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JOINT TERRITORIAL STRATEGY FOR THE PROMOTION OF ENERGY COMMUNITIES IN THE MUNICIPALITY OF MEDIJANA (NIŠ, SERBIA)

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Table of content

Executive Summary

Based on the regulatory guidelines from the Clean Energy Package, the regional models and best practices from across Southeast Europe, and the pragmatic economic realities identified in the South Serbia survey (Municipality of Medijana, Niš), an optimal strategy for the promotion of energy communities must bridge the gap between high climate awareness and low operational execution.

The best strategy should combine "hard" financial incentives, targeted structural collaborations, and direct technical support across the following pillars:

1. Close the Awareness Gap via Targeted, Value-Driven Campaigns

- The Problem: A stark 90% of local survey respondents are completely unaware of any energy community in their region. Traditional environmental messaging is currently failing to prompt action from small businesses.

- The Strategy: Launch localized promotional campaigns tailored to the strict definition of Renewable Energy Communities (RECs), emphasizing that their primary legislative purpose is to provide economic, social, and environmental benefits directly to the local community rather than chasing purely commercial profit.

    - The Messaging: Shift from abstract climate goals to immediate operational benefits. Address the top priorities highlighted by local businesses: reducing operational costs (30.9%), mitigating the financial damage caused by intense heatwaves and air pollution, and bypassing total reliance on a carbon-intensive national electricity grid.

2. Tie "Hard" Financial Subsidies to Collective Energy Models

    - The Problem: Pragmatic operators in South Serbia emphasize that "soft" support (like pure training) is insufficient; they are heavily constrained by financial limits, view certifications as expensive administrative burdens, and demand direct capital injections.

    - The Strategy: The municipality should design green funding programs where financial subsidies (the most preferred support form at 37.6%) are prioritized for entities that form or join an energy community.

    - The Mechanism: Channel municipal co-funding and available EU/national subsidies directly into purchasing collective solar infrastructure. This mitigates the individual high upfront financial risk that holds small businesses back and ensures that Small and Medium Enterprises (SMEs) can capitalize on shared solar configurations, achieving economies of scale.

3. Leverage the Local "Division of Labor" through Multi-Stakeholder Partnerships

    - The Problem: The South Serbia report reveals a strict division of labor: active environmental stewardship is almost exclusively handled by NGOs and Youth Associations, while private businesses operate purely pragmatically, and state-linked entities focus on cultural preservation.

    - The Strategy: Explicitly bring these fragmented groups together to form the core of local energy communities, aligning with open, voluntary, and democratically controlled legal models:

        O NGOs & Youth Associations: Act as the operational and community-building core. They can handle social mobilization, advocacy, and administrative organization, echoing the EUCENA guide's call to "organize and join the energy revolution".

O Private Businesses (Cafes, Restaurants, Hostels): Act as participating members who provide physical roof infrastructure for solar panels and serve as reliable energy consumers looking for cheaper power.

O Public/Municipal Bodies: Provide the necessary legal backing, simplify local bureaucratic hurdles, and integrate municipal buildings (schools, libraries) into the community energy sharing grid.

4. Establish a Local "One-Stop Shop" to Absorb Bureaucratic Complexity

• The Problem: Small business owners cite complexity, bureaucracy, and a total lack of internal staff training (23.5%) and public technical assistance (17.6%) as primary roadblocks to implementing sustainable practices.

• The Strategy: The City Municipality of Medijana should establish a dedicated technical assistance hub to walk community initiatives through the legal transition.

• The Framework: Provide structured toolkits that clarify how to legally register RECs/CECs, fulfill reporting compliance with the national regulator and distribution system operators, and manage energy balancing protocols cleanly.

• Targeted Workshops: Execute "Green Finance Navigator" sessions for business managers to successfully apply for green financing, combined with operational "Resource Hero" workshops to build long-term technical capacities within participating organizations.

5. Launch Highly Visible Local Pilot Projects

• The Problem: Skeptical local businesses require proof of a clear Return on Investment (ROI) to overcome structural and financial hesitation.

• The Strategy: Implement a visible pilot demonstration project—such as a "Water & Energy Resilience Model" or a centralized solar energy-sharing cluster among a group of 5–10 local hospitality businesses.

• The Outcome: Publicly log, track, and share the cost reduction data over a one-year cycle. Proving tangible local success creates a blueprint that demystifies energy sharing, inspiring nearby communities to replicate the model and organically accelerating the citizen-driven energy transition across South Serbia.

1. DETAILED INSTITUTIONAL CONTEXT AND EXECUTIONAL FRAMEWORK

The global climate crisis and the volatile nature of European energy markets necessitate an immediate, structural reorganization of localized energy systems. Within the framework of the European Union's Clean Energy for all Europeans Package (CEP), the traditional, highly centralized paradigm of energy generation, transmission, and distribution is being systematically replaced by decentralized, decarbonized, and citizen-driven alternatives. The Interreg IPA ADRION THEMATIC2GREEN project (IPA-ADRION00228) serves as the primary transnational vehicle to accelerate this transformation across the Adriatic-Ionian macro-region. It establishes a coordinated institutional framework where local public authorities, small and medium enterprises (SMEs), non-governmental organizations, and civic associations can collaborate to implement energy-efficient and circular economic practices.

This comprehensive report focuses on the City Municipality of Medijana, the central urban municipality of the City of Niš in southeastern Serbia. Medijana represents a high-density urban territory characterized by an active commercial ecosystem, a prominent tertiary and hospitality sector, and significant exposure to environmental and climate-induced stressors. This strategy acts as an actionable, legally grounded roadmap designed to bridge the gap between abstract European policy objectives and the operational realities of local business owners. By integrating the technical principles of the EU Clean Energy Package, the regional lessons of the European Citizen Energy Academy (EUCENA) Balkan Best Practice Guide, the empirical findings of the Medijana Energy Efficiency Survey (December 2025), and the legal mechanisms of the newly amended Serbian Decree on Conditions for Delivery and Supply of Electricity (updated through May 2026), this document provides a comprehensive blueprint for launching, financing, and promoting Renewable Energy Communities (RECs) and Active Buyer configurations in South Serbia.

2. TRANSNATIONAL REGULATORY FOUNDATIONS: ENERGY COMMUNITIES UNDER THE CLEAN ENERGY PACKAGE

To design an effective local promotional strategy, we must first establish the legal and structural definitions provided by European Union directives, which are being progressively transposed into the national frameworks of Western Balkan accession states. The Clean Energy Package formally recognizes two distinct collective legal concepts designed to democratize energy markets: Renewable Energy Communities (RECs) and Citizen Energy Communities (CECs).

