REGI1ST

Guidelines on EE1st and Multilevel Governance implementation in regional planning

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Content

Abbreviations

EE1st	Energy Efficiency First
EED	Energy Efficiency Directive
EU	European Union
MCDA	Multi Criteria Decision Analysis
MLG	Multilevel Governance
NECP	National Energy and Climate Plan
RED	Renewable Energy Directive
SCBA	Social Cost Benefit Analysis

1 Introduction

Regio1st, a project co-funded by the EU LIFE programme, aims to raise awareness about the Energy Efficiency First (EE1st) principle among regional authorities and their agencies, as well as support them to incorporate this in decisions related to energy planning.

Within the framework of this project, the following activities are being implemented: a) provision of appropriate support to regional authorities to embed the EE1st principle in their decisions and energy planning, b) establishment of a community of practice for EE1st, in cooperation with the Covenant of Mayors, c) facilitation of the introduction of the principle in national energy and climate plans (NECPs), and d) development of a customised co-creative tool for regions to assist their policy making process.

Regio1st focuses on six regions, i.e. Liguria in Italy, Ormož and Slovenska Bistrica in Slovenia, Western Macedonia in Greece, Asturias in Spain, Medjimurje in Croatia and Carlow, Kilkenny, Wexford, Waterford in Ireland. These regions aim to implement and test the Regio1st framework and then showcase to other regions how they embedded the EE1ST principle.

Across multiple European regions, the EE1st principle is being progressively integrated into climate and energy planning, guided by national commitments under each country's NECP in line with EU directives. The EE1st principle is recognised as a strategic approach that prioritises energy-saving measures over supply-side solutions where they are more cost-effective and sustainable.

The successful implementation of EE1st relies heavily on Multilevel Governance, where cooperation is fostered between EU institutions, national governments, regional and local authorities, as well as private stakeholders and citizens. Regional planning plays a central role, as regional and local authorities are best positioned to understand territorial specificities, integrate energy efficiency measures and align projects with the needs of communities.

These Guidelines are designed to serve as a practical tool for regional authorities, energy agencies and other relevant actors involved in energy planning and policy development. They provide step-by-step instructions on how to effectively integrate EE1st principle into regional planning processes.

Inputs and findings from activities within Regio1st were reviewed and included in the process of compiling this document.

Apart from this introductory chapter, the deliverable unfolds as follows:

Chapter 2: Legislation on EE1st principle, with reference to regional decision-making processes and EE1st implementation described for each Regio1st regional partner (SEEA, FAEN, IRE Liguria, LEASP, MENEA, CLuBE).

Chapter 3: Multilevel governance implementation in regional planning with subchapters about MLG, preconditions for establishing a suitable MLG model for EE1st and step-by-step guide for implementing MLG in regional planning with an EE1st approach

Chapter 4: Barriers in MLG implementation in regional planning,

Chapter 5: Best practice examples from Regio1st regional partners on MLG and EE1st implementation in regional energy planning

Chapter 6: Recommendations on establishment of MLG on EU level

Chapter 7: Conclusions

2 Legislation on EE1st principle

The Energy Efficiency First principle (EE1st principle)[1] is a guiding policy concept that prioritises the implementation of energy efficiency measures before investing in new energy supply infrastructure or capacity. By emphasising energy efficiency, this principle helps to reduce overall energy demand, decrease the need for new infrastructure investments, lower greenhouse gas emissions, improve energy security and save consumers money.

In the context of regional energy planning, the EE1st principle directs policymakers and planners to first consider demand-side measures. Such measures include: improving the energy efficiency of buildings, promoting efficient appliances and lighting, and encouraging behavioural changes that lead to energy conservation, before exploring options for increasing energy supply. Incorporating the EE1st principle into regional energy planning ensures a more sustainable, cost-effective and resilient energy future for communities.

The EU's Commission's recommendation (EU) 2024/2143[2] mandates that EE1st be embedded in national energy and climate plans (NECPs), which are the primary tools for addressing energy-related goals in EU countries. These plans must explicitly outline how energy efficiency will be prioritised in national and regional energy policies, and how it will be reflected in infrastructure investments and regulatory measures. This principle must guide the allocation of financial resources, influencing how EU funds are used to support energy-efficient projects and policies.

The EU legislative framework for the EE1st principle is designed to guide the integration of energy efficiency into national, regional, and local policies. By ensuring that energy efficiency is prioritised in all decision-making processes, the EU seeks to reduce energy consumption, emissions, and costs, while also fostering sustainability and energy security. The Energy Efficiency Directive provides a clear roadmap for member states to adopt EE1st and emphasises the role of regional and local governments in its implementation. With the support of financial mechanisms,

[1] European Commission, https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficiency-targets-directive-and-rules/energy-efficiency-first-principle_en

[2] European Union, Directive (EU) 2024/2143 of the European Parliament and of the Council of 28 December 2024 on the promotion of energy efficiency first in energy planning. Official Journal of the European Union. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32024H2143

capacity-building efforts, and stakeholder engagement, EE1st can become a cornerstone of future energy systems across Europe.[3]

2.1 Regional decision-making process

While NECPs consistently acknowledge and promote the EE1st principle, particularly in sectors like buildings, transport and infrastructure, implementation at regional level throughout member states can vary significantly. For example, local/regional authorities engaged in the Regio1st project activities mention and/or incorporate the EE1st principle in their local/regional energy plans. Common strategies include promoting building retrofits, conducting energy audits, applying cost-benefit analysis and incorporating EE1st into public procurement and spatial planning.

However, several challenges persist. These include lack of detailed implementation tools, limited regional resources and insufficient monitoring frameworks. Despite these gaps, efforts to embed EE1st are visible through regional energy strategies, partnerships with national agencies and evolving legislative frameworks that aim to improve energy efficiency across sectors. As the transposition of the provisions of the amending EED into national legislation throughout member states progresses, decision makers will be required to align their planning processes with the EE1st principle.

The recommendations on adapting the EE1st principle in governance structures below originate from Findings from Regio1st activities on regional development planning cycles and procedures.

2.1.1 Carlow, Kilkenny, Wexford, Waterford, Ireland

Carlow, Kilkenny, Wexford and Waterford belong to the South East region of Ireland, where regional planning is based on aligning local priorities with national and EU strategic objectives. This region primarily uses renewable energy sources, such as wind farms and solar energy, while a focus on energy efficiency is key to reducing energy consumption and greenhouse gas emissions is present on the Regional Spatial and Economic Strategies (RSES), a strategic framework for decision-making.

[3] European Union, Directive (EU) 2024/2143 of the European Parliament and of the Council of 28 December 2024 on the promotion of energy efficiency first in energy planning. Official Journal of the European Union. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32024H2143

Decision making process

The decision-making process includes:

- Regular meetings of regional councils, made up of 33 local councillors, who direct energy projects and strategies
- Evaluation of projects according to sustainability criteria, including reduction of emissions, increase in the share of renewable sources and socioeconomic benefits
- Public consultation and cooperation with interested stakeholders, such as business chambers, local authorities and civic organisations

In Ireland, energy and climate planning follows a top-down but interconnected structure.

The national government, through the Department of Environment, Climate and Communications, sets the overall policy framework, national targets, and strategic plans. The Sustainable Energy Authority of Ireland (SEAI) supports this by providing technical advice, funding programmes, and coordinating stakeholder engagement.

Regional Assemblies, such as the Southern Regional Assembly, act as intermediaries between national and local levels. They must ensure that regional strategies, like the RSES are aligned with national frameworks and contribute to meeting or exceeding national goals. They also provide oversight of local authority plans and advise the national government on regional needs and priorities.

Local Authorities are responsible for implementing energy and climate actions at the community level. They develop Local Climate Action Plans and integrate national and regional goals into local initiatives, often focusing on energy use, the built environment and public sector leadership.

All regional and local plans must be consistent with national strategies, and regional assemblies coordinate and mediate between the state and municipalities to ensure coherent, multi-level implementation of Ireland's energy and climate policies.

EE1st in Ireland

Ireland has integrated the EE1st principle in its NECP, which aligns with the EU Energy Efficiency Directive (EED). The EE1st first principle is referenced as a guiding framework across multiple sectors and policy measures. It is explicitly considered in the design of the Energy Efficiency Obligation Scheme (EEOS) while other efficiency policy instruments for businesses, such as audits and grants, are aligned with this principle. Ireland's NECP identifies the EEOS as a central policy instrument for meeting the national energy-savings targets required under Article 7 of the EED. The scheme obliges large energy suppliers and distributors to achieve specific annual

energy-saving targets by supporting or implementing efficiency measures in households, businesses, and public bodies.

In the buildings sector, the principle is central to the National Retrofit Plan, prioritising energy demand reduction through deep retrofits. In the energy sector, the principle informs network development by promoting demand-side solutions that can reduce or defer infrastructure expansion. However, implementation gaps exist due to fragmented coordination across sectors. The latest recast of the EED has not yet been adapted in Ireland, which slows down the implementation of requirements such as cost-benefit analysis.

At **regional level**, the Sustainable Energy Authority of Ireland (SEAI)'s programs reflect EE1st principles indirectly by encouraging energy audits and retrofitting as priority actions. The Regional Spatial and Economic Strategy (RSES 2020-2032) does not explicitly reference the EE1st principle but incorporates its principles through the promotion of compact growth and energy-efficient transport systems. Examples of the EE1st principle in action in RSES include prioritising energy efficiency in retrofitting public buildings and regional collaboration with the SEAI to promote energy-efficient practices across local authorities. The Southern Regional Assembly is also developing a regional decarbonisation plan, set to be adopted within 2025, with SEAI ensuring the integration of the EE1st principle.

