

# A multi-disciplinary approach to increase the adoption of energy-efficient solutions locally



## Project Group

The SERENE cluster, consisting of three EU-funded projects (SERENE, LocalRES, SUSTENANCE), is developing cutting-edge solutions to transform energy management and empower consumers. Together, these projects aim to foster innovation, promote energy efficiency, and drive the transition to renewable energy. Supported by the Horizon Results Booster (HRB) programme of the European Commission, the SERENE group collaborates to disseminate their findings and address the key challenges associated with scaling renewable energy adoption across Europe.



## The Challenges

### Societal Challenges

Barriers in isolated communities include unfamiliarity with new energy technologies, misinformation, and a focus on short-term cost savings over environmental benefits. Limited access to clear and transparent information contributes to uneven societal acceptance and resistance to clean energy innovations.

### Scientific and Technological Challenges

Challenges include integrating renewable sources, outdated infrastructure, and lack of reliable data. This complicates energy management, especially in small communities. Regulatory issues further hinder collaboration with Distribution System Operators (DSOs).

### Industrial Challenges

Industrial hurdles include the need for scalable technologies, a skills gap in rapidly growing markets, and regulatory barriers. Trust issues with large companies providing costly solutions also slow adoption. Capacity building and enhanced market access are essential for progress.

## Energy-efficient solutions



The **HRB - Horizon Result Booster** is an initiative funded European Commission, Directorate General for Research and Innovation, Unit J5, Common Service for Horizon 2020 Information and Data.

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## Energy-efficient solutions

### The Impacts

**Recommendation 1 - Training Tools and Workshops:** Provide structured training for communities to raise awareness and acceptance of renewable energy solutions.

**Recommendation 2 - Align EU and Local Regulations:** Streamline policies between EU and local governments for easier adoption of energy projects.

**Recommendation 3 - Scalable Energy Solutions:** Develop plug-and-play technologies for simpler adoption by citizens and communities.

**Recommendation 4 - Funding for Start-ups:** Allocate EU and national funds to support small companies and start-ups in renewable energy.

**Recommendation 5 - Simplify Procedures:** Speed up administrative processes for energy projects, especially for smaller communities.

**Recommendation 6 - Interoperability and Standardisation:** Create EU-wide standards for renewable technologies to ensure compatibility.

**Recommendation 7 - Promote Energy Sharing:** Implement flexible legal frameworks to enable communities to share surplus energy.

**Recommendation 8 - Combat Misinformation:** Launch awareness campaigns to educate citizens on the benefits and debunk myths about renewable energy.

### Projects



SERENE - Sustainable and Integrated Energy Systems in Local Communities ([h2020serene.eu](https://h2020serene.eu))



LocalRES- Empowering local renewable energy communities for the decarbonisation of the energy systems ([www.localres.eu](https://www.localres.eu))



SUSTENANCE - Sustainable energy system for achieving novel carbon neutral energy communities ([h2020sustenance.eu](https://h2020sustenance.eu))



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