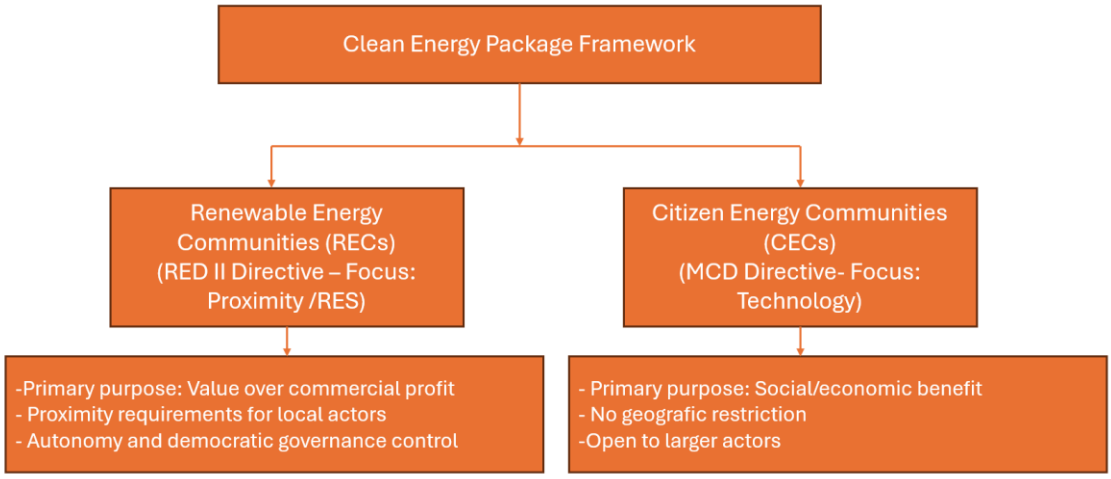

Figure 1 Two distinctive legal concepts

2.1 Renewable Energy Communities (RECs)

As defined in the recast Renewable Energy Directive (RED II - Directive (EU) 2018/2001), a Renewable Energy Community is a legal entity that satisfies three core criteria:

1. Primary Purpose over Profit: The primary objective of the entity must be to provide environmental, economic, or social community benefits for its shareholders, members, or the local areas where it operates, rather than chasing purely commercial financial profits.

2. Autonomous and Democratic Governance: The entity must be open and voluntary, and controlled by shareholders or members that are located in the proximity of the renewable energy projects owned and developed by that legal entity.

3. Eligibility and Inclusivity: Eligible members include natural persons, local public authorities (including municipalities), and micro, small, or medium-sized enterprises (SMEs), provided that participation does not constitute their primary commercial or professional activity.

2.2 Citizen Energy Communities (CECs)

Introduced under the Internal Electricity Market Directive (IEMD - Directive (EU) 2019/944), Citizen Energy Communities share a similar social purpose but differ in technical scope:

1. Technology Neutrality: Unlike RECs, which are restricted to renewable energy sources, CECs can manage electricity from any source, including fossil-fuel cogeneration or legacy systems, and can engage in broader services like electric vehicle charging, energy efficiency consulting, or grid balancing.

2. Geographical Flexibility: CECs do not enforce a strict geographical proximity requirement. Members can be distributed across different regions, and membership is open to large enterprises, though effective control must remain restricted to natural persons, local authorities, and small businesses.

2.3 The Core Legal Pillars: Effective Control and Value-Driven Governance

Promoting these entities requires preserving their unique legal identity. Transposition guidelines emphasize that "effective control" must be structurally protected within the corporate bylaws of the community. Large market actors, commercial utilities, or legacy fossil-fuel suppliers cannot exert dominant voting rights or decision-making authority over an REC or CEC. Voting structures are typically governed by a "one member, one vote" principle, regardless of individual capital contributions. Furthermore, any financial surpluses generated by the community's energy-sharing or energy-selling activities are reinvested into local infrastructure, used to lower utility rates for low-income members, or spent on local environmental restoration, ensuring the entity remains focused on community benefit rather than capital accumulation.

3. BALKAN REGIONAL LESSONS: LESSONS FROM THE EUCENA BEST PRACTICE GUIDE

The European Citizen Energy Academy (EUCENA) Balkan Best Practice Guide provides important context regarding the socio-political and economic realities of implementing community energy models across Southeast Europe (including Serbia, Croatia, Greece, Bosnia & Herzegovina, and Montenegro). The guide highlights several regional challenges and opportunities that directly shape our strategy for Medijana.

3.1 Overcoming the Institutional Trust Deficit

Across the Western Balkans, community initiatives must operate within a landscape characterized by historical trust deficits regarding cooperative ownership. Legacy institutional structures from the 20th century have often left a lingering public skepticism toward collective property or state-managed community projects. Therefore, successful promotion cannot rely solely on top-down municipal declarations. It requires building trust organically through transparent governance, clear legal separation from partisan political bodies, and early engagement with respected local community figures.

3.2 Navigating Grid Integration Hurdles and Legislative Delays

The EUCENA guide shows that while many Balkan nations have introduced definitions for "prosumers" or "energy communities" into their national energy acts, the actual implementation often stalls due to incomplete secondary legislation. Distribution System Operators (DSOs) frequently present administrative roadblocks, including prolonged grid-connection approval wait times, opaque grid-capacity assessments, and expensive technical metering mandates. Promotional strategies must therefore prepare community organizers for these bureaucratic hurdles by providing technical templates and standardized legal support.

3.3 Capital Shortages and the Need for Creative Civic Financing

Unlike Western European energy cooperatives (such as those in Belgium, Germany, or the Netherlands) that can quickly raise millions in equity through citizen shares, Balkan communities face lower average disposable incomes and restricted access to green commercial loans. The EUCENA guide highlights the importance of hybrid financing structures. Successful initiatives in the region often combine international philanthropic grants, European climate finance (e.g., EUKI, GIZ, or IPA mechanisms), local municipal co-funding, and community crowdfunding campaigns. This allows projects to absorb high initial development costs before opening up for broader citizen participation.

4. LOCALIZED TERRITORIAL AND ENVIRONMENTAL CONTEXT: CITY MUNICIPALITY OF MEDIJANA

To ground this strategy within the local reality, we must analyze the specific territorial, environmental, and microclimatic conditions of the City Municipality of Medijana. As the core urban district of Niš, Medijana features a dense mix of residential multi-family housing blocks, retail high streets, educational centers, and a large hospitality sector (cafes, traditional kafanas, restaurants, and hotels). This high urban density creates five interconnected environmental challenges that a localized energy community strategy must address.

4.1 Severe Seasonal Air Quality Degradation

During the autumn and winter months, Medijana suffers from severe atmospheric pollution, frequently registering hazardous concentrations of particulate matter ($PM_{2.5}$ and PM_{10}). This degradation is driven by the widespread use of individual, inefficient heating furnaces burning low-grade lignite coal or damp wood in non-connected residential units, combined with heavy emissions from urban traffic.

The hospitality sector contributes directly to this problem through its reliance on traditional charcoal grills and standalone space heating units. This persistent seasonal smog poses public health risks and reduces foot traffic for local outdoor commercial operations, creating a direct financial incentive for businesses to transition toward clean, electric, and decentralized heat pump systems.

4.2 Deficient Municipal Wastewater and Water Infrastructure

The broader city region lacks a centralized primary wastewater treatment facility, meaning that a significant volume of urban effluent flows untreated directly into the Nišava River. Within Medijana, aging commercial water infrastructure suffers from high physical network losses. Hospitality operators, particularly high-turnover restaurants and hotels, generate large volumes of grease-heavy wastewater and require substantial volumes of fresh water for sanitation. The lack of commercial-scale water recycling, greywater isolation, and optimized grease-trap management strains the aging municipal network and highlights the need for resource management training.

4.3 Linear Waste Generation and Separate Collection Deficiencies

Solid waste management in Medijana operates on a highly linear "take-make-dispose" model. The municipality's dense concentration of restaurants, hotels, and cafes produces substantial amounts of organic food waste, cardboard, glass, and single-use packaging. Separate collection infrastructure is limited, and commercial waste streams are largely co-mingled with domestic trash and sent to the Bubanj landfill. This lack of structured separate collection, organic waste sorting, or decentralized commercial composting represents a major missed opportunity for circular economic loops and local bio-energy recovery.