2.1.2 Asturias, Spain

Asturias is a region with a strong history of coal mining and thermal power. However, the transition process towards a low-carbon economy requires the integration of energy efficiency measures to reduce emissions and stabilise the economy. In Spain, regional authorities are not required to conduct energy or climate planning, as these responsibilities belong to the national government, which oversees energy and gas markets, infrastructure and emission reduction. However, regions handle licensing of energy facilities, grid access and emissions monitoring. They can also support specific technologies, projects and influence national strategies. Although not mandatory, some regions, like Asturias, have created their own energy strategies - Regional Energy Transition Strategy (RETS) to address local needs and promote regional decarbonisation, and to ensure compliance with national NECP and EU targets.

Decision making process

The main elements of the decision-making process include:

- The active role of the Directorate for Energy and Mining (Directorate General for Energy and Mining)

- Cooperation with regional councils and the private sector on the development of renewable energy and energy efficiency projects
- Cooperation of national entities such as the Just Transition Institute (ITJ) and the Institute for Energy Diversification and Saving (IDAE)
- Organisation of public hearings, working groups and technical consultations to ensure transparency and inclusiveness

In Spain, energy and climate governance is coordinated across national, regional, and local levels through structured cooperation. The national government, primarily through the Ministry for Ecological Transition and Demographic Challenge, establishes the national framework, programmes, and objectives for energy and climate policy.

Regional authorities develop and implement their own energy and climate strategies and plans within this national framework. In Asturias, for instance, the Directorate-General of Energy, Mining and Restoring oversees energy policy, while the Regional Ministry of Infrastructures, Spatial Planning and Environment handle climate policy. Regional authorities also monitor programmes using indicators provided by the national level, though they may develop additional regional ones.

Cooperation between national and regional authorities is ensured through regular meetings and consultations, allowing both levels to align strategies – national authorities understand regional needs, while regions adapt to national priorities.

At the local level, municipalities are not obliged to create energy or climate action plans, but many do so voluntarily, often with support from regional energy agencies. Larger cities (over 50,000 inhabitants) must, however, establish zero-emission transport zones to reduce GHG emissions.

The Regional Energy Transition Observatory in Asturias supports coordination by bringing together regional and local authorities to monitor the RETS and assist municipalities in developing Sustainable Energy and Climate Action Plans (SECAPs).

EE1st in Spain

Spain has integrated the EE1st principle into its NECP, as a foundational approach across all sectors, and mandates systematic assessment of efficiency potential in energy planning, ensuring cost-effective and sustainable alternatives are considered. In sectors like buildings and transport, strategies focus first on reducing consumption through renovation, modal shift and smart technologies. All major decisions, including the new supply infrastructure, must evaluate whether efficiency measures could achieve the same goals more effectively, by comparing demand-side measures, energy-efficiency improvements, and system-optimisation options against supply-side investments in line with EU and Spanish regulatory requirements. However, there is a

lack of detailed tools and guidelines for the practical implementation of the principle across all sectors.

At **regional level**, the Asturias region has developed plans that indirectly incorporate the EE1st principle. The Energy Improvement Plan (Plan ASUME) promotes energy efficiency in public infrastructure, transportation and building rehabilitation. Although not explicitly mentioned, the entire Plan ASUME is focused on promoting energy efficiency in public sector consumption as a key means to reduce dependence on external energy sources. Plan ASUME includes public outreach campaigns, energy-saving criteria in public tenders and acceleration of renewable adoption, but there are limited regional resources for widespread public sector upgrades and renewable implementation timelines.

Additionally, the Just Energy Transition Strategy focuses on energy efficiency to reduce dependence on coal by focusing on transforming the coal-dependent energy model, integrating energy efficiency in various sectors as well as renewables deployment, public outreach campaigns and establishment of energy-saving targets. EE1st will be considered in the next revision.

The Energy Rehabilitation Strategy for Buildings Program "PREE 5000" provides grants for energy retrofit of buildings, aimed at reducing final energy consumption and CO_2 emissions, particularly in municipalities facing demographic challenges. However, the program faces challenges such as limited awareness and technical expertise among local authorities and building owners, high initial costs for rehabilitation actions despite the availability of grants, and difficulties in achieving widespread adoption of energy efficiency measures in rural or less populated regions due to logistical and economic constraints.

2.1.3 Liguria, Italy

Liguria is an Italian region known for its complex geographical terrain, which includes mountains and coastline, making it difficult to implement large-scale renewable projects. The region's energy policies are based on the Regional Energy and Environment Plan (PEAR), which provides a comprehensive framework for integrating energy efficiency principles.

Decision-making process

- The development of the PEAR goes through several stages, including environmental impact assessments, public consultations and technical analyses
- The departments for economic development and environmental protection coordinate the plan to ensure compliance with national legislation and EU objectives

A particular focus is placed on the retrofitting of buildings, which is of strategic importance for the region. In Italy, energy governance is shared ("concurrent") between the national government and the regions. The national government sets the fundamental legislative principles and national targets, primarily through documents like the NECP. It divides national goals among regions via a "burden-sharing" mechanism.

Regions hold legislative and planning powers within this national framework. They must adopt PEARs, which outline regional measures to meet national objectives. While these plans do not require national approval, they are evaluated during the Strategic Environmental Assessment (VAS) by national bodies (e.g., ministries, cultural heritage agencies).

Cooperation between the two levels is institutionalised through the "Coordination between Regions" Committee, which operates through technical and political working groups. This Committee allows regions to exchange experiences and issue (sometimes binding) opinions on national regulations and initiatives.

At the local level, municipalities are not required to develop energy or climate plans, but many participate voluntarily in the Covenant of Mayors (CoM), creating Sustainable Energy Action Plans (SEAPs) or SECAPs. These local plans, along with Sustainable Urban Mobility Plans (SUMPs), are used by regions to inform and prioritise regional strategies, though municipalities retain autonomy over urban planning through their City Urban Plans (PUCs). Local authorities and their national association (ANCI) can also contribute to national energy strategies during public consultation phases, both in preliminary and final stages.

EE1st in Italy

Italy's NECP acknowledges the EE1st principle as a fundamental pillar across its strategy, planning, and implementation, in alignment with EU Directive (EU) 2023/1791. It explicitly states that EE1st was considered in drafting the plan and will guide the implementation of measures, ensuring energy efficiency options are evaluated before supply-side interventions where more cost-effective. The plan explicitly references EE1st in strategic sections, particularly in relation to public procurement, building renovations and investment planning, emphasising that energy efficiency should be prioritised in all relevant decisions.

The revision of the PNIEC is expected to be completed by October 2025. The Ministry of Environment and Energy Security (MASE) and the National Agency for New Technologies, Energy, and Sustainable Development (ENEA) are responsible for updating the PNIEC, while regional governments do not have any power on PNIEC formulation.

At **regional level**, the Liguria Region is about to approve the Regional Energy and Environmental Plan (PEAR 2030), which incorporates the EE1st principle as a key element of its energy framework. The EE1st principle is introduced as a focus point of the energy legislative framework of PEAR 2030. The principle is embedded in a specific way as the targets are built considering energy efficiency interventions first and then the potential of renewable energy sources. The plan is expected to be approved by the regional Board by the end of 2025.

2.1.4 Ormož & Slovenska Bistrica, Slovenia

In Slovenia, there are no official regions or regional authorities; the regional division is only for statistical purposes. The Energy Act requires municipalities to prepare a Local Energy Concept (LEC), which is valid for 10 years and is approved by the Ministry of Infrastructure. The LEC is the most important tool for developing a local energy policy strategy. Ormož and Slovenska Bistrica exemplify Slovenia's commitment to local energy planning through their LECs. These documents align with the national NECP, emphasising energy efficiency and renewable energy.

Decision-Making Process

The process includes:

- Preparation of LECs by municipal authorities, supported by external experts and stakeholders
- Regular public consultations to integrate community needs and feedback into energy strategies
- Collaboration with national agencies to ensure alignment with broader climate goals

Slovenia has mechanisms to ensure multilevel governance and the coordination of national and local plans. The Ministry of Infrastructure develops the NECP, supported by the Ministry for the Environment, other relevant ministries and expert agencies. Local authorities are not directly involved in drafting national plans but can participate through public consultations and workshops, and national plans guide municipal energy and climate planning. Regional coordination occurs through the College of Mayors of Spodnje Podravje, the Joint Municipal Administration and the Development Council of the Podravje Region, which manage inter-municipal projects and regional development plans. At the local level, municipalities have constitutional autonomy, managing energy supply, permitting infrastructure, promoting efficiency and incentivising clean technologies. They must also submit annual reports on

implementation of LECs to the Ministry, with support from local energy agencies for monitoring and data management.

EE1st in Slovenia

Slovenia has integrated the EE1st principle into its NECP, which aligns with the EED. Slovenia's NECP explicitly incorporates the EE1st principle. The plan emphasises that energy efficiency must be considered as a priority in policy making and investment decision-making, particularly where cost-benefit analysis shows energy efficiency as the optimal solution, in sectors such as buildings, energy supply and public infrastructure. Practical references to EE1st include its application in cost-benefit evaluations and prioritisation of demand-side measures. Additionally, the NECP promotes the use of EE1st in public procurement and spatial planning by equipping authorities with training and regulatory support to prioritise energy efficiency. However, while the document recognises the strategic role of EE1st, it does not provide detailed mechanisms or monitoring tools to ensure systematic implementation across all governance levels.

