Recommendations for a Sustainable Energy Future: Efficiency, Innovation & Community Engagement

AISVJ

Nine European research institutes and energy agencies share evidence on how to make the transition just for all citizens.

JUSTEM

SUMMARY OF RECOMMENDATIONS

Energy renovation of residential buildings

Promote large-scalerefurbishment of multifamily residential buildings through grants andlow-interest loans, improving insulation, replacing windows, andupgrading heating and cooling systems.

Replacement of inefficient equipment and systems

Provide subsidiesand incentives for households to replace outdated heating systems.

Smart energy infrastructure for vulnerable households

Deploy smartmeters and energy management systems to empower consumers tomonitor and optimize their energy consumption.

Community solar energy projects

Support the development ofrenewable energy communities, ensuring that vulnerable householdsbenefit from locally generated solar energy. This will reduce energy bills,promote self-consumption, and encourage energy sharing withincommunities.

Developing climate awareness narratives

To deliver effective climate awareness narratives in the Jiu Valley, it is essential to develop communication campaigns tailored to the region's cultural and socio-economic specificities.

Engage education and research institutions

To maximise the impact of the involvement of educational and research institutions in the Jiu Valley, it is essential to establish strategic partnerships between universities, research centres, and local administrations.

Empower local governments

To support the empowerment of local governments in the Jiu Valley, it is essential to pay special attention to strengthening their administrative and financial capacities.

Improving regional connectivity

To improve regional connectivity in the Jiu Valley, it is essential to modernise road and rail transport infrastructure, focusing on creating fast and secure links with the main economic centres in the Western Development Region.

Improving the ability of cities to be financially self-sustaining

To improve the ability of cities in the Jiu Valley to become financially self-sustaining, it is essential to develop alternative and sustainable sources of income, beyond reliance on government subsidies.

The integration of energy poverty as a cross-cutting subject within legislation

To provide conceptual coherence to the current framework, energy poverty must be addressed as a cross-cutting issue

INTRODUCTION

POLICY CONTEXT

The political context of the policy recommendations for the Jiu Valley microregion reflects the need for a coordinated and sustainable response to the economic, social, and environmental challenges facing the region. Climate change and the energy transition are priorities on the European agenda, and implementing climate awareness narratives will support the development of a local culture of ecological responsibility.

WHY THE URGENCY?

The relevance of these policy recommendations is crucial in the context of the energy transition and the climate challenges faced by the coal-dependent microregion of the Jiu Valley. Addressing these issues now is urgent, given the impact of climate change on the local economy and communities, as well as the need to diversify economic sources and support sustainable development. Implementing measures focused on energy efficiency and renewable energy, alongside supportive policies and regulations, will facilitate the region's adaptation to new economic and environmental realities, contributing to the financial self-sustainability of the cities in the Jiu Valley.

OBJECTIVE

The overall objective of these policy recommendations is to support the sustainable development and economic regeneration of the Jiu Valley. By integrating energy efficiency and renewable energy policies, these recommendations contribute to reducing energy costs, attracting investments, and creating green jobs. They are addressed to local authorities, educational and research institutions, economic actors, and the civil society, fostering a collaborative framework that responds to the region's challenges and leverages the opportunities of the energy transition.

EVIDENCE BASE

The sources of information used to formulate the recommendations are represented by the totality of data and results obtained so far within the JUSTEM project.

POLICY RECOMMENDATIONS

1. Energy renovation of residential buildings

To support the energy transition in the Jiu Valley, it is essential to implement a residential building energy renovation programme focused on improving insulation, replacing windows, and modernising heating systems. This programme should be funded through grants and low-interest loans, prioritising vulnerable households and former workers' colonies. Additional incentives could be provided for integrating renewable energy sources, thereby reducing long-term costs for residents. A coordinated approach involving local authorities, the private sector, and the community will ensure a just and sustainable transition for the region.

2. Replacement of inefficient equipment and systems

To support the energy transition in the Jiu Valley, a comprehensive programme is needed to replace inefficient heating equipment and systems with modern solutions such as heat pumps, efficient boilers, and renewable energy-based systems. This programme should be funded through grants and subsidies, prioritising support for vulnerable households and older buildings in former mining communities. Additionally, technical assistance and consultancy measures could facilitate residents' access to new technologies and optimise energy consumption. Partnerships between authorities, energy providers, and the private sector will be essential for the effective and sustainable implementation of these solutions. In the long term, this initiative will reduce energy costs, improve air quality, and contribute to job creation in the green technology sector.

3. Smart energy infrastructure for vulnerable households

To support vulnerable households in the Jiu Valley during the energy transition, it is necessary to develop smart energy infrastructure, including smart meters and advanced consumption management systems. These technologies will enable residents to monitor and optimise their energy use, helping to reduce bills and prevent energy poverty. The programme should be funded through European, governmental, and private investments, ensuring free or subsidised access for disadvantaged groups. Its implementation should be accompanied by awareness and training campaigns to ensure beneficiaries can effectively use the new technologies. Partnerships between authorities, energy providers, and local organisations will be essential for integrating these solutions and expanding the region's digital infrastructure. In the long term, this initiative will help reduce energy inequalities, improve consumption efficiency, and stimulate local economic development.

4. Community solar energy projects

To support the energy transition in the Jiu Valley, the development of community solar energy projects is essential, enabling the local production and use of renewable energy. These initiatives should be supported through public and private funding, prioritising access to cheaper and more sustainable electricity for vulnerable households. Local authorities, energy cooperatives, and social enterprises can play a key role in implementing and managing these projects, ensuring a fair distribution of benefits. The creation of self-consumption and energy-sharing schemes will reduce dependence on traditional energy sources and lower household bills. Additionally, such initiatives can stimulate the creation of green jobs, contributing to the region's economic diversification.