4.4 Urban Heat Islands (UHI) and Deficits in Green Infrastructure

Due to intensive real estate development, Medijana exhibits a very high soil sealing index. Asphalt roads, paved pedestrian zones, and concrete building envelopes dominate the landscape, while pocket parks, urban tree canopies, and green roofs are scarce. This structural composition creates a pronounced Urban Heat Island (UHI) effect during the summer, raising localized temperatures by several degrees compared to rural surroundings. For hospitality businesses, this microclimatic strain leads to high indoor cooling demands, creating steep spikes in peak electricity consumption for air conditioning and straining the local distribution network.

4.5 Climate Vulnerability and Flash Flooding Risk

Climate change projections for southeastern Serbia indicate an increasing frequency of extreme weather events, including extended summer heatwaves and sudden, high-intensity downpours. Medijana's stormwater infrastructure is regularly overwhelmed during these short-duration cloudbursts, leading to localized flash flooding in low-lying commercial basements, pedestrian underpasses, and ground-floor properties. These physical disruptions threaten business continuity and underscore the urgent need to build structural climate resilience into local commercial infrastructure.

5. EMPIRICAL SURVEY DATA ANALYSIS AND THE SUSTAINABILITY GAP

In December 2025, a comprehensive field survey was executed within the City Municipality of Medijana under the Report 2 of THEMATIC2GREEN framework to evaluate the baseline sustainability practices, energy profiles, and systemic challenges of the local hospitality and commercial SME sector. The survey achieved a robust sample size, providing clear statistical insights into the current landscape.

5.1 Demographic and Operational Profiles

- Sectoral Breakdown: The respondent database consists primarily of food and beverage service providers, with Restaurants and Cafes representing 77.5% of the total sample, while Accommodation providers (hotels, hostels, and guesthouses) comprise 22.5%.
- Legal Ownership Structure: The sector is overwhelmingly dominated by the private market, with 92.5% of businesses operating under private ownership, while state-linked, cooperative, or non-profit entities make up the remaining 7.5%.
- Enterprise Scale: The average workforce size corresponds directly to micro and small enterprises, maintaining an average of 11.15 employees, though the distribution has a tight median of 6.5 employees.
- Operational Tenures: The surveyed sample demonstrates strong commercial stability, with an average operational longevity of 12.46 years. This longevity indicates that while these businesses have stable business models, they may also suffer from technical inertia, remaining locked into legacy energy setups.

5.2 Energy Sourcing and Grid Dependency

The quantitative metrics regarding energy sourcing reveal a deep structural vulnerability to centralized, fossil-fuel-heavy power supplies:

- Total Grid Reliance: A substantial 84.1% of all surveyed commercial entities rely entirely on the conventional national electrical grid for their primary operational power.
- Renewable Energy Penetration Gap: Only 9.1% of respondents have integrated any form of renewable energy generation (primarily small solar thermal installations for hot water or low-capacity photovoltaic systems). The remaining businesses have zero localized clean power generation.

5.3 The Corporate Awareness Deficit

The most critical barrier identified by the survey data is an informational vacuum regarding evolving regulatory frameworks:

- Total Lack of Awareness: A striking 90% of local business owners and managers reported having zero knowledge of energy communities, cooperative energy networks, or collective prosumer options.

• The Carbon Footprint Monitoring Vacuum: Furthermore, 95% of the surveyed enterprises do not perform any measurement or monitoring of their corporate carbon footprint. Energy usage is managed purely as an unavoidable operational invoice line item rather than a controllable environmental indicator.

5.4 Identified Roadblocks and Systemic Needs

When questioned about the primary barriers preventing them from implementing sustainable technical retrofits or pursuing green certifications (such as the EU Ecolabel or Green Key), managers highlighted a mix of financial and capability constraints:

• High Upfront Capital Requirements: Identified as the primary barrier, given the tight operating margins of micro-hospitality businesses.

• Lack of Internal Technical Personnel: 23.5% of respondents noted a complete lack of specialized internal expertise to evaluate or manage renewable energy projects.

• Absence of Institutional Guidance: 17.6% cited a lack of clear public technical assistance or accessible state advisory channels.

When asked what specific support mechanisms would most effectively encourage their participation in the green transition, the responses aligned around financial incentives and technical information:

Table 1 Required transition support mechanism

Direct financial subsidies and grants	**37,6%**
Targeted informational and advisory campaign	25,9%
Institutional incentives for collective energy communities	20,7%

This data forms the basis for our strategy. Financial constraints mean that soft messaging alone will fail; instead, promotional efforts must connect direct capital subsidies with structured technical training.

6. LEGAL ANALYTICAL DEEP-DIVE: THE SERBIAN ACTIVE BUYER REGULATORY FRAMEWORK (2026)

To move past basic awareness campaigns, a promotion strategy for Medijana must provide local businesses with actionable legal pathways. The primary regulatory tool for this in Serbia is the newly updated Decree on Conditions for Delivery and Supply of Electricity (Uredba o uslovima isporuke i snabdevanja električnom energijom), which includes comprehensive amendments published in the Official Gazette of the Republic of Serbia up to No. 48/2026. This decree establishes the legal framework for Active Buyers (Aktivni kupci) and Groups of Active Buyers (Grupa krajnjih kupaca koji zajednički deluju kao aktivni kupac), creating clear opportunities for commercial energy sharing.

6.1 Core Legal Status and the Principle of Active Participation

Under Article 1 and Article 10 of the amended Decree, an Active Buyer is defined as a final electricity consumer who operates a generation facility or an energy storage system within their internal electrical installations. Unlike standard prosumers (kupac-proizvođač), whose activities are generally limited to offsetting personal consumption with simplified billing, an Active Buyer has broader commercial flexibility. They have the explicit legal right to consume, store, and sell self-generated green electricity, either independently or through a designated market aggregator, without being classified as a professional energy utility enterprise.

6.2 The Third-Party Asset Ownership Model

A major breakthrough for capital-constrained hospitality businesses is detailed in Article 10. The decree specifies that the production facility or storage asset used by the Active Buyer does not need to be owned directly by the consumer. Instead, it can be owned, installed, and operated by a third party (such as an Energy Service Company - ESCO or an energy cooperative).

In these configurations, the decree mandates that the required building permits, network configuration filings, or construction authorizations must be issued jointly to both the potential active buyer and the third-party asset owner. This mechanism allows an energy community or private investor to fund and install solar panels on a cafe or hotel roof in Medijana, selling the power directly to the business owner at a stable, pre-negotiated rate through a Power Purchase Agreement (PPA), avoiding the need for the business to provide large upfront capital.

6.3 Groups of Active Buyers Acting Jointly

For dense commercial districts like Medijana, Article 10a introduces the concept of a Group of Final Consumers Acting Jointly as an Active Buyer. This framework is designed for multi-apartment buildings, multi-tenant commercial centers, or adjacent businesses located along the same street block.

- Interconnection Layouts: The decree permits these groups to connect their shared generation or storage assets through several configurations: individual user meters, common building consumption meters, or dedicated generation meters.

• Unified Legal Status: The group must sign a binding internal agreement and appoint a single representative entity. In all subsequent dealings with the Distribution System Operator (Elektrodistribуција Srbije - EDS), the transmission operator (Elektromreža Srbije - EMS), and supply utilities, the group is treated as a single unified active buyer. This creates a clear legal pathway for commercial clusters to pool their roof space, share a common inverter network, and collectively manage their power supply.