Additionally, the Energy Efficiency Act (ZURE-1), currently in public consultation, explicitly incorporates the EE1st principle. The EE1st principle emphasises prioritising energy efficiency in all planning, policy-making and major investment decisions, particularly for investments exceeding €100 million or €175 million for transport infrastructure projects. It mandates that sectors such as buildings, transport, water, ICT, agriculture and finance consider energy efficiency measures and prepare studies to assess their costs and benefits from a long-term perspective, the security of supply and the quantification from a social, health and economic perspective. This also requires taking into account the interconnections of sectors and cross-sectoral effects where decisions on policy, planning and investments require approvals and monitoring. Entities must report their compliance with the EE1st principle to the Ministry of Energy within six months, and the methodology for applying the principle will be detailed by the Minister of Energy.

2.1.5 Medjimurje, Croatia

Medjimurje County, as the regional authority of the Medjimurje region located in the northern part of Croatia, has an active role in energy planning at the regional level. Mandated by the Croatian Energy Efficiency Act, the region is obligated to adopt three-year Energy Efficiency Action Plans (EEAPs) for its territory, implement energy efficiency actions, monitor the effects of these actions and report on implemented actions annually to the national coordinating body for energy efficiency.

Decision-Making Process

The process includes:

- Developing a baseline consumption inventory and analysing suitable options regarding energy efficiency
- Defining areas of interest, goals and recommending energy efficiency measures for the EEAP
- Relevant department approves further action, the measure/project is proposed for funding; decisions on small scale investments are made by County prefect, while large scale investments require the approval of the County Assembly

In Croatia, energy and climate decision-making follows a centralised but consultative model. The national government prepares the NECP and related strategies, while regional authorities (counties) must align their regional EEAPs with these national frameworks. Although regions are not directly involved in developing national plans, they can participate through public consultations on the e-Consulting platform. Regions are accountable to national ministries, by submitting annual reports on energy efficiency implementation to the national coordinating body. At the local level, municipalities are not obliged to prepare energy or climate plans, but many do so voluntarily (e.g. SECAPs). Coordination between counties and municipalities occurs mainly through public consultations and local meetings, ensuring that spatial and urban plans remain consistent with regional and national objectives.

EE1st in Croatia

Croatia has integrated the EE1st principle into its NECP 2021-2030. However, this principle is primarily addressed in relation to outreach and information campaigns on building decarbonisation, rather than as a mainstream planning tool. The NECP was updated in 2023 and underwent public consultation in 2024, with the final version published in spring of 2025.

At the **regional level**, the EEAP of Medjimurje County for the period 2025-2027 incorporates the EE1st principle where applicable. EEAP integrates the EE1st principle as a core element of regional planning, explicitly stating that energy efficiency measures must be prioritised over supply-side solutions whenever they are technically and economically justified. This principle is not only referenced in the strategic sections of the plan but also operationalised through practical mechanisms, including cost-effectiveness analysis for project evaluation, prioritisation of energy efficiency in investment planning. The plan also mandates the use of energy audits, systematic energy management, and capacity-building for local authorities to ensure EE1st is applied consistently in daily decision-making.

2.1.6 Western Macedonia, Greece

Greek regions must develop an Energy Efficiency Plan (EEP), with a primary focus on public buildings. The plan must contain specific objectives and outline energy efficiency measures to be implemented. It should be submitted to the Ministry of Environment and Energy and reviewed every two years. Besides the EEPs, regions must develop Regional Climate Change Adaptation Plans, which define priority policy areas and specific targeted measures.

Decision-Making Process

- The regional council includes the topic in its agenda and approves the initiation of the action plan process, outlining its purpose and scope
- The action plan is drafted either by internal staff or, if needed, by hiring external experts or consultants
- Relevant regional committees assess the draft plan, considering factors like feasibility, environmental and social impact, and legal compliance
- The Ministry of Environment and Energy (or other relevant bodies) may evaluate the draft to ensure it aligns with national standards and policies
- After public consultation and necessary revisions, the Regional Council reviews and formally adopts the finalised action plan

In Greece, energy and climate planning is nationally driven but includes elements of multilevel coordination. There is no formal institutional framework for multilevel governance, yet regional and local authorities take into account national strategies, targets and legal frameworks when developing their own plans, promoting overall consistency. Public consultations and workshops provide opportunities for local input, while regional authorities report implementation progress through the national electronic platform for energy efficiency monitoring.

The Just Transition Development Plan (JTDP) was coordinated through a national Steering Committee involving key ministries and regional governors, though it remains centrally managed, raising concerns about regional representation. In practice, interaction between levels relies on consultation and information exchange, rather than structured decision-making authority.

Regarding the EEP, regional and local authorities have to report about the implementation of their plans through a national electronic platform. With this electronic platform, the implementation of energy efficiency actions is being monitored, as well as the progress in reducing energy consumption tin the entire public sector (schools, universities, hospitals, ministries, public services, etc.) and local government.

EE1st in Greece

Greece encourages the application of the EE1st principle through its NECP, in sectors where energy efficiency interventions are expected. Specifically to the NECP published on December 2024 it mentions "It is noted that the achievement of the above objectives is ensured by applying the EE1st principle, prioritising the selection of the most efficient policy measures while implementing cost-benefit analyses throughout the life cycle of the measure as well as the long-term perspective, system efficiency and cost, thus achieving, in accordance with the requirements of Regulation (EU) 1999/2018 (Article 18), multiple benefits across all end-consumption sectors, such as reducing energy costs, improving comfort conditions in buildings, increasing worker productivity, increasing domestic value added and employment and improving business competitiveness". No other provision for the integration of the principle in **local or regional level** has been mandated by the Greek NECP so far.

3 Multilevel governance implementation in regional planning

Multilevel Governance (MLG) implementation in regional planning reflects a coordinated approach involving EU, national and subnational authorities. Each region integrates EU cohesion policy frameworks with national development strategies while tailoring interventions to local/regional socio-economic and environmental contexts.

3.1 About multilevel governance

According to the Committee of the Regions' white paper on Multilevel Governance[4], MLG is:

"*coordinated action by the European Union, the Member States and local and regional authorities, based on partnership and aimed at drawing up and implementing EU policies. It leads to responsibility being shared between the different tiers of government concerned and is underpinned by all sources of democratic legitimacy and the representative nature of the different players involved.*"

In other words, MLG is a framework that recognises the interconnected nature of policy-making across different levels of governance – local, regional, national and supranational. It involves a system of coordination and collaboration where public authorities, private actors and civil society engage in decision-making processes that transcend hierarchical structures.[5] The MLG approach is particularly relevant in addressing complex issues such as energy transition and climate change, which require integrated and cooperative strategies.

The processes of MLG are designed to support involvement of players at different levels. However, in order for these approaches to be successful, the White Paper on European Governance[6] advocates **5 principles of "good governance"**:

[4] The Committee of Regions' white paper on mutlilevel governance, https://www.europarl.europa.eu/meetdocs/2009_2014/documents/regi/dv/cdr89-2009_/cdr89-2009_en.pdf

[5] OECD, Multi-level governance: An introduction., https://www.oecd.org/en/topics/policy-issues/multi-level-governance.html

[6] European governance – A white paper, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52001DC0428

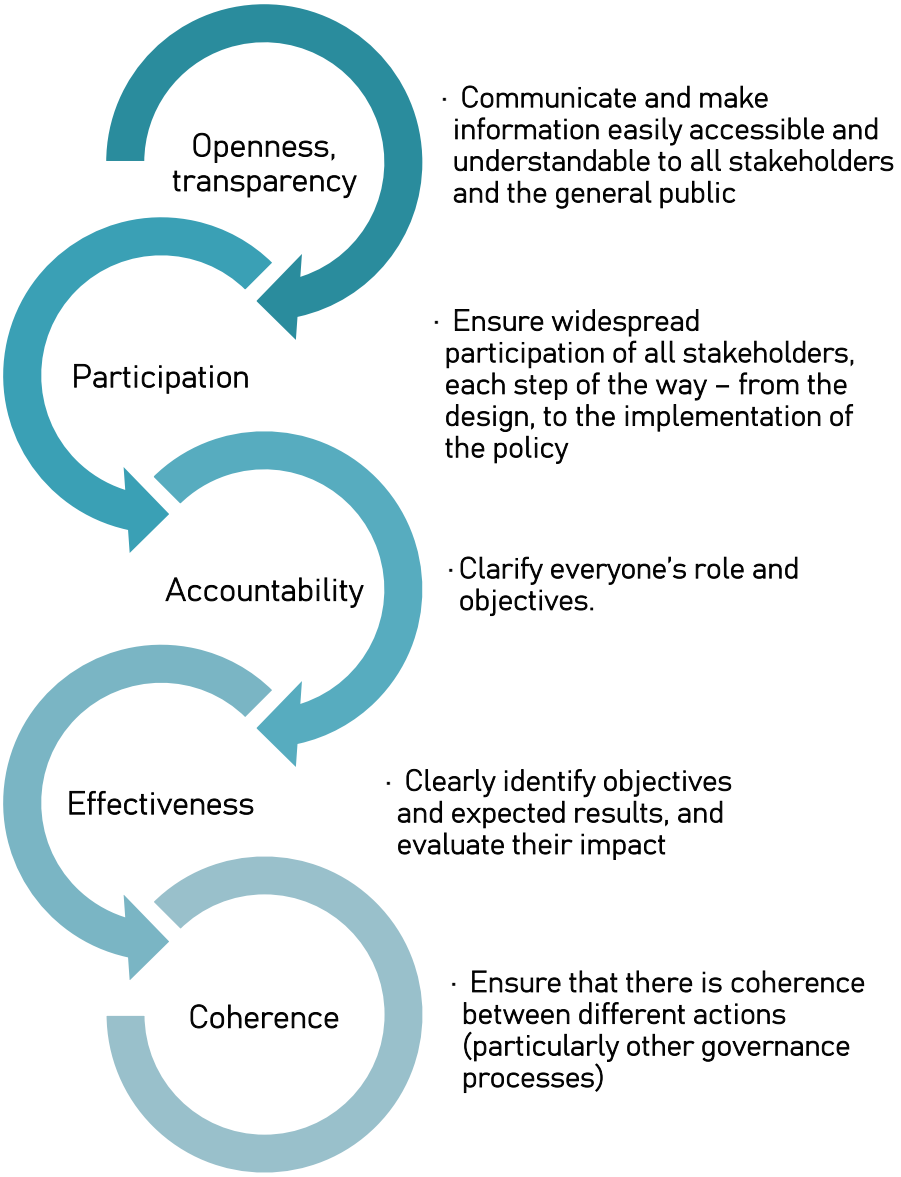

Figure 1 Principles of good governance, MLG

Relevance of MLG in Regional Planning

In regional planning, MLG provides a framework to manage the diverse, often competing interests of various stakeholders involved in spatial development, energy transition and environmental sustainability. It supports the alignment of regional and national strategies with local priorities and capacities, ensuring that policies are

