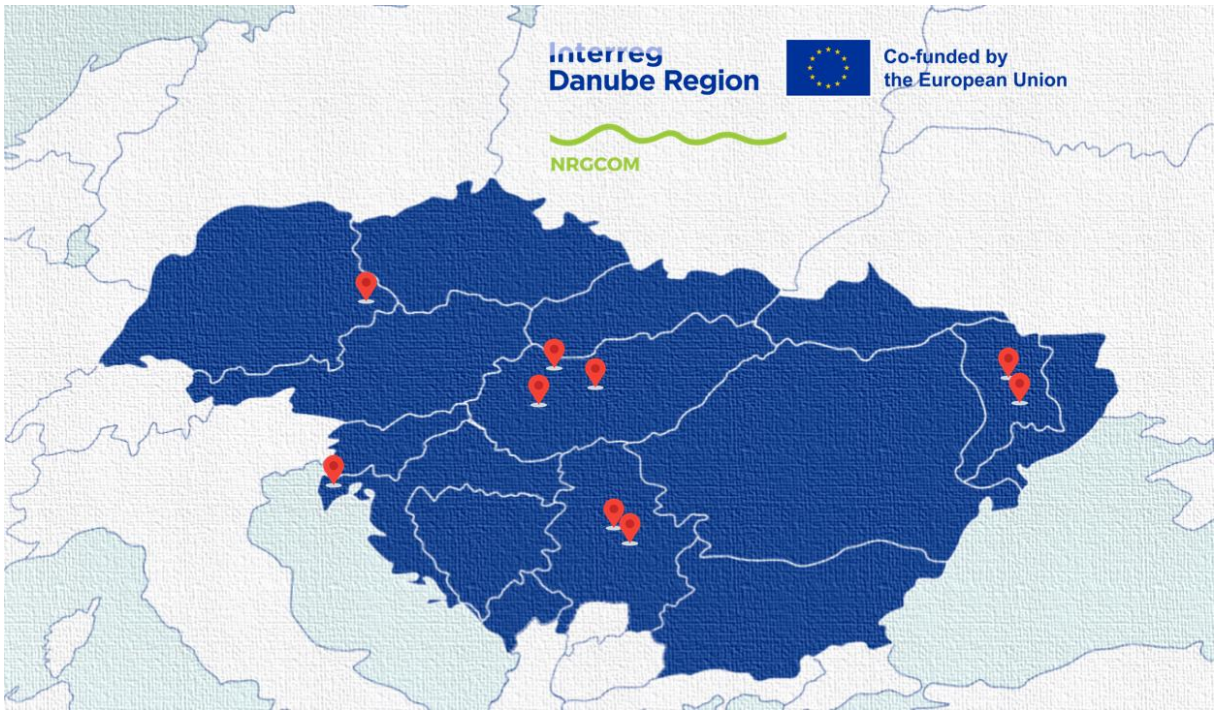

Photo 1: Spatial distribution of pilot projects across the Danube Region.

3. Methodology and Assessment Framework

3.1 Mentoring Scheme Applied

The mentoring scheme (D.3.1.1), developed under Activity 3.1 and coordinated by DIT, provided the methodological foundation. The scheme defined structured steps for REC creation and was adapted to each national context. Mentoring activities included workshops, face-to-face and telephone consultations, expert guidance, document preparation support, regulatory liaison, and data collection support.

3.2 Assessment Criteria

Success was evaluated against criteria defined in the NRGCOM application form:

Criterion	Description	Assessment Method
Founder identification	Name and legal form of the founding entity	Documentation review
Membership	Number and type of members recruited	Quantitative count
Legal conditions	Agreements, licences, regulatory compliance	Checklist / status
Financial framework	Funding model, business plan, cost analysis	Documentation review

Criterion	Description	Assessment Method
Technical readiness	Equipment, technology, infrastructure status	Progress assessment
Administrative progress	Pace and smoothness of administrative tasks	Timeline adherence
Barriers encountered	Challenges and mitigation strategies applied	Qualitative analysis
Energy management	System design and operational readiness	Maturity assessment

3.3 Data Collection

Data was collected in two rounds. First, a standardised interim reporting template was distributed to all Activity 3.2 partners (December 2025 – January 2026). Based on gaps identified in the interim reports, partner-specific follow-up data requests were issued and returned between February and March 2026. Additional information was gathered through partner meetings, bilateral consultations, and project progress reports.

4. Pilot Sites: Detailed Progress Reports

4.1 Hungary – STRIA (with IMRO)

STRIA is mentoring three energy community initiatives. All three have completed professional concept development and data collection, and are planning formal registration in 2027 as non-profit LLCs. A consistent challenge across Hungarian sites is the incomplete regulatory framework for RECs and artificially capped residential energy prices, which reduce the financial attractiveness for citizen members.