6.4 Technical Connection Studies and Financial Deposit Safeguards

To protect grid stability, the decree outlines strict technical and financial steps that projects must complete before securing connection approvals.

• The Connection Study (Studija priključenja): Under Articles 4 and 6, any developer intending to connect a generation or storage module to the network must request the development of a formal Connection Study from the relevant system operator.

• The Transmission Deposit Framework: For large installations looking to connect to the transmission network, the decree enforces a substantial financial deposit requirement. To prevent speculative capacity booking, developers must submit a deposit of €50,000 for system capacities up to 50 MW. For larger installations, this baseline deposit increases linearly, adding €400 per MW for capacities between 50 MW and 100 MW, and €200 per MW for capacities exceeding 100 MW.

• Bank Guarantee Mandates and Incentives: Within 60 days of receiving an approved Connection Study, the developer must provide an irrevocable, unconditional bank guarantee payable on first demand to the system operator. While standard variable renewable generation facilities face a high financial requirement of €25,000 per MW of maximum connection capacity, Article 10a introduces a targeted incentive for decentralized projects. Potential Active Buyers and storage operators benefit from a reduced rate of €12,500 per MW of maximum active generation capacity. This bank guarantee must maintain a mandatory validity period of 37 months to ensure the project progresses through construction and compliance phases.

6.5 The Simplified Zero-Injection Option (Article 10в)

For urban SMEs in Medijana that wish to avoid complex grid integration procedures, Article 10в provides a simplified alternative: Connection without the option to deliver energy into the grid (Zero-Injection Model).

• Rapid Approval Timeline: If a commercial enterprise installs solar generation exclusively to meet its internal load and installs fast-acting reverse-power relays to prevent any power from flowing back into the utility network, the decree cuts through standard red tape. The system operator is required to process and issue the connection agreement within a rapid 15-day window.

• Exemption from Commercial Balancing Fees: Because these installations do not inject power into the grid, they are exempt from complex market balancing obligations and high bank guarantee requirements, making it an ideal model for individual restaurants or cafes seeking immediate solar integration.

6.6 System Registries and Market Integration Contracts

To complete the active buyer registration process and begin operations, businesses must navigate three core agreements:

1. The Supply and Trade Contract: Modifying standard retail supply contracts to account for active generation profiles and self-consumption rules.

2. The Balancing Responsibility Contract (Ugovor o balansnoj odgovornosti): Explicitly defining which entity assumes financial responsibility for deviations between the business's scheduled energy profiles and their actual real-time generation and consumption. Small actors typically transfer this responsibility to a licensed market aggregator or virtual power plant provider.

3. The Exploitation Contract (Ugovor o eksploataciji): A technical agreement signed with the system operator that defines the operational rules, safety interlocks, and remote disconnection rights for the facility.

Once the applicant passes trial operations, the system operator is legally required to enter the entity into the national Register of Active Buyers within 5 working days, making their market status official.

7. THE SYSTEMIC PROMOTIONAL STRATEGY: BRIDGING VALUE AND PRAGMATISM

To construct a highly effective promotional strategy for community energy initiatives within the City Municipality of Medijana, it is necessary to structurally align the social, value-driven paradigms of the European Union's Clean Energy Package with the highly localized, pragmatic financial constraints identified in the commercial SME and hospitality survey. Quantitative empirical data reveals an informational vacuum across the municipality, where a striking 90% of local business owners and operators report having absolutely zero awareness of energy communities, cooperative energy sharing networks, or collective prosumer frameworks. This data clearly demonstrates that traditional, abstract environmental advocacy and top-down municipal messaging have failed to prompt operational modifications from local businesses.

Consequently, the updated promotional strategy must pivot completely away from generalized environmentalism. It must instead reframe the adoption of clean energy as a source of immediate, tangible operational advantages and clear risk management. Given that 84.1% of surveyed commercial entities remain completely dependent on the carbon-heavy national electrical grid and 95% do not monitor their corporate carbon footprints , promotional initiatives must meet business owners on purely practical terms, addressing their primary concerns: lowering high utility invoices, bypassing reliance on a volatile centralized grid, and building long-term financial insulation.

7.1 Establish the Medijana Municipal "One-Stop Shop" for Green Energy

The cornerstone of the promotional framework is the institutional establishment of a dedicated, physical, and digital public office by the City Municipality of Medijana to serve as a centralized technical and legal facilitator for local businesses. The local commercial sector is heavily dominated by micro and small enterprises maintaining a modest average workforce of 11.15 employees and a tight median of 6.5 employees. These small-scale operations possess tight margins and face a total deficit in internal technical capacity, with 23.5% of managers citing a complete lack of specialized internal personnel to evaluate renewable projects , and 17.6% highlighting the absolute absence of public technical assistance channels. The municipal "One-Stop Shop" is explicitly designed to absorb this bureaucratic complexity and bridge these capability gaps through two main operational pillars:

Standardized Legal Frameworks and Corporate Templates

To remove high legal and administrative design costs, the center will offer open-access, pre-vetted corporate bylaws for formalizing Renewable Energy Communities (RECs) and Citizen Energy Communities (CECs) in accordance with transposed RED II and IEMD criteria. Furthermore, the hub will provide standardized internal energy-sharing contracts designed under Article 10a of the updated Serbian Decree on Conditions for Delivery and Supply of Electricity. These templates will protect democratic, open governance structures—ensuring effective local control and a "one member, one vote" voting architecture regardless of capital injection. For capital-restricted operators, the shop will supply standardized third-party asset ownership contracts under Article 10, allowing entities to partner with Energy Service Companies (ESCOs) or energy cooperatives. This specific legal

configuration permits external investors to finance, install, and maintain rooftop solar arrays while selling the power directly to the business host via a stable, long-term Power Purchase Agreement (PPA) , systemically bypassing the need for large upfront business capital.

Technical Fast-Tracking and Regulatory Liaison

Staff engineers within the municipal hub will serve as direct administrative liaisons between local community groups and the Distribution System Operator, Elektrodistribucija Srbije (EDS). The shop will guide business clusters through the engineering complexities of the mandatory Connection Study (*Studija priključenja*) , streamline required system registry filings , and assist in managing the financial safeguards and reduced bank guarantee paths (€12,500 per MW of maximum active generation capacity) established for decentralized active buyers. To deliver rapid commercial wins, the hub will actively fast-track applications utilizing the simplified Zero-Injection Model outlined in Article 10в. For businesses installing solar generation solely for internal load matching with reverse-power relays , the hub will help secure the system operator's mandatory 15-day expedited approval agreement , bypassing complex commercial market balancing obligations and high bank guarantee requirements.

7.2 Core Value Proposition: Economic Resilience over Commercial Profit

In strict alignment with the principles of the recast Renewable Energy Directive (RED II), promotional campaigns must explicitly emphasize that the primary purpose of local energy communities is the generation of localized economic, social, and environmental insulation rather than speculative commercial financial profit. Promotional materials must frame the collective prosumer model not as an idealistic environmental club, but as a practical, bottom-line risk management tool. By speaking directly to the 30.9% statistical preference among local business owners for direct operational cost reduction , marketing strategies will highlight how energy communities can serve as an effective buffer against volatile commercial utility rates and peak demand charges. This value proposition is deeply rooted in the specific microclimatic and territorial vulnerabilities of the high-density Medijana urban ecosystem:

Mitigating Summer Microclimatic Strain

Due to high soil sealing, asphalt roads, and dense concrete envelopes, Medijana suffers from a pronounced Urban Heat Island (UHI) effect during summer months. This microclimatic strain triggers extreme spikes in peak electricity consumption for indoor air conditioning among hospitality operators (cafes, restaurants, and hotels). The promotional message will illustrate how a collective, community-managed solar array matches this summer cooling load curve, lowering expensive peak demand penalties and preventing local distribution grid overloads.