relevant, effective and feasible.[7] This can be achieved by establishing pathways for collaboration, customising strategies to fit local conditions, strengthening local capabilities, promoting consistency, enabling adaptable implementation and enhancing accountability. By connecting high-level planning with local implementation, these approaches make policies both relevant and actionable.

For example, the integration of MLG in energy efficiency projects can enhance the effectiveness of energy-saving measures by ensuring that regional authorities, local authorities and private sectors collaborate on common objectives. Furthermore, implementing these measures at regional and local levels ensures their alignment with national strategies and actions, thereby contributing to national targets rather than conflicting with them. This collaborative approach is the key for projects like energy refurbishment of buildings, which require a coordinated effort across multiple levels of governance.[8]

Spatial and territorial planning is vital in this context as they establish the framework needed to synchronise energy efficiency objectives with land use, urban growth and infrastructure development. By embedding energy considerations into spatial planning, energy-saving initiatives become part of wider territorial strategies, enabling more efficient resource utilisation and a systematic reduction in energy consumption.[9] Coordinated planning can identify priority zones for deep renovation, facilitate the integration of smart energy technologies and align infrastructure upgrades with urban renewal efforts.

Moreover, the European Spatial Planning Observation Network (ESPON) highlights that embedding energy efficiency into territorial planning supports systemic solutions that are tailored to local and regional characteristics, ensuring that policies are not only environmentally effective but also socially and economically feasible.

MLG and EE1st

Energy efficiency is inherently cross-cutting, influencing and depending on multiple policy areas such as energy, climate, transport, housing and spatial planning. Therefore, effective governance requires strong coordination mechanisms between ministries, regulatory bodies and different levels of government – national, regional and local. Properly coordinated MLG system supports aligning national objectives with

[7] OECD, Multi-level governance: An introduction, https://www.oecd.org/en/topics/policy-issues/multi-level-governance.html
[8] OECD, Multi-level governance: An introduction, https://www.oecd.org/en/topics/policy-issues/multi-level-governance.html
[9] Territorial Agenda, a future for all places, https://territorialagenda.eu/wp-content/uploads/TA2030_jun2021_en.pdf

regional and local priorities, capacities and development strategies and prevent policy overlaps and inconsistencies by promoting coherence and efficient use of resources. Implementing EE1st within the framework of MLG helps align energy-saving initiatives with the broader goals of reducing carbon emissions and fostering sustainable development. An MLG approach enables effective coordination among stakeholders, ensuring that energy efficiency initiatives at local, regional and national levels work together towards common goals.

The Role of Supranational Governance

Supranational organisations, such as the EU, play a significant role in shaping MLG in regional planning. The EU's policies and directives set frameworks that influence national and regional planning, decision-making and governance.[10] By aligning local and regional efforts with EU-wide climate goals, the EU fosters a cooperative, MLG system that encourages the sharing of knowledge, resources and best practices across borders.

The following subchapters explore the preconditions for establishing a suitable MLG model for EE1st and provides a step-by-step guide for its implementation.

3.2 Preconditions for establishment of a suitable multilevel governance model for EE1st

The implementation of the EE1st principle within an MLG framework requires certain preconditions to ensure its effectiveness. These preconditions encompass legal, institutional, financial and technical factors that must be in place at local, regional and national levels to support coordinated, efficient energy-saving actions. Establishing these preconditions is critical to overcoming the complexities associated with energy efficiency transitions, especially given the variety of actors, priorities and resources involved.[11]

[10] Council of Europe, Report on Multilevel Governance: Final Report, https://rm.coe.int/report-on-multilevel-governance-final-2768-6653-0568-v-1/1680ad9120

[11] Interreg Europe, A Guide to Multi-level Governance for Local and Regional Public Authorities, https://www.local2030.org/library/210/A-Guide-to-Multi-level-Governance-For-Local-and-Regional-Public-Authorities.pdf

Legal and Regulatory Frameworks

A robust legal framework is one of the fundamental preconditions for the effective implementation of MLG in energy efficiency policies. This framework should align with national and EU-wide regulations while also being flexible enough to address local needs. An example regarding this could be the EU's Energy Performance of Buildings Directive (EPBD). The EPBD is a key legislative framework in the EU aimed at improving the energy efficiency of buildings, requiring member states to transpose its rules into national law. Countries adapt the directive to align with both EU standards and national priorities, while regional and local authorities can implement additional measures tailored to specific conditions, such as stricter insulation or incentives for renewable energy. This demonstrates how a strong legal framework can combine clear rules with flexibility for local adaptation, supporting effective MLG in energy efficiency.

At the EU level, legal directives such as the EED and the Clean Energy for All Europeans package provide a regulatory foundation that guides national and regional policy-making. At the national level, laws must empower local and regional governments to implement energy efficiency measures while respecting subsidiarity principles.[12]

Institutional Capacity and Coordination

For MLG to function effectively in the context of energy efficiency, there must be strong institutional capacity at all levels of governance. This includes well-established administrative structures, trained personnel and clear mandates, meaning well-defined decision-making procedures and/or structures set in place, that define the roles and responsibilities of various stakeholders. Regional and local authorities must have the institutional capacity to plan, manage and execute energy efficiency initiatives while coordinating with national and supranational bodies.[13]

Financial Mechanisms and Funding

Sufficient financial resources are essential to implementing energy efficiency measures at all levels of governance. The availability of funding, whether from national budgets, regional sources or the EU's financial instruments, is critical to supporting EE1st initiatives. National and regional authorities must have access to financial mechanisms such as grants, subsidies and low-interest loans that can incentivise

[12] Council of Europe, Report on Multilevel Governance: Final Report, https://rm.coe.int/report-on-multilevel-governance-final-2768-6653-0568-v-1/1680ad9120
[13] OECD, Multi-level governance: An introduction, https://www.oecd.org/en/topics/policy-issues/multi-level-governance.html

investment in energy efficiency.[14] The financial mechanisms mentioned can co-finance and expand energy efficiency investments across buildings, industry and SMEs. These instruments should be structured to complement market-based financing, allowing public funds to attract and leverage private capital. They need to be aligned with national building renovation strategies and EU structural funds to ensure consistency and facilitate smooth implementation. Additionally, they should offer project development and support to address barriers at the transaction level, and provide financing options with long-term horizons that align with the typical payback periods of many energy efficiency investments.[15]

Data and Knowledge Sharing Systems

Effective data management systems and knowledge sharing platforms are essential for a successful implementation of MLG in energy efficiency. Accurate, up-to-date data on energy consumption, building performance and environmental impacts allow for informed decision-making and the identification of priority areas for intervention. Regional and local authorities should have access to data that enables them to design tailored energy efficiency policies based on local needs and conditions.[16]

Stakeholder Engagement and Social Acceptance

Lastly, stakeholder engagement and social acceptance are crucial for the success of energy efficiency initiatives. MLG models should actively involve all relevant stakeholders, including local authorities, businesses, civil society and citizens, in the decision-making process. This ensures that policies are tailored to local contexts and have the support of those directly affected by them.[17]

3.3 Step by step guide

This step-by-step guide for implementing MLG in regional planning with an EE1st approach provides a clear pathway for policymakers, regional authorities and

[14] GIZ, Multi-level Governance in Western Balkans, https://www.giz.de/de/downloads/giz2024-en-multi-level-governance-western-balkans.pdf

[15] Launch and facilitate the implementation of new EEFIG Working Group "Applying the Energy Efficiency First principle in sustainable finance", https://op.europa.eu/en/publication-detail/-/publication/20330c99-7df5-11ee-99ba-01aa75ed71a1/language-en?WT.mc_id=Searchresult&WT.ria_c=37085&WT.ria_f=3608&WT.ria_ev=search&WT.URL=https%3A%2F%2Fenergy.ec.europa.eu%2F

[16] GIZ, Multi-level Governance in Western Balkans, https://www.giz.de/de/downloads/giz2024-en-multi-level-governance-western-balkans.pdf

[17] Interreg Europe, A Guide to Multi-level Governance for Local and Regional Public Authorities, https://www.local2030.org/library/210/A-Guide-to-Multi-level-Governance-For-Local-and-Regional-Public-Authorities.pdf

stakeholders. Each step ensures systematic progress from foundational stages to operational implementation while aligning with broader governance principles.

By following these steps (Figure 2), policymakers and stakeholders can ensure that governance structures are inclusive, effective and aligned with both regional/local needs and broader sustainability goals.