4.1.1 Energy Community of Kunsziget

Aspect	Details
Municipality	Kunsziget, Győr-Moson-Sopron County
Legal form	Non-profit LLC (planned)
Potential members	7 identified; 6 confirmed interest
RES type	Solar PV (community + solar power plant via PPA)
Planned capacity	50 kW AC/DC / 64,329 kWh

Aspect	Details
Key milestones achieved	Mentoring workshop (31.03.2025); Concept v1 (09.10.2025); Data collection (02.12.2025); Concept finalised (29.01.2026)
Registration timeline	2027 (dependent on PPA contract with solar power plant)
Remaining steps	1) Form non-profit LLC; 2) PPA contract with solar plant; 3) Register with MEKH

4.1.2 Energy Community of Nemesvámos

Aspect	Details
Municipality	Nemesvámos, Veszprém County
Legal form	Non-profit LLC (planned)
Potential members	13 identified; 9 confirmed interest
RES type	Solar PV (community + solar power plant via PPA)
Planned capacity	~2,000 kW (depending on efficiency targets)
Energy data	Production: 1,568,817 kWh; Consumption: 5,229,390 kWh
Key milestones achieved	Workshop (02.07.2025); Data collection (27.11.2025); Concept finalised (04.03.2026)
Registration timeline	2027 (dependent on PPA contract)
Remaining steps	1) Form non-profit LLC; 2) PPA contract; 3) Register with MEKH

4.1.3 Energy Community of Budapest Freeport

Aspect	Details
Organisation	Budapest Freeport
Legal form	Non-profit LLC (planned)
Members	4 entities (selected from 3 scenarios presented)
RES type	Solar PV + Battery Energy Storage System
Planned capacity	1,000 kWp solar PV + 3,900 kWh BESS
Energy consumption	3,052,168 kWh (current Freeport area consumption)

Aspect	Details
DSO status	Capacity expansion request submitted; response expected 2027
Key milestones achieved	Workshop (25.02.2025); Concept v1 (24.07.2025); Data collection (06.11.2025); DSO engaged (02.12.2025); Concept finalised (12.03.2026)
Registration timeline	2027

Hungarian-specific barriers and policy issues: STRIA highlights that the artificial cap on residential energy prices makes citizen participation financially unattractive, significantly impacting the mentoring process. There is no clear regulatory framework defining RECs in Hungary, no incentives for energy community formation, and contradictions between Hungarian and EU legislation on RECs. The regulations create obstacles for peer-to-peer (P2P) energy trading.

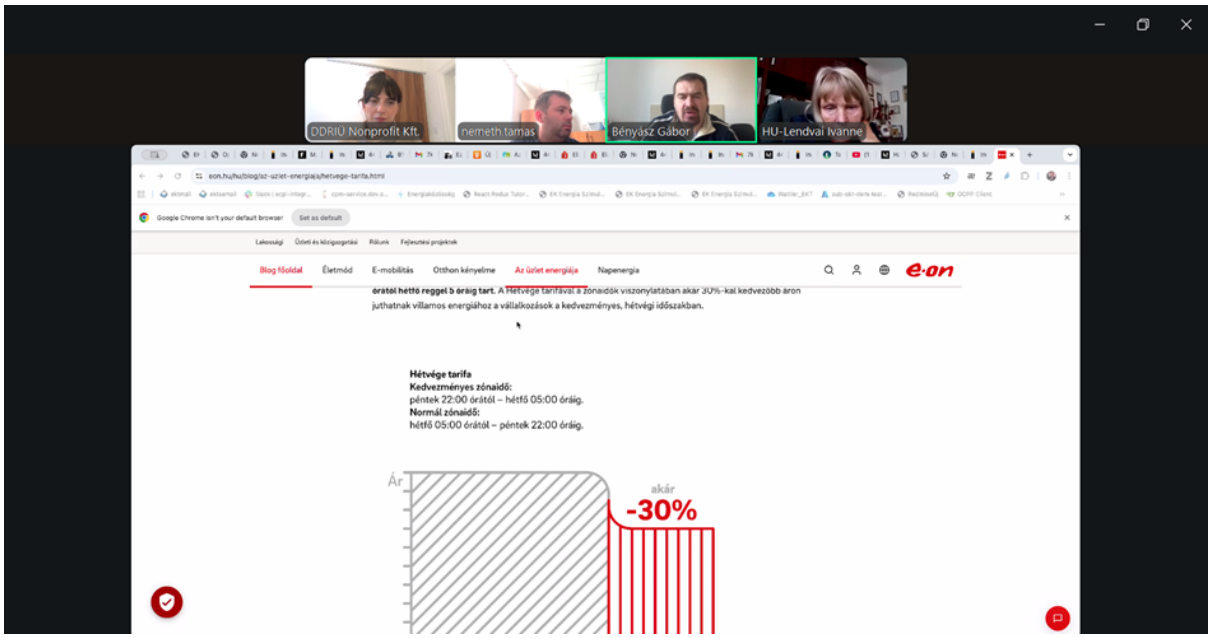

Photo 2,3: Highlights from the stakeholder workshops conducted as part of the Kunsziget pilot action.

4.2 Croatia – IRENA

4.2.1 Energy Community of Istria County

IRENA has developed one of the most technically detailed pilot analyses in the project. The Energy Community of Istria County plans to establish an association that brings together public institutions owned by Istria County, directing surplus electricity toward citizens and entrepreneurs in heritage-protected historic city centres who are unable to invest in their own renewable energy installations due to conservation restrictions. In subsequent expansion phases, institutions managed by cities and municipalities will be included to ensure sufficient shared energy supply. The long-term goal includes households at risk of energy poverty, making this a model with significant social inclusion potential. However, progress toward formal establishment is blocked by legislative amendments expected by late summer 2026.