Combating Winter Smog Disruption

During autumn and winter, Medijana experiences severe atmospheric pollution and hazardous spikes in particulate matter ($PM_{2.5}$ and PM_{10}) , driven by individual residential heating furnaces burning low-grade lignite coal or wood. This seasonal smog reduces urban foot traffic and compromises the operations of the prominent local hospitality sector. The promotional strategy will

position the energy community as a vehicle to collectively finance and install clean, electrified heat pump systems , enabling businesses to transition away from inefficient legacy systems and improve urban air quality while securing energy autonomy.

Capital Pooling and Economies of Scale

Micro-businesses operating with limited margins often view green transitions as financially unviable. The core marketing narrative will demonstrate that pooling roof infrastructure and capital within an REC or a Group of Active Buyers effectively spreads individual financial risk. This capital optimization unlocks critical economies of scale for micro-scale enterprises , transforming sustainable retrofits into achievable projects with clear, measurable investment returns.

7.3 Promotional Campaign Architecture and Targeted Marketing Channels

To systemically address and dismantle the 90% corporate awareness deficit , the municipality will implement a structured informational campaign utilizing specialized, business-centric communication channels:

Pragmatic B2B Messaging Framework

All promotional literature, digital platforms, and advisory briefs will replace abstract environmental slogans with quantitative corporate metrics. Concepts such as "carbon neutrality" will be reframed as "line-item expenditure reduction," and "ecological stewardship" will be communicated as "long-term operational stability" and "predictable utility cost forecasting."

Leveraging the Local "Division of Labor" for Mobilization

The outreach campaign will be structured around the distinct division of labor identified within the South Serbia regional context. Highly active local non-governmental organizations (NGOs) and Youth Associations will be mobilized as the operational outreach core, leading social mobilization, organizing information sessions, and managing basic administrative advocacy. Private hospitality operators (cafes, restaurants, and guesthouses) will be engaged directly at local commercial association forums , where they are approached primarily as physical asset hosts (roof space providers) and primary energy consumers seeking cheaper electricity. Public and municipal authorities will use institutional platforms to announce the incorporation of municipal buildings (such as local schools and libraries) into the shared community energy pool, demonstrating clear civic commitment and reducing public skepticism.

Overcoming Commercial Inertia via Historical Profiles

The surveyed commercial ecosystem exhibits strong stability, maintaining an average operational longevity of 12.46 years. However, this long tenure often fosters technical inertia, keeping operators locked into outdated energy configurations. The One-Stop Shop will deploy direct business-to-business (B2B) field agents to dense commercial dining streets and retail clusters. These agents will present localized, sector-specific case studies that detail the exact return on investment (ROI) realized by similar operations , demonstrating that energy transition is a proven mechanism for commercial modernization.

7.4 Strategic Alignment with Regional, National, and Transnational Funding

Because pragmatic local business owners emphasize that "soft" advisory support is insufficient without direct capital injections , the promotional strategy will be tied to accessible financial incentives:

Conditionality of Subsidies

The Medijana Energy Efficiency Survey highlights that direct financial subsidies are the most preferred form of operational support, selected by 37.6% of respondents. To capitalize on this preference, the municipality will structurally prioritize capital subsidies and green funding allocations for businesses that formally organize or join a registered collective energy community or an active buyer group.

Hybrid Capital Stacking Toolkits

Recognizing that Balkan communities face lower disposable incomes and restricted access to standard green commercial loans , the municipal hub will provide specialized toolkits on hybrid financing structures, drawing on lessons from the EUCENA Best Practice Guide. The One-Stop Shop will assist local initiatives in stacking capital from multiple tiers: municipal environmental funds, co-funding lines from national ministries (such as the Serbian Ministry of Mining and Energy) , international development mechanisms (such as EU IPA, GIZ, or EUKI climate funds) , and localized community crowdfunding campaigns. This coordinated financial structuring allows community initiatives to absorb the high initial costs of engineering studies, grid technical connections, and mandatory bank guarantees , ensuring that upfront capital barriers are effectively lowered for local operators.

To build a successful promotional strategy for energy communities in Medijana, we must combine the social value-driven principles of the Clean Energy Package with the pragmatic financial realities identified in the local SME survey. The fact that 90% of business owners are unaware of energy communities indicates that past informational efforts have been ineffective. The new promotional framework must pivot away from abstract environmental messaging and focus on delivering direct operational benefits.

8. THE FOUR-TIER CAPACITY BUILDING AND WORKSHOP FRAMEWORK

To support this promotional strategy, the municipality will launch a structured, modular training program designed for different organizational levels within the local economy.

8.1 Module 1: The "Resource Hero" Operational Training

- Target Audience: Front-line hospitality staff, kitchen crews, facility maintenance personnel, and shift managers.
- Delivery Format: Direct, on-site practical demonstrations held inside local commercial kitchens and hotels.
- Core Technical Curriculum:

1. Food Waste Reduction Protocols: Implementing inventory controls and commercial kitchen tracking to minimize food waste, alongside setting up separate organic waste collection streams for local composting.

2. Water-Smart Efficiency Upgrades: Practical steps for installing low-flow aerators on high-volume commercial faucets and setting up scheduled maintenance routines for grease traps and drainage systems.

3. Thermal Efficiency Management: Training staff on optimal pre-heating schedules for commercial ovens and refrigeration maintenance routines to eliminate avoidable energy waste during peak hours.

8.2 Module 2: The "Green Finance Navigator" Seminars

- Target Audience: Business owners, chief financial officers, company accountants, and commercial procurement managers.
- Delivery Format: Structured half-day seminars paired with practical calculation exercises.
- Core Technical Curriculum:

1. Mapping Transition Subsidies: Providing step-by-step guidance on how to monitor and apply for energy-efficiency grants from the Serbian Ministry of Mining and Energy, municipal environmental funds, and European development programs.

2. Calculating Life-Cycle ROI: Training accountants to move past simple upfront cost evaluations and utilize life-cycle cost analysis when assessing energy retrofits (such as heat pumps and smart automation systems).

3. Compiling Compliance Dossiers: Practical guidance on preparing financial declarations and technical audits to meet the strict application standards of international green lending institutions.

8.3 Module 3: Specialized Executive Workshops: "Mastering the Active Buyer Framework Under Serbian Law"

- Target Audience: Executive directors, corporate legal advisors, real estate developers, and commercial cluster leaders.
- Delivery Format: Advanced regulatory workshops featuring expert presentations from energy lawyers and grid engineers.
- Core Technical Curriculum:

Sub-session A: Legal Structure and Corporate Setup

1. Establishing Legal Entities: Detailed guidance on structuring a collective group under Article 10a of the Serbian electricity decree, including drafting internal voting rules and choosing the best legal form for community energy sharing.

2. Drafting Third-Party Ownership Agreements: Creating clear legal frameworks for contracts between hospitality businesses and third-party asset owners, defining clear lines of responsibility for building access, liability, and solar power pricing.