5. Developing climate awareness narratives

To deliver effective climate awareness narratives in the Jiu Valley microregion, it is essential to develop communication campaigns tailored to the region's cultural and socio-economic specificities. These campaigns should involve local communities, opinion leaders, and civil society organisations to increase acceptance and engagement. Climate change education could be integrated into schools and community activities, emphasising the importance of both individual and collective actions in addressing these impacts. Additionally, initiatives could utilise digital platforms and local media to disseminate relevant and accessible information about the effects of climate change on the environment and the local economy. A partnership between local administrations, educational institutions, and the private sector is necessary to support these efforts. By promoting positive messages and local success stories, the transition towards more sustainable behaviour across the region can be encouraged.

6. Engage education and research institutions

To maximise the impact of the involvement of educational and research institutions in the Jiu Valley, it is essential to create strategic partnerships between universities, research centres, and local administrations. These institutions can contribute through studies and analyses that support the sustainable development of the region, identifying innovative solutions to economic and environmental challenges. The development of educational and training programmes tailored to the needs of the local labour market can help prepare the workforce for emerging industries, such as green energy and digital technologies. Furthermore, applied research initiatives can attract investments and support the development of local entrepreneurship by providing practical and accessible solutions. Creating innovation hubs and organising events such as conferences or workshops can stimulate collaboration between academia, local administrations, and the private sector. By leveraging the knowledge and resources of these institutions, the Jiu Valley can become an example of regeneration based on education and innovation.

7. Empower local governments

To support the empowerment of local governments in the Jiu Valley, it is essential to place special emphasis on strengthening their administrative and financial capacities. This can be achieved through professional training programmes for civil servants, preparing them to manage EU funds effectively and develop sustainable infrastructure projects. Furthermore, implementing collaboration mechanisms between local authorities and the private sector is crucial for attracting investments and stimulating regional economic development. The government should support the decentralisation of decision-making processes, granting local administrations greater autonomy in managing resources and implementing projects. Creating dialogue platforms between citizens and authorities will contribute to more transparent governance and a better understanding of community needs. Through these measures, local administrations will become more efficient and capable of addressing local challenges in a sustainable and innovative manner.

8. Improving regional connectivity

To improve regional connectivity in the Jiu Valley, an integrated strategic plan is necessary to modernise transport and communication infrastructure. The priority should be the rehabilitation of roads and railways, ensuring fast and safe links with the main cities in the region, as well as with national and European transport corridors. The development of high-speed digital networks is essential to connect local communities to educational, economic, and social opportunities. Attention should also be given to eco-friendly public transport, with investments in electric buses and charging stations to reduce carbon emissions and encourage sustainable mobility. Partnerships between local administrations, the government, the private sector, and international organisations are crucial for securing funding and implementing projects. Ultimately, involving local communities in the decision-making process can ensure better adaptation of solutions to the specific needs of the region.

9. Improving the ability of cities to be financially self-sustaining

To enhance the ability of cities in the Jiu Valley to become financially self-sustaining, it is essential to promote the diversification of revenue sources. In this regard, local authorities should support the development of sustainable industries, such as those in the green energy sector, technology, and eco-tourism, which can not only attract external investments but also create sustainable jobs. Additionally, the digitalisation of public services is an important step in reducing administrative costs and increasing efficiency, allowing for better management of financial resources. Another crucial aspect is improving tax collection by optimising fiscal administration processes and combating tax evasion. Local administrations should also develop their skills in securing EU funding and implementing sustainable infrastructure projects that support long-term development. Establishing public-private partnerships can stimulate investments in local infrastructure, contributing to the creation of a sustainable economic ecosystem. Furthermore, it is important to support education and professional training for the local workforce, in order to meet the demands of the labour market in emerging industries. By implementing these measures, cities in the Jiu Valley will be able to build a solid economic foundation and become financially independent in the long term.

10. The integration of energy poverty as a cross-cutting subject within legislation

To provide conceptual coherence to the current framework, energy poverty must be addressed as a cross-cutting issue, meaning its inclusion in a wide range of policies, strategies, and sectors to ensure a coordinated and coherent approach rather than being treated in isolation. In this regard, legal and strategic documents should be reviewed to include an explicit and systematic reference to the legal definition of energy poverty, in accordance with Law No. 226/2021 on establishing social protection measures for vulnerable energy consumers.

CONCLUSIONS

In the current context of climate change and the energy transition, the policy recommendations for the Jiu Valley coal region are essential to support the region's adaptation to new economic and environmental challenges. The region faces the need to diversify income sources, modernise infrastructure, and promote sustainable practices as its reliance on traditional industries diminishes. Implementing these policies will facilitate the transition to a green economy, contribute to sustainable development, and support local revitalisation in response to new energy and climate realities.

If authorities seek public support for achieving decarbonisation and developing strong, sustainable regions, cities, and local communities, they must adopt policies that engage the entire community. Energy-efficient building renovation, the development of smart energy infrastructure, and the implementation of community solar energy projects are essential for reducing energy consumption, increasing efficiency, and transitioning to a sustainable energy system. Additionally, raising awareness of climate change, integrating education and research into sustainable solutions, supporting local administrations, and improving connectivity will enhance economic resilience and ecological transition. Through these integrated measures, social tensions will be reduced, and the shift towards a balanced ecological and economic future will be supported.

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