Aspect	Details
Community name	Energy Community of Istria County
Legal form	Association (statute and membership regulations drafted)
Members	24 potential: 18 public institutions, 3 citizens, 3 entrepreneurs. Participation certain for institutions (managed by Istria Region); formalisation pending legislation
RES type	Solar PV
Planned capacity	713 kW; estimated production 962,550 kWh; ~300,000 kWh surplus for sharing

Aspect	Details
Energy sharing model	Surplus distribution: 20% of institutional, 67% of citizen, 20% of entrepreneur consumption. Internal rules pending legislative amendments on member-owned facility sharing
DSO/metering	HEP ODS responsible for smart meter installation (free); request can only be submitted after HERA registration. Interim plan: inverter-level smart meters with custom software
Governance documents	Statute drafted; Terms of Membership drafted; founding assembly planned for May 2026 (initially 3-member association). Phase 2: institutions, citizens and entrepreneurs from heritage-protected areas join after legislative amendments
Social purpose	Surplus electricity directed to citizens and entrepreneurs in historic city centres under heritage conservation who cannot install own RES. Long-term: inclusion of energy-poor households
Registration timeline	Unknown – dependent on legislative amendments (expected late summer 2026)
Critical barrier	Legislative amendments needed: (1) allow institutions as REC members; (2) enable sharing from member-owned production facilities
Support needed	Technical: software for automated sharing key calculation and financial settlement

Croatian legislative barriers: IRENA has identified six specific legislative issues requiring amendments to the broader regulatory framework governing RECs, including the Act on Renewable Energy Sources, the Electricity Market Act, and relevant by-laws:

1) enabling energy sharing from member-owned production facilities, not only community-owned. Current limitations restrict energy sharing in RECs to community-owned assets, reducing investment flexibility and practical viability.
2) allowing public institutions to become REC members. The 40% ownership cap currently applies only to citizen energy communities (CECs) and not to RECs; however, it is crucial to ensure that this restriction is not replicated in the upcoming legislative amendments for RECs.
3) addressing the spatial scope of RECs. Currently, the law does not prescribe spatial limitations for RECs; however, upcoming amendments are expected to limit scope to one 110 kV substation area. IRENA advocates that the scope should be expanded to at least distribution areas to ensure financial sustainability of future RECs.

4) addressing asset ownership rules upon dissolution (currently transferred to local government regardless of member contributions). This issue stems from the application of general rules under the Law on Associations (Zakon o udrugama), indicating the need for a more tailored lex specialis solution for RECs.

5) simplifying the activity registration procedure for RECs, aligning it with the simplified CEC model. RECs whose installed capacity exceeds 500 kW must currently undergo a complicated procedure to obtain individual permits for electricity-related activities, which contradicts the legislator's original intention to simplify procedures and support citizen energy initiatives.

6) explicitly permitting EV charging activities for RECs. Taken together, IRENA describes the current Croatian REC situation as one of "bureaucratic limbo" – a result of the cumulative effect of multiple unresolved legal and regulatory barriers across the broader framework, rather than any single legislative gap.

4.3 Serbia – REDASP

4.3.1 Aranđelovac (Residential) & MIND Park, Kragujevac (Industrial)

REDASP has developed two complementary preparatory REC pilot concepts. Progress remains constrained by the absence of secondary legislation, with formal registration now anticipated in 2027.

Aspect	Aranđelovac (Residential)	MIND Park (Industrial)
Target group	Households in Šumadijski Kutak area	Enterprises in MIND Park industrial zone
Members	Core group identified; formal membership to be defined upon enabling regulatory framework	Core group identified; formal membership to be defined upon enabling regulatory framework
RES type	Rooftop solar PV for self-consumption	Rooftop solar PV on industrial buildings
Planned capacity	3.5–4.5 kWp per household	30–100 kWp per enterprise
Legal form	Non-profit citizens' association	Non-profit association of legal entities
Governance	Executive Board coordination; REDASP facilitation; DSO technical interface	Coordinated self-consumption within industrial zone
Energy sharing	Subject to secondary legislation	Subject to secondary legislation
Expected benefits	Reduced household energy costs	Reduced costs, price predictability, ESG positioning

Regulatory aspect	Status
Secondary legislation	Not adopted as of reporting date
Ministry engagement	Communication established with Ministry of Mining and Energy
Expected provisions	REC registration procedure, energy sharing mechanisms, member rights/obligations, grid connection
Expected timeline	Formal registration following adoption of secondary legislation (anticipated 2027)
EU alignment	Ongoing alignment with EU energy acquis; no restrictive developments

Serbian-specific policy recommendations from REDASP: Adopt secondary REC legislation, establish clear energy sharing rules, simplify registration procedures, and define DSO coordination mechanisms. REDASP notes that stakeholder readiness can progress significantly despite regulatory delay, but legal clarity remains essential for formal establishment.