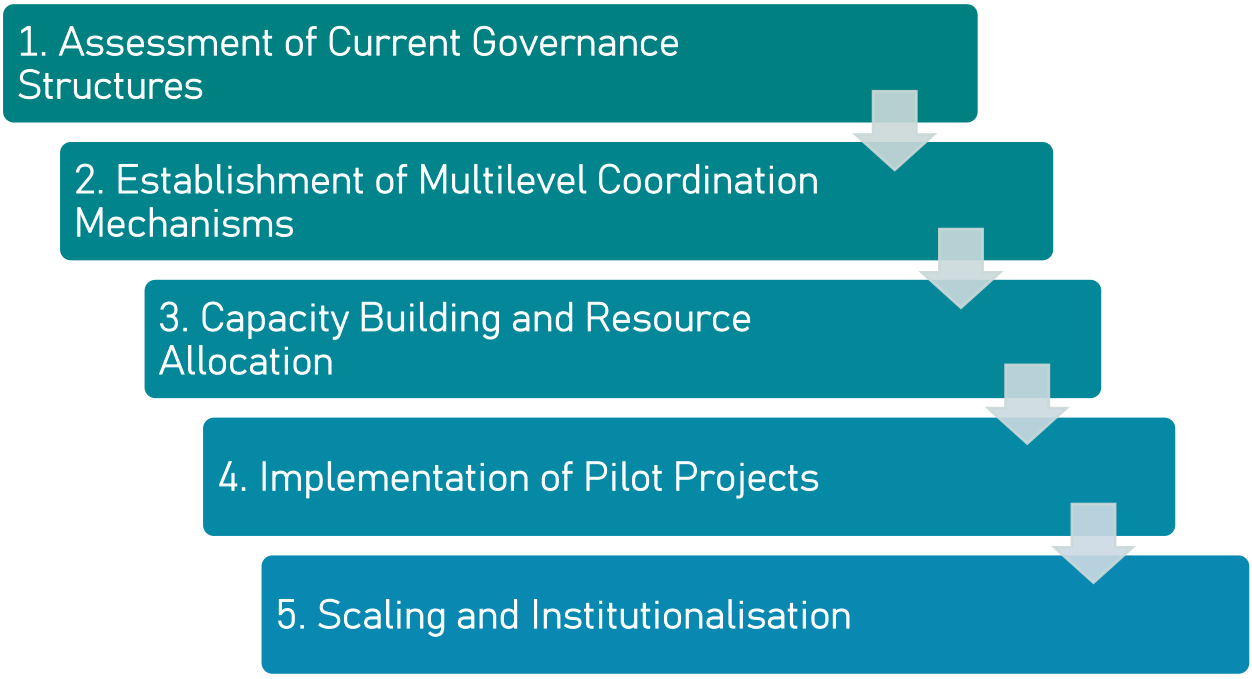

Figure 2 Steps to implementing MLG in regional planning

3.3.1 Step 1 – Assessment of Current Governance Structures

The first step in implementing MLG is to assess existing governance structures and identify the strengths, weaknesses and gaps in the current framework. This assessment should include:

- *Mapping Stakeholders:* Identify relevant actors at local, regional, national and supranational levels, including public authorities, private organisations and civil society.[18]

[18] Interreg Europe, A Guide to Multi-level Governance for Local and Regional Public Authorities. https://www.local2030.org/library/210/A-Guide-to-Multi-level-Governance-For-Local-and-Regional-Public-Authorities.pdf

- *Policy Alignment:* Analyse existing policies to ensure they align with EE1st principles and identify any conflicting regulations.[19]
- *Capacity Analysis:* Evaluate institutional and financial capacities to manage and implement EE1st initiatives effectively.[20]

A successful implementation of the EE1st principle requires a clear understanding of who is involved, how policies interact and whether the necessary resources are in place. By mapping stakeholders, aligning policies and assessing capacities, governance frameworks can be strengthened to support more effective and coordinated energy efficiency actions across all levels.

3.3.2 Step 2 – Establishment of Multilevel Coordination Mechanisms

Building effective coordination mechanisms among different governance levels is essential. This includes:

- *Coordination Platforms:* Create formalised platforms for dialogue and collaboration, such as intergovernmental working groups or advisory committees.[21]
- *Stakeholder Engagement Plans:* Develop strategies to involve local governments, private sector actors, and community organisations in the planning process.[22]
- *Legal Frameworks:* Adapt or introduce legal instruments to formalise cooperation between governance levels.[23]

Strengthening multilevel cooperation in energy planning relies on structured collaboration, inclusive engagement and supportive legal frameworks. Establishing coordination platforms, developing stakeholder engagement plans and adapting legal instruments are key steps to ensure consistent, transparent and effective joint action across all levels of governance.

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[19] Council of Europe, Report on Multilevel Governance: Final Report. https://rm.coe.int/report-on-multilevel-governance-final-2768-6653-0568-v-1/1680ad9120
[20] OECD, Multi-level governance: An introduction. https://www.oecd.org/en/topics/policy-issues/multi-level-governance.html
[21] GIZ, Multi-level Governance in Western Balkans. https://www.giz.de/de/downloads/giz2024-en-multi-level-governance-western-balkans.pdf
[22] Interreg Europe, A Guide to Multi-level Governance for Local and Regional Public Authorities. https://www.local2030.org/library/210/A-Guide-to-Multi-level-Governance-For-Local-and-Regional-Public-Authorities.pdf
[23] Council of Europe, Report on Multilevel Governance: Final Report. https://rm.coe.int/report-on-multilevel-governance-final-2768-6653-0568-v-1/1680ad9120

3.3.3 Step 3 – Capacity Building and Resource Allocation

Effective implementation requires building institutional capacity and ensuring the availability of financial and technical resources. Actions include:

- *Training Programs:* Provide training for policymakers and practitioners on EE1st principles and MLG processes.[24]
- *Resource Mobilisation:* Identify funding sources, such as EU grants, national subsidies or private investments, to support energy efficiency initiatives.[25]
- *Data Systems:* Establish shared data platforms for energy usage, emissions and policy impacts to ensure informed decision-making.[26]

Building capacity for effective EE1st implementation requires providing stakeholders with knowledge, resources and information. Training programs, resource mobilisation and robust data systems are essential tools to support informed decisions and coordinated action across governance levels.

3.3.4 Step 4 – Implementation of Pilot Projects

Pilot projects serve as testing grounds for the proposed MLG model and EE1st initiatives. These should:

- *Demonstrate Feasibility:* Showcase how MLG structures and EE1st measures can work in real-world scenarios.[27]
- *Encourage Innovation:* Promote innovative energy efficiency solutions tailored to regional contexts.[28]
- *Monitor and Evaluate:* Collect data to evaluate the success and scalability of pilot projects.[29]

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[24] OECD, Multi-level governance: An introduction. https://www.oecd.org/en/topics/policy-issues/multi-level-governance.html
[25] GIZ, Multi-level Governance in Western Balkans. https://www.giz.de/de/downloads/giz2024-en-multi-level-governance-western-balkans.pdf
[26] Council of Europe, Report on Multilevel Governance: Final Report. https://rm.coe.int/report-on-multilevel-governance-final-2768-6653-0568-v-1/1680ad9120
[27] Interreg Europe, A Guide to Multi-level Governance for Local and Regional Public Authorities. https://www.local2030.org/library/210/A-Guide-to-Multi-level-Governance-For-Local-and-Regional-Public-Authorities.pdf
[28] GIZ, Multi-level Governance in Western Balkans, https://www.giz.de/de/downloads/giz2024-en-multi-level-governance-western-balkans.pdf
[29] OECD, Multi-level governance: An introduction. https://www.oecd.org/en/topics/policy-issues/multi-level-governance.html

Demonstrating the practicality of EE1st and MLG is key to building momentum. By piloting real-world solutions, encouraging innovation and evaluating outcomes, regions can identify what works, scale successful approaches and drive continuous improvement in energy efficiency planning.

3.3.5 Step 5 – Scaling and Institutionalisation

Based on the results of pilot projects, the next step is to scale successful practices and institutionalise them. Actions include:

- *Policy Integration:* Incorporate successful practices into regional and national energy policies.[30]
- *Formal Agreements:* Establish binding agreements between governance levels to ensure the sustainability of initiatives.[31]
- *Continuous Monitoring:* Develop mechanisms for ongoing monitoring and evaluation to adapt policies as needed.[32]

To ensure long-term impact, successful practices should be embedded into policy frameworks and backed by formal agreements. Ongoing monitoring and evaluation help keep initiatives on track and allow for continuous improvement across all levels of governance.

[30] Council of Europe, Report on Multilevel Governance: Final Report. https://rm.coe.int/report-on-multilevel-governance-final-2768-6653-0568-v-1/1680ad9120
[31] GIZ, Multi-level Governance in Western Balkans, https://www.giz.de/de/downloads/giz2024-en-multi-level-governance-western-balkans.pdf
[32] OECD, Multi-level governance: An introduction, https://www.oecd.org/en/topics/policy-issues/multi-level-governance.html

4 Barriers

Even though MLG aims to enhance coordination and inclusivity in policymaking and energy planning, it can face several barriers that can undermine its effectiveness.

The analysis of current practices reveals a range of barriers that hinder effective MLG in the implementation of regional energy planning and the operationalisation of the EE1st principle. These challenges occur both horizontally (across sectors and departments) and vertically (across governance levels), and are summarised below.