Sub-session B: Technical Grid Integration and Financial Risk Management

1. Navigating the Connection Study Process: Reviewing the engineering criteria used by system operators to assess grid capacity, alongside managing the deposit requirements for network filings.

2. Structuring Bank Guarantees: Providing practical financial strategies to help businesses secure the required €12,500/MW active buyer bank guarantees from local commercial banks, and managing the risks associated with the mandatory 37-month validity period.

3. Implementing Zero-Injection Systems: Reviewing the engineering specifications for reverse-power relays and zero-export inverters to utilize the fast-tracked 15-day approval path under Article 10в.

Sub-session C: Contract Management and Market Settlement

1. Balancing Responsibility Strategies: Evaluating options for partnering with licensed market aggregators to manage imbalance risks on the commercial market.

2. Managing System Registries: Step-by-step guidance on completing trial operations and securing permanent placement on the national Register of Active Buyers.

9. ACTIONABLE DEMONSTRATION AND PILOT PROJECTS

To build confidence within the local business community, the promotion strategy includes three visible, measurable pilot projects designed to demonstrate the practical return on investment of sustainable energy configurations.

9.1 Pilot Project 1: The Water & Energy Resilience Model

• Target Sector: Accommodation sector (boutique hotels, hostels, and guesthouses in Medijana).

• Operational Execution: The municipality will select three local accommodation facilities to participate in a co-funded demonstration project. The installations will pair high-efficiency solar thermal collectors for hot water with smart, cloud-linked water meters.

• Strategic Objectives: This project aims to demonstrate a verifiable 30.9% reduction in hot water energy expenses over a 12-month pilot period. The performance data will be shared publicly to help reduce financial hesitation and encourage broader adoption across the regional lodging sector.

9.2 Pilot Project 2: The Multi-SME "Waste-to-Resource Hub"

• Target Sector: Restaurant and cafe clusters located in high-density dining districts.

• Operational Execution: Partnering with municipal sanitation services, the project will establish a dedicated commercial organic waste collection network linking 5 to 10 participating restaurants to a localized composting and bio-resource diversion program.

• Strategic Objectives: This hub will demonstrate how separate waste collection can help businesses lower their waste management costs, reduce landfill tipping volumes, and establish a repeatable circular economy model within the urban environment.

9.3 Pilot Project 3: The Medijana Commercial Active Buyer Cluster

• Target Sector: A multi-tenant commercial center or a group of adjacent retail and hospitality properties along a shared street.

• Operational Execution: The project will guide 4 to 6 neighboring businesses to form a unified Group of Active Buyers under Article 10a. The participants will install a shared 100 kW rooftop photovoltaic array on a common roof space, connected through a shared inverter layout.

• Strategic Objectives: This pilot will test the reduced €12,500/MW active buyer bank guarantee path and navigate the full grid connection process with the system operator. By documenting energy allocation patterns and balancing costs across participants, the project will create a practical case study for commercial energy sharing in Serbia.

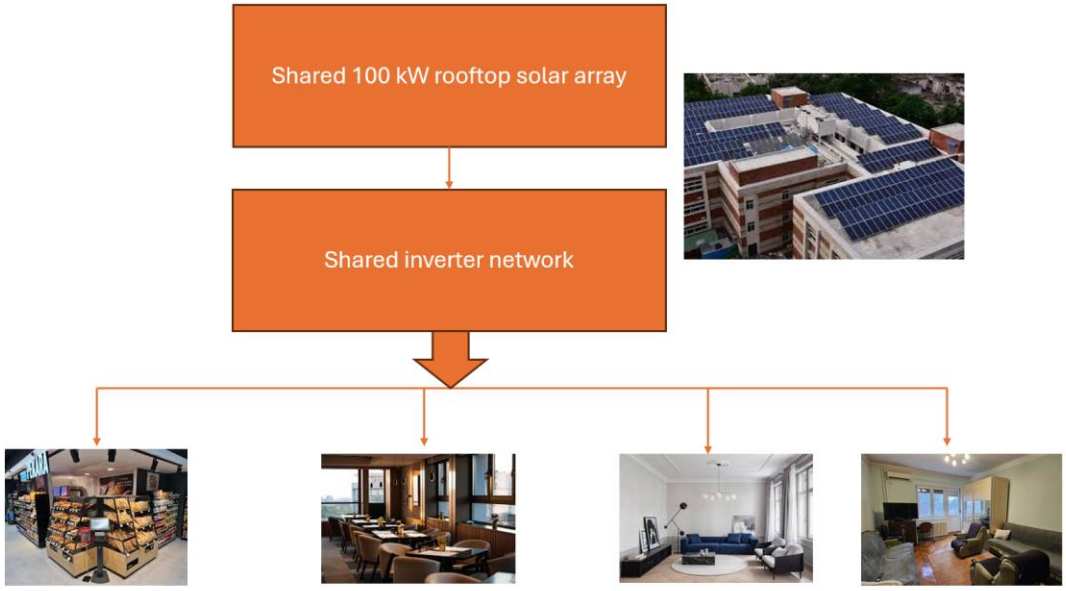

Figure 2 Pilot project 3

9.4. Usage of Virtual Power Plant software

Implementing a feature where users can organically invite others to form a group and track their collective impact is highly feasible. In modern software product design, this is often referred to as "Ad-Hoc Peer Circles" or "Dynamic Energy Communities." This feature acts as a bridge between the informal, social aspects of energy saving (behavioral science) and the formal regulatory structures (like the Grupa aktivnih kupaca defined in distribution regulations).

To build this into VPP platform, the functionality should be divided into two layers: Social/Informal Groups (for tracking and benchmarking) and Formal/Regulatory Groups (for shared billing and grid settlement).

1. Informal "Impact Circles" (Social & Gamification Layer)

In this scenario, a user wants to form a group with friends, family members living elsewhere, or neighbors simply to collaborate, compete, and track their combined green footprint.

Peer-to-Peer Invitation System: A prosumer can generate an invite link or search for another user's unique alias/ID within the app to send a "Join my Energy Circle" request.

Aggregated Impact Dashboards: Once accepted, the platform creates a shared virtual dashboard. Instead of showing private, granular household data (which violates privacy), it displays aggregated metrics:

Combined Self-Sufficiency: "Your circle is 78% powered by your own shared solar and batteries today."

CO_2 Displacement Tracker: "Together, your group saved 1.2 metric tons of CO_2 this month, equivalent to planting 20 trees."

Grid Autonomy Streak: A gamified tracker showing how many consecutive hours the group managed to completely stay off the main distribution grid.

Privacy & Consent Safeguards: To comply with global privacy standards (like GDPR), when a user creates a group, they must configure visibility settings. The system can offer options like Full Aggregation Only (members only see the group's total sum) or Friendly Leaderboards (members can see a ranked list of who contributed the most clean energy to the grid).

2. Formal "Active Customer Groups" (Regulatory Layer)

If the users choosing to group up are connected to the same part of the distribution network (e.g., tenants in a multi-apartment building or businesses in a commercial park), this feature transitions from a social tracker into a legal Group of Active Customers (Grupa aktivnih kupaca).

Location & Grid Node Validation: When User A invites User B to form a structural group, the software checks their OMM (Billing Metering Point) data and geographic location. The platform verifies if they share a common physical coupling point or sub-station to ensure they qualify for localized energy sharing tariffs under grid rules.