4.4 Republic of Moldova – AEER

4.4.1 Sireți (Local Community) & Vasile Lupu, Chișinău (Urban Residential)

AEER, as both pilot site mentor and Activity 3.2 leader, is developing two pioneer REC initiatives representing Moldova's earliest energy community models.

Aspect	Sireți (Rural)	Vasile Lupu, Chișinău (Urban)
Target group	Local community (8 buildings/households)	Multi-apartment building (12 apartments)
Active interest	8 confirmed	10 out of 12 expressed interest
RES type	Solar PV (75 kWp)	Rooftop solar PV (40 kWp)
Legal form	NGO	NGO
Founder/initiator	Sireți Municipality (founder member)	A resident of the building
Governance	Multi-stakeholder: municipality, economic agent, school (PV host), gas entity, households	Static allocation: predefined shares based on consumption or financial contribution

Aspect	Sireți (Rural)	Vasile Lupu, Chișinău (Urban)
Formal requests	3 submitted to institutions; no final answer yet	Under development
Registration expected	June 2026 (Sireți)	Post-legislation
Operation expected	Post-registration; dependent on financial opportunities	Post-registration

Regulatory aspect	Status
Legal framework	Law 10/2016 (energy) + Law 164/2025 (CEC/REC) exist but implementation rules incomplete
Special REC law	Under development; Ministry of Energy not providing exact timeline
Key meetings	22.09.2025 – DSO Premier Energy (Sireți connection); 13.11.2025 – Min. of Energy, ANRE, CNED (legal form); 09.12.2025 – Podcast with Min. of Energy & CNED (REC law, perspectives)
Registration requirements	ANRE registry; open participation; autonomy; non-profit orientation; compliance with market rules
DSO connection	Grid connection via DSOs; metering; contractual arrangements for measurement, allocation, billing
Financial incentives	Emerging: CNED/Energy Efficiency Fund; international donors (EU, UNDP, GIZ, EBRD/EIB/WB) are main drivers

Key barriers faced in establishing RECs in Moldova: AEER reported several significant challenges:

1) regulatory uncertainty – the legal framework exists (Laws 10/2016 and 164/2025) but implementation rules are incomplete and a dedicated REC legal form is still under development, creating ambiguity about registration and operational procedures.
2) limited stakeholder experience – RECs are a completely new concept in Moldova, requiring extensive awareness-raising and capacity building before any practical steps can be taken.
3) coordination delays with multiple institutions – engagement with the Ministry of Energy, ANRE, CNED, and DSO Premier Energy required sustained effort, with no final responses received to the three formal requests submitted for the Sireți pilot.
4) financial constraints and delayed reimbursements – implementation timelines were affected by financial bottlenecks, limiting the pace of activities.

5) the absence of a dedicated legal form that allows local public authorities to associate with other actors – this is the specific legislative gap that the pending special law aims to address.

Moldovan policy recommendations from AEER: Adopt a dedicated legal form for RECs; enable all stakeholder types (LPA, business, private, state) to participate; extend eligibility to other RES types (wind, biomass); introduce financial incentives (grants, tax support); clarify energy sharing and metering rules; establish a one-stop-shop support mechanism for RECs.