Structural and institutional fragmentation

A significant barrier is the persistence of governance silos, which limit collaboration and shared responsibility among departments. Coordination between energy, planning, environment, finance and other relevant departments remains limited, obstructing the integration of EE1st tools into planning processes. Existing administrative structures and decision-making protocols often lack the flexibility to accommodate cross-sectoral approaches or innovative planning methodologies.

The division of responsibilities between regional and municipal authorities contributes to fragmentation. While some municipalities express interest in contributing to energy planning, they often lack a formal mandate or legal responsibility for regional energy strategies. In the context of regional energy planning, experience from the Regio1st partners shows that regional authorities are generally mandated to develop regional energy plans, whereas municipalities are not, although in some countries they are required to prepare local energy plans. These differences largely depend on each country's governance system.

Technical and operational barriers

The lack of harmonised baselines and inconsistent data across departments undermine the effective application of decision-support tools such as Social Cost-Benefit Analysis (SCBA) and Multi-Criteria Decision Analysis (MCDA). These limitations affect the credibility and comparability of planning outcomes.

Energy efficiency measures and the EE1st principle are frequently misaligned with existing infrastructure investments and regional development programmes. Integration into established local planning workflows remains limited, making it difficult to operationalise strategic goals in practice.

Capacity and communication gaps

Within institutions, there is often a lack of clarity regarding roles and responsibilities related to energy planning. Broader internal teams are not always aware of strategic

objectives, and key departments, such as those working on urban planning or decarbonisation zones are not systematically involved in relevant decision-making processes.

Local/regional energy agencies often serve as essential intermediaries, facilitating coordination across governance levels when it comes to EE1st and energy planning. However, their role sometimes compensates for weakness in structural coordination rather than complementing a coherent governance framework.

Potential barriers

Potential barriers are anticipated risks, i.e. challenges that might emerge if certain conditions are not met or if policies are poorly implemented. Based on the findings of Regio1st activities, potential barriers were defined as following:

Exclusion of municipalities from future planning processes

If formal cooperation mechanisms between governance levels are not systematically established, municipalities risk remaining side-lined from regional and national energy planning processes. Despite their proximity to citizens and deep understanding of local needs, many municipalities lack a clear legal mandate or structured role in shaping broader energy strategies. This exclusion limits their ability to align local priorities with national objectives, diminishes their ownership of energy transitions and reduces the effectiveness of regional planning. Without meaningful involvement, local authorities may become passive implementers rather than active co-creators of energy solutions, undermining the principles of subsidiarity and integrated governance.

Failure to operationalise the EE1st principle

The EE1st principle, although widely endorsed at EU and national levels, risks remaining a commitment in theory unless it is meaningfully embedded in spatial planning, infrastructure investment frameworks and daily decision-making processes. Without clear mechanisms to integrate EE1st into regional and local workflows (including planning procedures, budgeting decisions and project appraisal tools), the principle will lack practical impact. This disconnect could result in energy efficiency opportunities being overlooked, particularly in sectors like buildings, transport and industry, where initial planning choices frequently determine long-term energy consumption

Low uptake of decision-support tools

Decision-support tools such as SCBA and MCDA have the potential to bring transparency to energy planning decisions. However, without targeted methodological training and technical support, these tools may remain rarely or unevenly used. Local and regional planners may lack knowledge in using them, particularly when they

involve complex data inputs or unfamiliar evaluation criteria. This leads to a gap between the availability of robust tools and their actual deployment in policy and planning contexts, making energy efficiency assessments less accurate and harder to compare.

Missed opportunities for cross-sectoral integration

Energy efficiency measures often intersect with other policy domains, such as housing, mobility and economic development. However, in the absence of mechanisms for horizontal coordination across departments and sectors, these links may be overlooked. This siloed approach to planning can result in fragmented or contradictory policies – for example, expanding road infrastructure without considering its energy implications or approving housing developments that lack energy performance requirements. If different areas aren't planned together, it could lead benefits like lowering energy bills, improving air quality or making public transport better overlooked. In the end, this weakens the overall success of energy-saving efforts.

Undermining of EU and national policy goals

Poor multilevel coordination could hinder Member States' ability to meet Green Deal, REPowerEU and Fit for 55 targets. When regional and local plans are not aligned with national and EU strategies, implementation becomes inconsistent and fragmented. When things aren't well coordinated, it can slow down important actions, waste money and make people less confident in the shift to cleaner energy.

Depending on project-based support instead of structural solutions

Project-based models often focus on isolated interventions with fixed timeframes and limited geographic scope. Relying solely on EU programmes and (temporary) EU-funded projects without building permanent governance structures may undermine long-term capacity.

5 Best practice examples

In the following subchapters, Regio1st regional partners provided concrete, successful cases about MLG, EE1st and regional energy planning from their respective regions. These examples can provide guidance for other regions, illustrating practical approaches to common barriers.

5.1 Carlow, Kilkenny, Wexford, Waterford, Ireland

Tailored EE1st Implementation Strategies for Local Authorities in South-East Ireland

This method was developed to facilitate the practical application of the EE1st principle in South-East Ireland, ensuring alignment with local climate action plans and strategies while leveraging the Regio1st framework. The goal was to address the specific needs of Local Authorities and enhance their capacity to integrate EE1st effectively in regional planning.

Step-by-Step Methodology

1 - Assessment of Local Contexts and Needs:

Each Local Authority's climate action plan and relevant local strategies were thoroughly reviewed to identify specific goals, challenges, and operational frameworks.

Key stakeholders were engaged early in the process to gather insights and ensure their needs were accurately captured.

2 - Mapping Local Needs to Regio1st Framework:

Using the Regio1st framework, a tailored mapping process was implemented to connect each Local Authority's objectives with the resources, tools, and methodologies offered by Regio1st.

This mapping process was visualised for stakeholders, making the framework's applicability clearer and more accessible.

3 - Development of Customised EE1st Strategies:

For each Local Authority, a bespoke strategy was created that linked EE1st principles to their specific climate action goals. Tailored workshops and training sessions were conducted to familiarise stakeholders with the Regio1st tools and methodologies.

Feedback loops were established to refine strategies based on stakeholder input and emerging challenges. The process encouraged collaboration between departments

(e.g., energy, environment, and planning) within Local Authorities, as well as between different Local Authority in the region.

Best practices from neighbouring regions and national-level initiatives were integrated to ensure a cohesive and informed approach. By tailoring the strategies to local contexts while anchoring them in the Regio1st framework, the process maximised efficiency, reduced implementation barriers, and offered a replicable model for other regions.

Key Outcomes

- Enhanced understanding and adoption of the EE1st principle among Local Authorities in South-East Ireland.
- Streamlined decision-making processes by directly linking local needs and actions to the Regio1st framework.
- Improved stakeholder engagement and cross-sectoral collaboration, fostering an MLG approach.
- Successful pilot implementation provided a replicable template for other regions

Lessons Learned

- Tailored strategies that reflect local needs and challenges are essential for the successful implementation of the EE1st principle, particularly in contexts where there are existing challenges, such as limited time and resources.
- Early and continuous stakeholder engagement enhances buy-in and ensures the strategies remain practical and actionable.
- Mapping and communication tools complement operational tools like the Regio1st framework by simplifying complex toolsets. This simplification helps overcome potential barriers and hesitancies, making stakeholders more willing to use and apply the framework effectively.

This approach demonstrates how tailoring the implementation of the EE1st principle to local contexts can drive efficiency, improve stakeholder understanding, and foster MLG.

5.2 Asturias, Spain

Asturias' Position Paper on the Energy Transition

The "Energy Just Transition Strategy of Asturias" is the result of an extensive collaboration process among key regional stakeholders to define a fair energy transition strategy. This initiative addresses the need to transform Asturias' energy

model, aligning it with European and national decarbonisation commitments while ensuring economic competitiveness and social justice in the region.

The drafting of this document was coordinated by the Regional Fair Energy Transition Committee, a multisectoral body established following the recommendations of the Joint Commission to assess the impact of the transition in Asturias. Participants included:

- Government of the Principality of Asturias
- Trade unions (UGT, CCOO, SOMA-FITAG-UGT)
- Energy companies (EDP, Enagas, ArcelorMittal, Glencore)
- Business associations (FADE, Enerclub)
- Research centres and universities (University of Oviedo, INCAR-CSIC, FAEN)
- Technical support from the Secretariat of the Initiative for Coal Regions in Transition (START) and consultancy firm Ecorys.

Through a public consultation process, contributions from different sectors were incorporated, ensuring a comprehensive and balanced perspective.

The document establishes a framework for a fair energy transition in Asturias, structured around the following pillars:

1. Vision and Objectives: A decarbonised, decentralised, digitised, and sustainable energy model by 2050, with intermediate targets for 2030
2. Transformation of the Energy Model: Promotion of renewable energies (wind, biomass, renewable hydrogen), energy storage and energy efficiency
3. Competitiveness and Industrial Development: Strengthening local industries to manufacture emerging energy technologies
4. Governance and Participation: A management model based on cooperation between public and private sectors, ensuring transparency and progress monitoring
5. Socioeconomic Impact: Support mechanisms for communities affected by the closure of coal-based industries and promotion of green and skilled employment

The "Energy Just Transition Strategy of Asturias" is a key reference in cooperation among administrations, industry, trade unions and research centres. Its inclusive approach and alignment with European strategies ensure a fair transition with concrete measures for environmental and economic sustainability.

This initiative stands out as a good practice due to:

- Its broad participation and consensus among key sectors

- Its **alignment with European decarbonisation and fair transition goals**
- The creation of a **replicable model** for other regions with similar characteristics

The document not only lays the foundation for Asturias' energy future but also serves as an example of regional collaboration and commitment in the fight against climate change.