Virtual Ledger for Netting Impact: The platform calculates the exact timestamped generation of User A (e.g., who has a large rooftop solar array) and virtually offsets it against the live consumption of User B (who might live in a shaded apartment) in real-time.

Shared Asset Monitoring: If the group decides to pool money together to buy a communal battery or an EV charger, the app provides a collective asset tracking view. It monitors how much energy the shared battery absorbed from the members' excess solar production and attributes ownership shares dynamicallyFor all of the potential pilot project, it would be of utmost importance to use the Virtual Power Plant (VPP) software. This software offers significant benefits for energy communities—groups of households, businesses, or organizations that collaborate to generate, consume, and manage energy locally. Here are the main advantages:

1. Optimized Energy Management

VPP software aggregates and coordinates distributed energy resources (DERs)—like solar panels, batteries, electric vehicles, and flexible loads—within the community. This enables:

- Balancing supply and demand: Ensuring local energy use matches local generation as much as possible.
- Smart scheduling: Charging batteries or running appliances when renewable generation is high or prices are low.

2. Increased Self-Consumption and Savings

By managing energy flows, VPP software helps communities:

- Use more of their own renewable energy locally.
- Reduce reliance on the grid during peak price periods, lowering energy bills.

3. Participation in Energy Markets

VPPs allow energy communities to:

- Sell surplus energy or flexibility (e.g., reducing demand when requested) to the grid or energy markets.
- Earn revenue from ancillary services, such as frequency regulation or demand response.

4. Enhanced Grid Stability and Resilience

By coordinating DERs, VPP software can:

- Support the grid during outages or peak demand by providing backup power.
- Help avoid overloads and contribute to a more stable, reliable local grid.

5. Environmental Benefits

Efficient management means:

- Maximizing the use of renewables, reducing carbon emissions.
- Reducing the need for fossil-fuel-based peaker plants.

6. Empowerment and Community Engagement

VPPs give community members:

- More control over their energy use and costs.
- Opportunities to participate actively in the energy transition.

7. Data-Driven Insights

VPP software provides dashboards and analytics for:

- Tracking generation, consumption, and savings.
- Identifying further opportunities for efficiency and optimization.

In summary, Virtual Power Plant software empowers energy communities to manage energy more efficiently, save money, participate in energy markets, and contribute to a cleaner and more resilient energy system.

For instance, the Nexum VPP software developed by the experts from the Science Technology Park in Niš provide benefits to two main groups: Independent power producers (IPPs) from resources (RES) and the Aggregators.

Both groups are paying high amounts for balancing energy due to the forecast errors. The value for balancing costs can go up to 400 €/MWh and the average monthly price on Serbian power market can be found on the following link:

https://ems.rs/wp-content/uploads/2023/02/Average-price-of-balancing-energy.pdf

The reduction of these costs Is directly related to the forecast accuracy offered by the software, because of the innovative fuzzy related and global area approach of the forecast.

IPPs of RES can optimize the time for selling their energy to maximize the profit, or sell their unused energy back to the power company for a profit. With VPPs, the software can do this intelligently to maximize profits.

The VPP aggregator benefits by being compensated for the support the VPP provides to the grid. By creating a virtual power grid, a VPP aggregator helps the grid to remain stable. In return for providing this increase in stability, they receive financial remuneration for how much power they supply.

Depending on the financial and energy priorities of the owner, Nexum VPP platform can be programmed to:

- Utilize weather and load management forecasts.
- Process real-time and historical data.
- Price signals from the market during fluctuations throughout the day.
- Generally, provide additional resources to the main grid during peak hours.

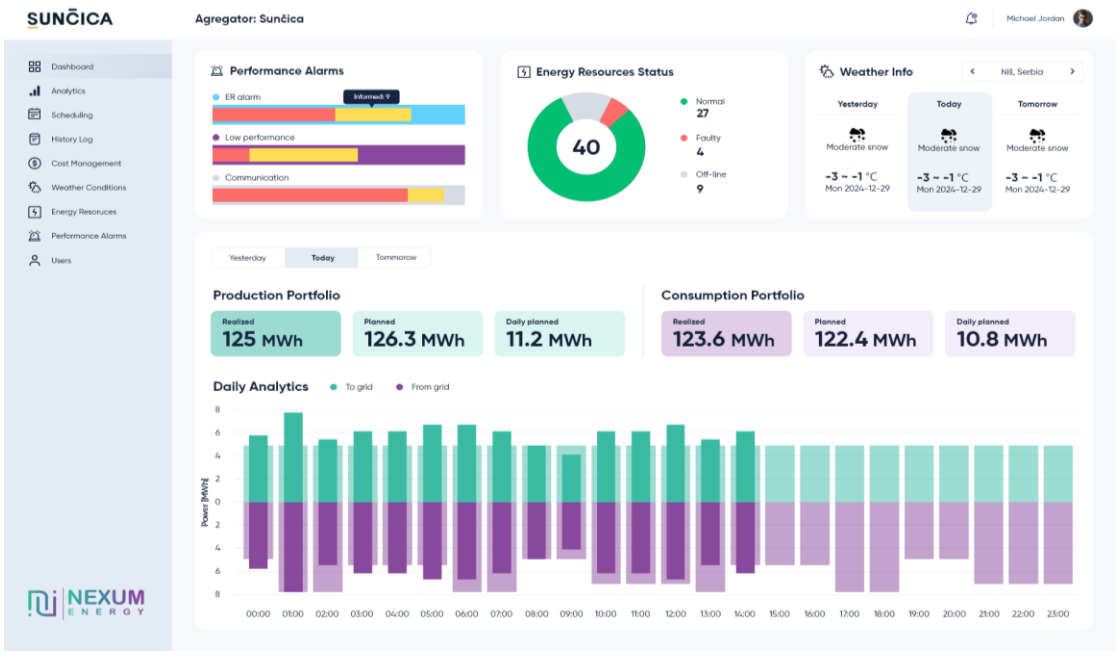

Figure 3 The dashboard of VPP software

10. COMPREHENSIVE STRATEGIC ROADMAP AND IMPLEMENTATION MATRIX (2026–2030)

To ensure effective execution, the strategy is organized into a clear timeline with defined operational phases, stakeholder roles, and key performance indicators.

10.1 Phase I: Institutional Setup and Foundation Building (Q3–Q4 2026)

- Core Focus: Establishing the municipal support office, publishing standardized legal templates, and launching initial training programs.
- Involved Stakeholders: Municipal Council of Medijana, Regional Energy Agencies, Local Chambers of Commerce, Legal Consultants.
- Key Performance Indicators: Complete launch of the municipal "One-Stop Shop" office; completion of Module 1 and Module 2 training sessions for at least 40 local hospitality businesses; publication of standardized active buyer contract templates.

10.2 Phase II: Launching Pilot Projects and Technical Frameworks (Q1–Q4 2027)

- Core Focus: Deploying the three demonstration projects, finalizing grid connection filings, and establishing data monitoring systems.
- Involved Stakeholders: Selected Hospitality Partners, Technical Engineering Firms, Distribution System Operators (EDS), Energy Cooperatives.
- Key Performance Indicators: Installation and activation of the Solar Hot Water systems across Pilot 1 properties; formal legal registration of the first commercial Group of Active Buyers under Article 10a; initialization of continuous data tracking for energy and waste flows.