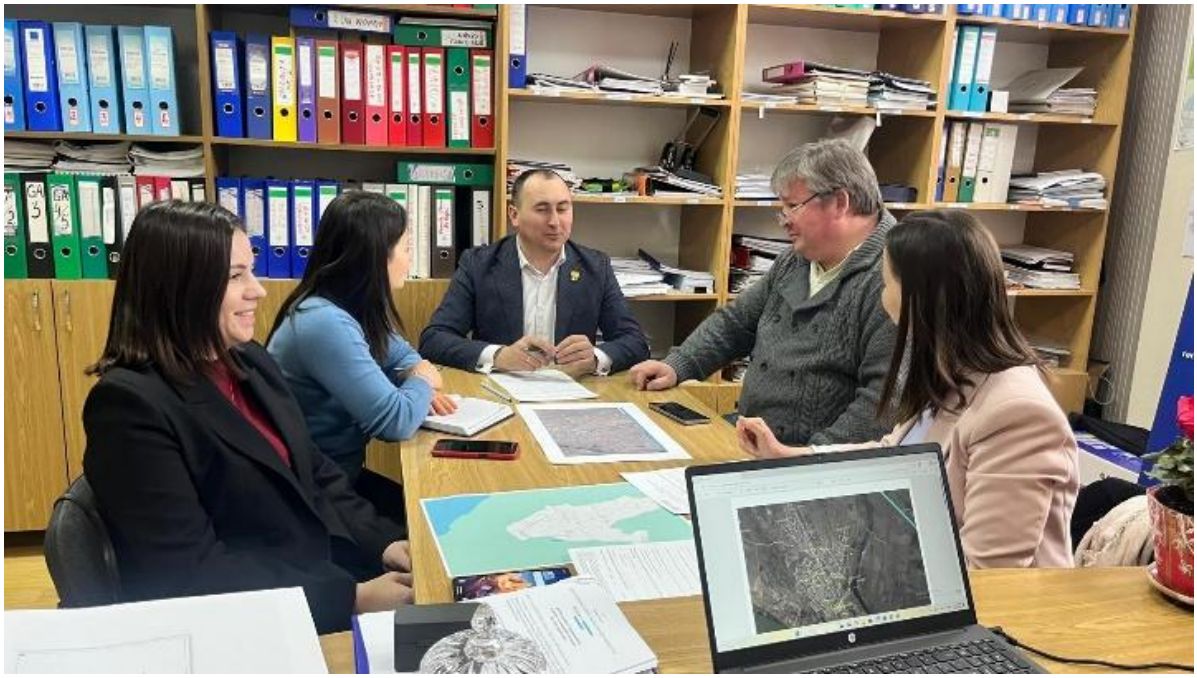

Photo 4: Sireți pilot action: AEER team planning meeting.

4.5 Germany – DIT

4.5.1 Regionalwerke Passauer Land

The Regionalwerke Passauer Land represents the most advanced pilot site in the NRGCOM project. It is not a classical Renewable Energy Community under EU directive transposition, but a large-scale inter-municipal communal enterprise encompassing 27+ municipalities across an entire Landkreis (~189,000 inhabitants). The gKU was formally founded on 26 March 2025, and DIT served as the academic mentor throughout the political negotiation and founding process.

Aspect	Details
Community	Regionalwerke Passauer Land gKU (HRA 13999, Amtsgericht Passau)
Legal form	Gemeinsames Kommunalunternehmen (gKU) – Anstalt des öffentlichen Rechts under Art. 49 Bavarian KommZG

Aspect	Details
Members	27 municipalities (51%) + Landkreis Passau (49%); up to 35 Gemeinden referenced subsequently
RES targets	300 GWh PV + 280 GWh wind by 2033; long-term: 500 GWh + 80 GWh biomass/green gases
Coverage target	~580 GWh = ~40% of district electricity consumption (baseline: ~1,400 GWh/year)
Management	Verwaltungsrat: 28 members, chaired by Landrat Kneidinger; Vorstand: Jakob Schätz (appointed 5 June 2025)
Business model	gKU develops turnkey project rights, transfers to Projektgesellschaften with municipal + private co-investors
Citizen participation	Bürgergenossenschaften (citizen cooperatives) explored; local value retention
Funding	Start-up: €0.40/inhabitant/year + Landkreis share. Self-financing post build-up
Risk mitigation	Low entry cost; public-law protections; ring-fenced subsidiaries; quick-win priority; optional private investors
First installations	First major project: a 4.9 MW ground-mounted photovoltaic park (construction commenced 2026) – the Regionalwerke's first large-scale RES installation. Additional PV rooftop projects and wind land securing underway.

4.5.2 Political and Administrative Process

The founding required broad political consensus across dozens of independent municipalities, each needing individual Gemeinderat/Stadtrat resolutions across party lines (CSU, SPD, Freie Wähler, Grüne). Initial scepticism centred on financial risk, loss of municipal autonomy, and the appropriate legal form.

Key milestones: Kreisausschuss concept approval (12 March 2024) → Info event in Ruhstorf with ~300 attendees (19 June 2024) → Kreistag founding resolution (9 December 2024) → Formal founding with 27 municipalities + Landkreis (26 March 2025) → Verwaltungsrat constituted and Vorstand appointed (5 June 2025) → Commercial register entry (21 July 2025).

How hurdles were overcome: (1) Peer testimony from Landrat Franz Löffler (Cham) on the Regionalwerk Cham model; (2) 49/51% ownership keeping control with municipalities; (3) Detailed legal/financial briefings by Peter Ranzinger and Oliver Eifertinger; (4) Continuous dialogue through Bürgermeisterdienstversammlungen.

Photo 5: Official foundation day of Regionalwerke Passauer Land.

Photo 6: Plenary session at the pilot conference, featuring key regional stakeholders.

5. Comparative Analysis

5.1 Legal and Regulatory Environment

The legal environment proved to be the single most influential factor determining progress across all five countries. Notably, regulatory challenges affect not only non-EU countries but also EU member states:

Country	Legal framework status	Key regulatory barrier	Impact on pilot
Germany	Well-established; Bavarian KommZG enables gKU model	Administrative complexity: consensus across 27+ municipalities required individual council resolutions	Formal founding achieved; Verwaltungsrat and Vorstand appointed; first projects in planning
Hungary	Framework exists but incomplete; contradictions with EU law	No clear REC definition; artificial energy price caps; P2P trading barriers	Professional concepts ready; registration delayed to 2027
Croatia	Legal basis exists but restrictive provisions	6 specific barriers: institution eligibility (40% cap warning), member-owned sharing, anticipated spatial scope limitation, asset rules (lex specialis needed), activity registration (incl. 500 kW threshold), EV charging	Detailed analysis completed; formal establishment blocked pending amendments (late summer 2026)
Serbia	No secondary legislation adopted	No REC registration, sharing, or grid connection procedures	Roadmaps prepared; formal establishment pending legislation (2027)
Moldova	Laws 10/2016 & 164/2025 exist; implementation rules incomplete	No dedicated REC legal form; special law under development	Roadmaps prepared; Sireți registration target June 2026

A critical finding is that even in EU member states with transposed directives, practical obstacles such as restrictive membership provisions (Croatia), artificial price distortions (Hungary), and administrative complexity (Germany) can significantly delay REC establishment. The legal barriers are not binary (present/absent) but exist on a spectrum of regulatory maturity.