Just Transition Observatory[33]

The Just Transition Observatory of Asturias (OTJA) is a public initiative led by the Government of the Principality of Asturias in collaboration with various regional entities. Its main goal is to serve as a platform for citizen participation and to promote awareness of the ongoing Just Transition process in Asturias.

These strategies considered and monitored at the OTJA are the Just Energy Transition Strategy of Asturias, Climate Action Strategy of the Principality of Asturias and the Just Transition Strategy.

The OTJA has multiple objectives, with a key focus on acting as a tool for dissemination, monitoring and oversight of the main strategies being implemented in Asturias to navigate the Just Transition process.

The main goals are:

- Address the Energy transition from a socially just and sustainable perspective in the Asturias Region
- A tool for citizen participation and dissemination of the Just Transition process
- Monitoring and control of the evolution of the main strategies
- Evaluate the degree of execution and fulfilment of the measures of the regional Strategies

Through the OTJA, it will be possible to assess the implementation and effectiveness of the measures outlined in each regional strategy, aiming to incorporate the participation of citizens, stakeholders and social organisations.

The observatory is made up of various entities that play different roles.

[33] Asturias Observatory for Just Transition, https://news.industriall-europe.eu/documents/upload/2024/3/638463743212879612_Asturian_Observatory_for_a_Just_Transition_in_the_region._An_example_of_Trade_Union_involvement_and_data_collection.pdf

5.3 Liguria, Italy

Liguria Regional Strategy for Sustainable Development

The Regional Strategy for Sustainable Development (SRSvS) of Liguria Region was approved in 2021. It defines the contribution of Liguria to the goals set at national level by the Italian Strategy for Sustainable Development (SNSvS) and to the broader 2030 Agenda SDGs objectives.

The Liguria SRSvS outlines the priority actions to be implemented at regional level and was built through the broad involvement of different actors at all levels of governance (national, regional, local).

First, an Interdepartmental Working Group internal to Liguria Region was established at project start, involving all regional Departments and relevant offices and coordinated by the Sustainable Development Office. Main task of the Working Group was to develop the strategy's content by: 1) mapping the relevant competences and activities within the Region that could positively contribute to reaching the strategy's objectives, 2) involve local institutions and stakeholders through a broad participatory activity, 3) define the strategy's objectives, tools and actions at regional level, in accordance with the 2030 Agenda and the national strategy's objectives, and 4) monitor the regional strategy's objectives, also contributing to monitoring of the national ones.

To support a broad engagement of all relevant stakeholders, Liguria Region enlisted the 13 territorial Centres for Environmental and Sustainable Education and Training (CEAS), entrusting them with the task of implementing a participatory activity at local level to promote the development and implementation of the Strategy. These Centres organised working tables and other initiatives in their respective territories engaging several local institutions as well as stakeholders from civil society, and the results from the tables directly informed the content of the strategy as well as its subsequent implementation.

Liguria Region also involved the Italian Alliance for Sustainable Development (ASviS) in the process, a national association bringing together over 270 stakeholders at national level around the topic of sustainable development (associations, PAs, academia, foundations, etc.). The Alliance was enlisted to promote the principles of Agenda 2030 and contribute to the definition of the regional strategy.

Liguria Region's multiple Working Tables on the topics of Energy

Liguria Regional Government's Economic Development Department has established - and regularly works with – several multilevel Working Tables around various Energy topics, coordinated by the Department's Energy Office. These tables are set-up with

the aim to share information and best practices on energy topics that are innovative or regarded as strategic by the Region. Currently, the following five official Working Groups up and running:

- Working Group on Renewable Energy Communities
- Working Group on Renewable Energy Communities in Ports
- Working Group on Liquefied Natural Gas (LNG)
- Working Group on Hydrogen
- Working Group on Geothermal Energy

Participants to the working tables include all the main territorial stakeholders: the Region and its relevant technical agencies, the three Liguria Provinces and one Metropolitan city, the medium and large-sized cities with their Energy Manager, representatives from the relevant professions (architects, engineers, geologists), University and research institutions, and any other territorial stakeholder that might be relevant to the individual tables, such as Port Authorities or private companies with ongoing projects in the topics of interest. These tables meet at least twice a year (often more frequently) and typically include a presentation/update by the Region followed by an open discussion in which all participants can freely intervene and share information, projects, ideas. This kind of permanent consultation with different levels of governance is typical of the Region's way of doing things, in particular of the Region's Economic Development Department and its Energy Office.

5.4 Ormož & Slovenska Bistrica, Slovenia

One stop shop for RES[34]

The European Parliament and the Council adopted the Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources. This directive regulates the one-stop-shop system and mandates that Member States establish one or more contact points to assist and guide applicants throughout the administrative process. In 2022, this law was incorporated into the Slovenian Act on the Promotion of the Use of Renewable Energy Sources.

At national level, the national electricity market operator BORZEN is responsible for establishing these contact points and collaborates with local energy organisations to ensure that the contact points are accessible to end users.+

[34] RES Info Point, https://borzen.si/sl-si/tocka-ove

Applicants, both from the private and public sectors, can visit these contact points for assistance with procedures related to obtaining permits and other necessary approvals for the construction, reconstruction, renovation, or use of renewable energy sources. All services are provided free of charge.

The purpose of the contact point is to provide information and guidance to investors in relation to renewable sources and thus accelerate investments in the field of renewable energy sources. The contact point guides the investor based on an application by which the investor expresses interest in cooperating with the contact point. The applicant can submit the application on the web portal by clicking on the button below.

The contact point guides the investor (public or private) in the procedures for obtaining permits and other acts required for the construction, reconstruction, renovation or operation of a production facility and their connection to the grid, as well as in the procedures for support programs for:

- production of electricity from renewable energy sources;
- production of heat for heating and cooling from renewable energy sources;
- production of gaseous fuels, including hydrogen, from renewable energy sources;
- production of liquid and gaseous biofuels for propulsion;
- production of other liquid biofuels;
- high-efficiency cogeneration;
- use of excess heat in district heating systems;

To provide valuable assistance, a comprehensive and transparent manual[35] has been prepared, offering detailed information on the following topics:

1. types of production sources and technologies;
2. procedures for placement, construction, connection to the network and operation;
3. connection of production devices;
4. legal organisational statuses and tax and financial aspects;
5. smaller, self-sufficient and larger devices:
6. renovations and reconstructions;
7. financing, energy sales and support.

[35] Manual for setting up small power plants, https://borzen.si/Portals/0/To%C4%8Dka%20OVE/Prirocnik-za-postavitev-manjsih-elektrarn-na-OVE-in-SPTE_web_7.9.pdf

Energy renovation of buildings[36]

The EU has established targets for reducing energy consumption in buildings. In response, Slovenia has enacted national legislation and measures, such as the Energy Efficiency Act (EZ-1), which sets guidelines for energy renovation in buildings. Local authorities and municipalities are crucial in implementing these measures, actively managing energy renovation projects in public buildings and encouraging private property owners to undertake similar renovations.

Energy agencies play an important role in the process by providing support for applications to national and European tenders for building renovation projects.

The Ministry of the Environment, Climate, and Energy has established a **project office focused on the energy renovation of buildings**. The office's primary responsibility is to support entities involved in renovating public buildings, as well as to disseminate knowledge and best practices.

The public sector plays a key role in energy renovation, with municipalities required to renovate buildings they own every year.

Project Office for Building Energy Renovation (PP-EPS)[37]

The area of energy renovation of existing buildings is implemented under the priority direction *Energy Renovation and Sustainable Building Construction* within the development priority *Sustainable Energy Use*. Due to the critical importance and breadth of this area, the Ministry of Infrastructure (MZI) established a Project Office for Building Energy Renovation in October 2015.

The tasks of the project office include:

- Preparing an appropriate support environment and necessary documentation based on applicable legal acts;
- Providing assistance and expert support to intermediary and implementing bodies, public sector entities, energy service providers, applicants, public-private partnership providers and users involved in the implementation of operations during both the preparation and execution phases;
- Establishing necessary records (such as a register of public buildings to be renovated) and continuously updating changes;
- Monitoring and controlling operations;

[36] Ministry of the Environment, Climate, and Energy, energy renovation of buildings, https://www.gov.si/teme/energetska-prenova-stavb/

[37] Ministry of environment, climate and energy, Project Office for Building Energy Renovation, https://www.energetika-portal.si/podrocja/energetika/energetska-prenova-javnih-stavb/projektna-pisarna/

- Facilitating the transfer of knowledge and best practices.

The Project Office has issued written guidelines for the operations of intermediary and executive bodies. These guidelines include instructions and recommendations for operation preparation, the creation of necessary documentation and guidance for performing all required operational tasks. The guidelines are accompanied by the following documents:

- Detailed instructions for public partners;
- Technical guidelines;
- A manual for eligible costs;
- Guidelines for implementing energy renovations of cultural heritage buildings.

All the aforementioned documents are designed to provide all necessary information to entities participating in the energy renovation of public buildings.

5.5 Medjimurje, Croatia

Public calls for co-financing the use of renewable energy sources in family homes in Medjimurje county

Improving the energy efficiency of family homes and installing systems that use renewable energy sources not only reduces household energy costs but also enables greater energy independence, ensuring supply and reducing long-term dependence on unpredictable market fluctuations in energy prices and availability.

The public call has led to greater use of renewables in the area, all in line with the goals of Croatia's NECP 2021–2030, the Long-Term Strategy for the Renovation of the National Building Stock until 2050, the Development Program for Circular Management of Space and Buildings for the period 2021–2030, the National Energy Efficiency Action Plan for 2022–2024, the Development Strategy of the Republic of Croatia until 2030 with a vision toward 2050 and the Baseline Scenario for the Energy Sector.