10.3 Phase III: Scaling and Mainstream Market Integration (2028–2030)

- Core Focus: Expanding energy community models across the municipality by leveraging performance data from the pilot projects and introducing municipal tax incentives.
- Involved Stakeholders: Municipal Financial Officers, National Ministry of Mining and Energy, Private Commercial Clusters, Institutional Investors.
- Key Performance Indicators: Transposition of collective energy sharing models to at least 25% of the local hospitality sector; generation of over 1.5 MW of decentralized solar capacity within the municipality; complete diversion of commercial organic waste across participating hospitality corridors.

11. RISK MANAGEMENT AND MITIGATION FRAMEWORK

Implementing decentralized energy projects requires managing potential technical, financial, and operational challenges.

11.1 Managing Grid Interconnection Delays

• Identified Risk: Delays in processing Connection Studies or securing network approvals from the distribution system operator (EDS).

• Mitigation Strategy: Local projects should evaluate the Zero-Injection Option under Article 10в as a primary setup. This allows businesses to utilize the fast-tracked 15-day approval timeline, avoiding lengthy grid capacity reviews while meeting their internal energy needs.

11.2 Addressing Capital Access Constraints

• Identified Risk: Commercial banks refusing to issue the required 37-month bank guarantees for small hospitality operators.

• Mitigation Strategy: The municipality can collaborate with international development funds to establish a local Credit Guarantee Facility. This facility can provide partial collateral support to local banks, helping participating small businesses secure the necessary €12,500/MW guarantees at reasonable rates.

11.3 Mitigating Long-Term Operational Disagreements

• Identified Risk: Potential disputes within Groups of Active Buyers regarding cost allocation, energy distribution, or maintenance obligations.

• Mitigation Strategy: The municipal office will require all participating groups to adopt a standardized internal governance agreement before receiving public support. This agreement must include clear, pre-defined rules for energy allocation, automated billing procedures via smart meter data, and clear mediation steps for resolving internal disputes.

12. CONCLUSION AND POLICY RECOMMENDATIONS

The successful promotion of energy communities within the City Municipality of Medijana requires a coordinated approach that connects legal frameworks, technical training, and financial incentives. This strategy demonstrates that moving past abstract environmental messaging and focusing on practical operational benefits can help local businesses overcome structural hesitation and participate in the green energy transition.

By fully leveraging the updated Active Buyer regulatory framework, Medijana has a clear opportunity to modernize its local economy. Transitioning from passive consumers into interactive energy participants allows small businesses to lower their operating costs, improve their climate resilience, and directly support Serbia's broader energy transition goals. With clear institutional support from the municipality and robust engagement from local commercial clusters, this strategy provides Medijana with a clear, repeatable roadmap to build a sustainable, low-carbon urban ecosystem.

The transformation of the City Municipality of Medijana's energy landscape stands at a pivotal juncture. The empirical findings from the Medijana Energy Efficiency Survey, combined with the regulatory momentum of the EU Clean Energy Package and the amended Serbian Decree on Conditions for Delivery and Supply of Electricity, reveal both the urgency and the opportunity for embedding energy communities as a cornerstone of local economic resilience and climate action.

12.1. Summary of Key Findings

The research underscores a stark awareness gap: 90% of local business owners remain unfamiliar with the concept of energy communities, and 84.1% are fully dependent on the carbon-intensive national grid. This lack of awareness is compounded by structural barriers—complex bureaucracy, insufficient technical capacity, and acute capital constraints. Yet, there is clear evidence that when messaging pivots from abstract environmentalism to concrete operational benefits—such as cost reduction, energy autonomy, and risk mitigation—local businesses show increased receptivity.

The pilot strategies implemented in Medijana, including the establishment of a municipal "One-Stop Shop" for green energy and the rollout of localized demonstration projects, have begun to bridge the gap between policy and practice. By leveraging the unique division of labor among NGOs, youth associations, private hospitality operators, and municipal bodies, Medijana has set a replicable model for citizen-driven energy transition in Southeast Europe.

12.2. Strategic Policy Recommendations

To ensure the long-term success and scalability of energy communities in Medijana, the following policy recommendations are proposed:

Institutionalize and Scale the Municipal "One-Stop Shop"

Purpose: Continue to provide centralized legal, technical, and financial guidance for SMEs and citizen groups.

Action: Expand the One-Stop Shop's mandate to offer digital services, maintain open-access legal templates for REC/CEC formation, and serve as a direct liaison with the Distribution System Operator (EDS).

Impact: This will lower administrative barriers, standardize governance frameworks, and accelerate project initiation for new energy communities.

Embed Financial Incentives and Conditional Subsidies

Purpose: Address the primary barrier of capital access and incentivize collective action.

Action: Tie municipal, national, and EU subsidy eligibility to formal participation in energy communities. Establish a local Credit Guarantee Facility in partnership with development banks to support the €12,500/MW guarantee requirement, and provide guidance on hybrid capital stacking (municipal, national, EU, and crowdfunding).

Impact: Reduces upfront risk for SMEs, democratizes access to renewable energy investment, and unlocks economies of scale.

Pivot Messaging to Operational Value and Economic Resilience

Purpose: Overcome informational inertia by speaking the language of local business.

Action: Reframe promotional campaigns to focus on tangible benefits: lower utility costs, protection against grid volatility, and improved air quality. Utilize B2B field agents and sector-specific case studies to demonstrate ROI and operational stability.

Impact: Drives adoption among pragmatic business owners and builds a culture of innovation and modernization.

Foster Multi-Stakeholder Partnerships and Social Mobilization

Purpose: Leverage the established division of labor for effective mobilization.

Action: Formalize roles for NGOs and youth associations in outreach and administration, engage private businesses as asset hosts and energy consumers, and integrate public buildings into community energy pools.

Impact: Ensures broad social buy-in, maximizes resource utilization, and demonstrates public sector leadership.

Implement Risk Management Protocols

Purpose: Mitigate technical, financial, and operational risks inherent in decentralized energy projects.

Action: Promote the Zero-Injection Model (Article 10в) for rapid solar integration, require standardized internal governance agreements to prevent disputes, and maintain ongoing dialogue with EDS to expedite grid connections.

Impact: Increases investor and participant confidence, ensuring the long-term viability of energy communities.

Monitor, Evaluate, and Mainstream Successful Models

Purpose: Create a feedback loop for continuous improvement and scaling.

Action: Publicly track pilot project outcomes (e.g., cost savings, MW of new capacity, emissions reductions), disseminate best practices, and set clear KPIs (e.g., 25% penetration in the hospitality sector by 2030).

Impact: Fosters transparency, encourages replication, and positions Medijana as a regional leader in citizen energy.

12.3. Strategic Outlook

By fully operationalizing the updated Active Buyer framework and embedding energy communities into the urban fabric, Medijana can transition from a passive energy consumer to a resilient, interactive energy hub. This approach not only aligns with Serbia's national energy and climate goals but also delivers direct, measurable benefits to local businesses and residents.

The recommendations above are grounded in both EU directives (RED II, IEMD, Energy Performance of Buildings Directive) and Balkan best practices (EUCENA, REScoop), ensuring legal compliance and practical feasibility. As Medijana continues to scale its model, it will serve as a blueprint for other municipalities seeking to realize the promise of decentralized, community-driven energy transition.

The path forward for Medijana is clear: institutionalize support, incentivize collective action, communicate in pragmatic terms, and manage risk proactively. Through these actions, Medijana can secure its role as a national and regional pioneer—delivering climate action, economic resilience, and social value through empowered energy communities.

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