5.2 Community Engagement and Stakeholder Management

Engagement strategies were adapted to the type of community and the regulatory context:

- **Municipality-driven models (Hungary, Germany, Moldova/Sireți):** Local authorities played a central convening role. In Germany, the district united 27 municipalities into a single gKU. In Hungary, workshops were organised by municipalities for potential members. In Moldova, Sireți Municipality is the founding member.
- **Institutional model (Croatia):** IRENA leveraged the Istria Region's ownership of 18 public institutions as a guaranteed base of members, planning to add citizens and entrepreneurs from heritage-protected areas in a second phase.
- **Resident-initiated model (Moldova/Chișinău):** An individual resident is driving the urban REC, demonstrating that citizen initiative can emerge even in countries with nascent REC frameworks.
- **Pre-legislative engagement (Serbia, Moldova):** Both maintained stakeholder interest through consultations, awareness-raising, and institutional dialogue despite the inability to formalise. AEER emphasised that direct on-site mentoring combined with stakeholder meetings was the most valuable activity for building trust.

A notable challenge identified by STRIA (Hungary) is that artificially capped residential energy prices undermine the financial motivation for citizen participation, making engagement more difficult even where legal frameworks permit RECs.

5.3 Technical and Infrastructural Readiness

Technical progress correlates with both legal maturity and local capacity:

Country	RES Type	Planned Capacity	Energy Data Available	DSO Interaction
Hungary (Kunsziget)	Solar PV	50 kW	Collection complete	Planned 2027
Hungary (Nemesvámos)	Solar PV	~2,000 kW	Prod: 1.57 GWh; Cons: 5.23 GWh	Planned 2027
Hungary (Bp Freeport)	Solar PV + BESS	1,000 kWp + 3,900 kWh	Cons: 3.05 GWh	Request submitted
Croatia	Solar PV	713 kW	Prod: 962 MWh; Surplus: 300 MWh	Post-HERA registration
Serbia (residential)	Solar PV	3.5–4.5 kWp/house	Pending	Pending legislation
Serbia (industrial)	Solar PV	30–100 kWp/enterprise	Pending	Pending legislation
Moldova (Sireți)	Solar PV	75 kWp	Pending	Meeting held (Sept 2025)

Country	RES Type	Planned Capacity	Energy Data Available	DSO Interaction
Moldova (Chișinău)	Rooftop solar	40 kWp	Pending	Pending
Germany	Wind + solar	580 GWh target (300 PV + 280 wind)	Cons: ~1,400 GWh/year (district)	Active

Croatia stands out for the depth of its technical analysis, having modelled surplus distribution scenarios across member categories and validated financial sustainability. Hungary's Nemesvámos site has the most ambitious capacity target (~2 MW), while Budapest Freeport includes battery storage (3,900 kWh), the only BESS in the project. A common technical challenge is DSO engagement: IRENA notes that software for automated sharing key calculation is critically needed as communities scale.

5.4 Barriers Encountered and Mitigation Strategies

Barrier	Countries	Severity	Mitigation
Incomplete/restrictive secondary legislation	HR, RS, MD, HU	High	Roadmap approach; regulatory monitoring; legislative advocacy (HR detailed 6 amendments)
Artificial energy price caps reducing citizen motivation	HU	High	Focus on institutional members; await policy reform
Restrictive REC membership provisions	HR	High	Advocacy for legislative change; phased membership strategy
No dedicated REC legal form for mixed stakeholder types	MD	High	Government-initiated special law; AEER engagement with Ministry of Energy
Administrative complexity in founding process	HU, DE	Medium	Structured mentoring; step-by-step concept development
Political hurdles and delays	DE	Medium	Multi-stakeholder coalition building (27 municipalities + Landkreis)
Limited stakeholder experience with REC concept	MD, RS	Medium	On-site mentoring; awareness-raising; institutional dialogue

Barrier	Countries	Severity	Mitigation
DSO integration uncertainty	HR, HU, MD	Medium	Early engagement; capacity requests; interim metering plans
Financial constraints and delayed reimbursements	MD	Medium	Donor programme mapping; phased implementation approach
Financial framework uncertainty	DE, HR	Medium	Detailed feasibility analysis (HR); Wirtschaftsplan development (DE)
Limited precedent / no operational RECs nationally	HR, RS, MD	Medium	Transnational knowledge exchange; NRGCOM peer learning
Delayed institutional responses to formal requests	MD	Low–Med	Persistent follow-up; multi-channel engagement (meetings, podcast)

5.5 Mentoring Process Effectiveness

All partners provided feedback on the mentoring process. The findings show a consistent pattern:

Aspect	HU (STRIA)	HR (IRENA)	RS (REDASP)	MD (AEER)
Most valuable activity	Data-driven meetings building confidence	Legal navigation + feasibility studies	Transnational exchange + structured roadmaps	On-site mentoring + stakeholder meetings
Least valuable / improvement needed	Citizen engagement limited by price caps	Activities blocked by legislation; focus more on lobbying/workarounds	Technical steps limited by absent legislation	Generic theory sessions; people want concrete data
Additional support wanted	Full registration process guidance	Software for automated sharing keys	Tailored legal advisory for pre-legislative structuring	Contract templates, financial models, compliance guidance
Transferable to other orgs?	Yes, but requires	Yes, but limited by national context until legal reform	Yes, via regional	Yes, if org has institutional connections +

Aspect	HU (STRIA)	HR (IRENA)	RS (REDASP)	MD (AEER)
	appropriate expertise		development agency network	technical expertise
Advice for new REC founders	Ensure production capacity or optimise energy balance	Marathon not sprint; collect data immediately; watch legal changes	Align stakeholders early; prepare governance in advance	Start with local partnerships; engage DSO/regulator early; clear internal agreements

Key insights from the mentoring evaluation:

- **Practical, data-driven activities outperform theoretical sessions:** Both AEER and STRIA noted that concrete data and on-site consultations were far more effective than generic theoretical guidance.
- **The mentoring method is universally considered transferable,** but all partners add conditions: appropriate expertise (Hungary), institutional connections (Moldova), adapted legal context (Croatia), or regional networks (Serbia).
- **A gap exists in technical tools:** IRENA specifically identified the need for software to automate sharing key calculations, a challenge that will scale across all countries as communities grow.
- **Post-founding support is needed:** The current mentoring scheme focuses on creation, but the transition to operation (Croatia) and the registration process (Hungary) require continued guidance.

6. Cross-Site Comparison Matrix

Indicator	Hungary	Croatia	Serbia	Moldova	Germany
No. of pilot communities	3	1	2	2	1
Total members/stakeholders	28 (7+13+4 + interested)	24 (potential)	Core groups identified	20 (8+12 targeted)	27 municipalities + Landkreis
Legal form chosen	Yes	Yes	Yes	Yes	Yes
Professional concept ready	Completed	Completed	Draft	Draft	Completed

Indicator	Hungary	Croatia	Serbia	Moldova	Germany
Energy/feasibility analysis	Completed	Completed	Pending	Pending	In progress
RES capacity planned	50 kW + 2 MW + 1 MW	713 kW	3.5–100 kWp/unit	75 + 40 kWp	580 GWh target by 2033
DSO interaction initiated	Partial	Pending	Pending	Yes	Yes
Governance docs drafted	Yes	Yes	Yes	Yes	Yes
Registration/founding	2027 expected	Pending legislation	Pending legislation	June 2026 target	Completed
Key barrier	Price caps + regulation	6 legislative barriers	No legislation	Legal form gap	Political delays (resolved)
Mentoring transferable?	Yes	Yes	Yes	Yes	Yes
Additional support needed	No	Technical (software)	No	No	No

Legend: Green = completed/yes; Orange = in progress/partial; Red = pending/blocked.

7. Key Findings and Lessons Learned

7.1 What Worked Well

- **Diverse pilot design:** Nine communities across five countries with different models (municipal, institutional, residential, industrial, regional utility) provide a comprehensive evidence base for the White Paper.
- **Adaptable mentoring framework:** D.3.1.1 proved flexible enough to guide partners from pre-legislative settings (Serbia, Moldova) through to formal founding (Germany). All partners confirmed its transferability.
- **Data-driven feasibility analysis:** Croatia's detailed energy and financial analysis, and Hungary's quantified production/consumption data (Nemesvámos: 1.57 GWh / 5.23 GWh), demonstrate that rigorous planning strengthens the business case and member confidence.
- **Political coalition building:** Germany's achievement of uniting 27 municipalities and the Landkreis into a single gKU – requiring individual council resolutions across party lines –

proves that ambitious, large-scale public-sector-driven models are achievable with sustained political engagement.

- **Proactive regulatory engagement:** Moldova's documented meetings with the Ministry of Energy, ANRE, CNED, and DSOs, and Croatia's detailed six-point legislative analysis, demonstrate the value of advocacy and institutional dialogue as integral parts of the mentoring process.

7.2 What Could Be Improved

- **Timeline realism:** Registration in 2027 (Hungary, Serbia) and unknown timelines (Croatia, Moldova) show that 30-month project timelines may be insufficient for full REC establishment in countries with incomplete legal frameworks.
- **Market distortion awareness:** Hungary's experience demonstrates that artificially capped energy prices can neutralise the financial incentive for citizen participation, a factor not anticipated in the original project design.
- **Post-founding mentoring gap:** The scheme focuses on creation but partners need guidance through registration (Hungary), the transition to operations (Croatia), and the initial operational phase.
- **Technical tool deficit:** Automated sharing key calculation software was identified as a critical need (Croatia). This gap will affect all countries as RECs scale beyond a handful of members.
- **Standardised quantitative data:** Some partners could not yet provide quantitative membership or energy data. Earlier standardisation of reporting requirements would improve comparability.