Through such public calls for co-financing the use of renewable energy sources in family homes in Medjimurje county, citizens are given the opportunity to reduce energy costs and improve living comfort by installing systems that use renewable energy sources, which directly enhances their quality of life. Additionally, the opportunity to apply for these calls raises awareness about energy efficiency, educates citizens about their options and encourages broader behavioural change, making the community more conscious, sustainable and better prepared for future challenges.

By introducing such initiatives, regional authorities accelerate the reduction of CO_2 emissions in their area and contribute to achieving EU's and national climate neutrality goals. Moreover, regional public calls for co-financing the use of renewables in family

homes complement the national public call for energy renovation of family homes, implemented by Croatian Environmental Protection and Energy Efficiency Fund, the Ministry of Physical Planning, Construction and State Assets and the Ministry of Economy. Due to limited financial resources, the national call cannot accommodate all applications from interested citizens.

This example represents a strong model of MLG, where regional authorities complement national programs, fill funding gaps and actively engage citizens in the energy transition. By combining policy alignment, citizen empowerment and targeted investment, the initiative supports a more resilient, sustainable and inclusive energy system.

5.6 Western Macedonia, Greece

The following best practices from Greece highlight initiatives that exemplify effective MLG in energy efficiency. Each project illustrates how collaboration between national, regional and local stakeholders has been essential to achieving tangible results in energy transition and efficiency. These cases demonstrate the benefits of coordinated governance structures, community involvement and tailored regulatory frameworks, providing replicable models for EE1st implementation.

Energy Savings in Households II (Greece)

The *Energy Savings in Households II* program is a national initiative administered in collaboration with regional authorities to ensure broad coverage and accessibility across Greece. Regional entities play a vital role in disseminating information, guiding citizens through application processes, and monitoring program uptake, especially in high-demand areas like Western Macedonia.

Overview & Impact

Through a system of tiered financial incentives tailored to income levels and energy needs, the program aligns closely with national climate objectives while bolstering regional dedication to sustainability. This partnership between the national government and local municipalities ensures targeted support for energy efficiency upgrades, particularly benefiting low-income households and creating meaningful social and environmental impacts consistent with EE1st principles.

ELENA Project – Central Macedonia Region[38]

The ELENA project is a prime example of collaborative governance, bringing together regional authorities in Central Macedonia, national energy policy frameworks and EU funding to achieve large-scale energy efficiency goals. The project's structured cooperation across these governance levels demonstrates the importance of multilevel planning in complex initiatives like public sector retrofitting.

Initiative & Impact

- *Street Lighting & Public Buildings*

The involvement of local municipalities in managing energy audits, feasibility studies and financial analyses reflects an MLG approach where national and regional stakeholders work closely to optimise outcomes. By incorporating feedback from local authorities, the ELENA project ensured that each region's unique needs were addressed, making this a scalable model for other large-scale infrastructure programs.

[38] European Investment Bank, ELENA Project Factsheet, https://www.eib.org/files/elena/155-project-factsheet-innofin-energy-4-central-macedonia.pdf

6 Recommendations on fostering of Multilevel Governance on EU level

To promote the effective implementation of MLG frameworks across the EU, it is essential to provide recommendations that address the unique challenges and opportunities at the EU level. These recommendations build on the principles of the EE1st approach and aim to foster collaboration, integration and accountability among stakeholders. Following recommendations were built on observed regional barriers and propose systemic actions.

Governance, Coordination and Institutional Roles	
Identified barriers	*Governance silos* *Unclear mandates* *Weak interdepartmental collaboration*

Recommended solutions:

- Create formal, recurring platforms for collaboration across departments and governance levels, such as interdepartmental work groups, coordination boards or regional planning councils.
- Include representatives from energy, environment, planning, transport, finance and other relevant sectors in regional planning processes to ensure integrated decision-making.
- Clarify and formalise the role of municipalities within regional and national energy planning frameworks, and enable them to act beyond their administrative boundaries in areas requiring regional cooperation (e.g. district heating, regional transport).
- Develop EU-wide governance frameworks defining minimum expectations for vertical coordination between national, regional and local authorities in energy and climate planning.
- Strengthen the institutional role of local and regional energy agencies as intermediaries that bridge coordination gaps, providing technical support, data management and capacity-building.
- Encourage Member States to integrate these agencies into national climate and energy governance structures, supported by EU funding mechanisms.

Technical Integration and Data Management	
Identified barriers	*Misalignment of the EE1st principle with infrastructure planning* *Weak integration into existing workflows* *Fragmented data collection and management*

Recommended solutions:

- Standardise methodologies, indicators and assumptions used in data collection to enable accurate cross-comparison across governance levels.
- Provide local and regional decision-makers with user-friendly data templates to support consistent reporting and integration into larger models and assessments.
- Align regional development and cohesion funding criteria with EE1st objectives to ensure that long-term energy performance becomes a condition for public support.
- Require that EE1st is embedded in regional development strategies, spatial planning, infrastructure investment and funding frameworks, including ERDF and other Cohesion Policy instruments.
- Promote harmonised methodologies for energy planning across Member States, including common indicators, baselines and assessment procedures such as SCBA and MCDA.
- Fund and coordinate the development of shared digital platforms for data exchange between governance levels to support integrated planning and monitoring.
- Provide local and regional planners with practical tools to incorporate EE1st into their workflows, such as the Regio1st planning framework[39].

[39] Regio1st planning framework, https://regio1st-planning-framework.fedarene.org/

Capacity-Building and Knowledge Exchange	
Identified barriers	*Lack of technical expertise* *Insufficient understanding of EE1st* *Weak internal communication and accountability within institutions*

Recommended solutions:

- Offer structured training programmes for public officials at all levels, focusing on the EE1st principle, integrated energy planning and cross-departmental coordination.
- Conduct internal reviews to identify responsibilities for energy planning within institutions and map formal and informal decision-making roles to clarify accountability.
- Encourage continuous learning through webinars, online platforms and peer-to-peer knowledge exchange.
- Expand support for capacity-building programmes (e.g. through the Covenant of Mayors, LIFE) to ensure that local and regional authorities can meaningfully contribute to MLG.
- Establish EU-wide knowledge hubs or observatories to collect and disseminate best practices, tools and case studies on EE1st and MLG integration.

Dialogue and Cooperation Platforms	
Identified barriers	*Limited mechanisms for structured cooperation* *Inconsistent implementation of multilevel climate and energy dialogues across Member States*

Recommended solutions:

- Create or strengthen formal multilevel dialogue platforms at EU level, such as structured exchanges between the European Commission, Member States,

regions and cities, to enhance coherence in planning and implementation.

- Encourage Member States to replicate these platforms at national and regional levels to ensure consistent feedback loops and shared ownership of energy transition goals.
- Promote inclusive and continuous engagement of local and regional authorities, ensuring their meaningful participation in energy and climate planning processes.
- Ensure that such mechanisms align with EU requirements under the Governance Regulation and help operationalise the EE1st principle in practice.

Implementation Support and Access to Resources	
Identified barriers	*Complex administrative procedures* *Fragmented access to funding and technical assistance for energy efficiency measures*

Recommended solutions:

- Create centralised local or regional service centres – one-stop-shops (OSS) –that provide integrated guidance on financing, technical assistance, regulatory compliance and project implementation.
- Ensure these OSS coordinate closely with national and regional authorities to maintain alignment with broader energy and climate strategies, while adapting services to local needs and capacities.
- Develop standardised protocols and tools for OSS across the EU to ensure consistency, transparency and quality of support, while allowing flexibility to address specific regional contexts.
- Monitor and evaluate the effectiveness of OSS in improving access to funding, accelerating project deployment and reinforcing MLG principles.

7 Conclusion

The integration of the EE1st principle into regional energy planning highlights the importance of MLG. The successful application of EE1st depends on strong collaboration across governance levels, involving EU institutions, national governments, regional administrations, municipalities and local stakeholders. Such cooperation is essential for addressing the complex and interconnected challenges that arise in the context of the energy transition, particularly where policies must balance environmental, social and economic considerations. MLG provides a framework for ensuring that different levels of decision-making reinforce one another, rather than working in isolation, which strengthens both policy coherence and the effectiveness of regional energy planning.

By integrating diverse actors into the planning and implementation process, MLG makes policies more responsive to local needs while ensuring that they remain consistent with broader national and EU objectives. It creates the conditions for cross-sectoral coordination, which is vital for embedding EE1st into infrastructure development and investment strategies. This inclusiveness also supports greater ownership of energy and climate measures, as local communities and stakeholders can actively contribute to shaping the policies that affect them.

The establishment of an effective MLG model for EE1st requires a solid foundation built on legal, institutional, financial and technical elements. Clear regulatory frameworks are needed to provide stability and direction, while institutional arrangements should enable cooperation and dialogue between governance levels. Adequate financial resources, including access to EU funds and innovative financing mechanisms, are crucial for supporting regional and local action. In parallel, technical capacity building — through knowledge-sharing platforms, training programs and data availability — ensures that all actors are equipped to contribute effectively. When these preconditions are aligned, regions are far better positioned to foster coordinated, efficient and sustainable energy efficiency measures.

This document offers a practical, step-by-step guide to establishing a suitable MLG model for EE1st. It is designed to be adaptable, allowing each region to adjust its application in line with its own priorities, institutional structures and resources. By providing both a structured framework and the flexibility for local adaptation, these Guidelines aim to support regions in building governance systems that can accelerate the transition to a low-carbon and climate-resilient energy future.

Website: https://fedarene.org/project/regio1st/

Social Media: #Regio1st

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