7.3 Transferability

All five responding partners confirmed the mentoring method is transferable, with conditions:

- **Universally applicable:** The structured approach (concept → feasibility → engagement → governance → registration) works across contexts.
- **Critical prerequisites:** Appropriate technical expertise (Hungary), strong institutional connections (Moldova), active regional development networks (Serbia), and awareness of legal limitations (Croatia).
- **Minimum legal basis needed:** Without at least a basic enabling framework, the method delivers preparatory outcomes (roadmaps, stakeholder readiness) but cannot complete full REC creation.

8. Recommendations for the White Paper (O3.3)

8.1 Policy-Level Recommendations

- **Recommendation 1 – Adopt enabling secondary legislation:** Countries without operational REC frameworks (Serbia, Moldova) should prioritise adoption. Countries with

restrictive provisions (Croatia, Hungary) should amend existing laws to remove barriers to membership, energy sharing, and registration.

- **Recommendation 2 – Address market distortions:** Artificially capped energy prices (as in Hungary) undermine the financial case for REC participation. Policy should ensure that energy pricing reflects the true cost savings of community renewable energy.
- **Recommendation 3 – Enable sharing from member-owned assets:** Croatia's experience demonstrates that restricting energy sharing to community-owned facilities limits viability. Legislation should allow surplus sharing from member-owned RES installations.

8.2 Operational Recommendations

- **Recommendation 4 – Invest in early-stage feasibility analysis:** Croatia's detailed energy and financial modelling should be promoted as a replicable best practice. Data-driven planning builds member confidence and demonstrates financial sustainability.
- **Recommendation 5 – Consider diverse organisational models:** The project has validated multiple models: non-profit LLC (Hungary), association (Croatia), NGO (Moldova), non-profit association (Serbia), and communal company (Germany). No single model is optimal; the choice should match national law and local context.
- **Recommendation 6 – Engage DSOs early:** Metering, grid access, and surplus management are recurring challenges. Early DSO engagement (as demonstrated by Moldova with Premier Energy and Hungary with the Budapest Freeport request) prevents bottlenecks later.

8.3 Methodological Recommendations

- **Recommendation 7 – Extend mentoring to post-founding operations:** The mentoring scheme should include guidance for the registration process, initial governance setup, and the first year of REC operation.
- **Recommendation 8 – Develop shared technical tools:** Automated sharing key calculation software, standardised contract templates, and financial modelling tools should be developed and made available as open resources for REC founders across the Danube Region.
- **Recommendation 9 – Embed legislative advocacy in mentoring:** IRENA's detailed six-point legislative analysis demonstrates that mentoring should include structured advocacy and policy dialogue as a core activity, not just technical and organisational support.

9. Conclusion

Activity 3.2 has successfully tested the NRGCOM mentoring scheme across five Danube Region countries, demonstrating both its strengths and its limitations. Nine pilot communities were mentored through diverse contexts, from pre-legislative preparation (Serbia, Moldova) through detailed feasibility analysis and concept development (Hungary, Croatia) to formal founding and operational launch (Germany).

The comparative analysis reveals that legal framework maturity remains the primary determinant of progress, but the relationship between regulation and outcomes is more nuanced than a simple

present/absent binary. Even in EU member states with transposed directives, specific regulatory barriers – restrictive membership provisions in Croatia, artificial energy price caps in Hungary, administrative complexity in Germany – can significantly delay REC establishment. In Moldova, the combination of regulatory uncertainty, limited stakeholder experience, and institutional coordination challenges created a multi-layered barrier that required sustained engagement across multiple government bodies. In Serbia, the absence of secondary legislation prevented formal establishment but did not stop meaningful preparatory work.

The mentoring scheme (D.3.1.1) proved adaptable and was universally considered transferable by all responding partners. Practical, on-site consultations and structured roadmap methodologies were consistently rated as the most effective tools. Generic theoretical sessions were considered less valuable – stakeholders across all contexts demanded concrete data, practical steps, and tangible results. This finding should inform the design of future mentoring programmes for RECs.

The project has generated substantial and diverse evidence for the White Paper (O3.3): comprehensive technical and financial feasibility data from Croatia and Hungary; a detailed six-point legislative reform proposal from Croatia with direct relevance for EU policy harmonisation; market distortion insights from Hungary that highlight the unintended consequences of price regulation on community energy; regulatory engagement models from Moldova demonstrating how institutional dialogue can advance REC readiness even in pre-legislative contexts; the German Regionalwerke as a pioneering large-scale inter-municipal model with documented political process, governance structures, and its first major RES installation (a 4.9 MW photovoltaic park) now under construction; and Serbia's dual residential/industrial pilot design providing a template for countries preparing for future legislation.

The nine recommendations in this report – spanning policy, operations, and methodology – are grounded in the practical experience of partners operating across the full spectrum of REC maturity. Together, they provide actionable guidance for policymakers, REC founders, and future mentoring programmes in the Danube Region and beyond.

NRGCOM is making a tangible contribution to the green transition in the Danube Region by building the institutional capacity, technical knowledge, and regulatory readiness needed for renewable energy communities to be established, operate effectively, and expand across borders.

This document was prepared as part of the NRGCOM project, an Interreg Danube Region Programme project co-funded by the European Union.