



**EUSALP** EU STRATEGY FOR THE ALPINE REGION

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# MICROGRIDS IN RURAL AREAS: AN ENERGY APPROACH OF SMART VILLAGES

## NOEMIE POIZE, AUVERGNE-RHÔNE-ALPES ENERGIE ENVIRONNEMENT (AG9)

NOEMIE POIZE, AUVERGNE-RHONE-ALPES ENERGIE ENVIRONNEMENT,  
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**Auvergne  
Rhône-Alpes**  
Énergie Environnement

*AG9 Co leader*



80 million people, 7 countries, 48 regions,  
mountains and plains addressing together  
common challenges and opportunities



This project is co-financed by the European Union via Interreg Alpine Space

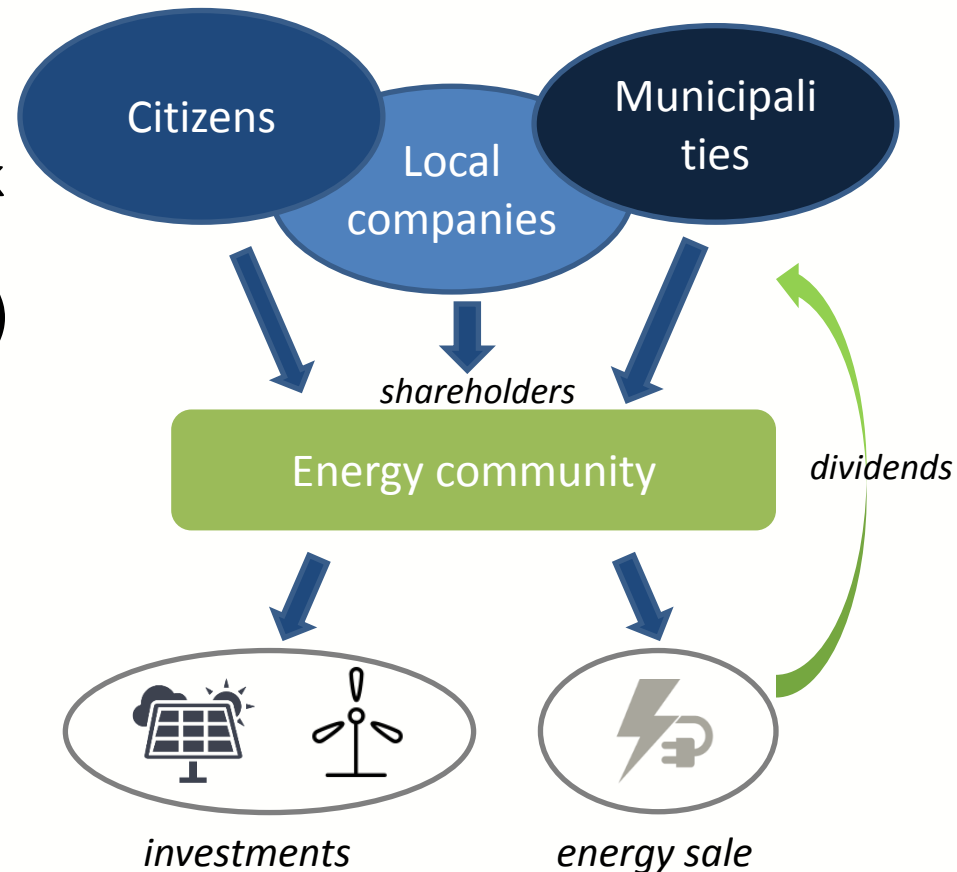
- Abundant renewable energy sources
- Weaker grids than in urban areas
  - Power outages
  - Limitation of RES plants (due to voltage constraints)
- Emerging energy communities
  - New governance schemes



Growing interest for community microgrids

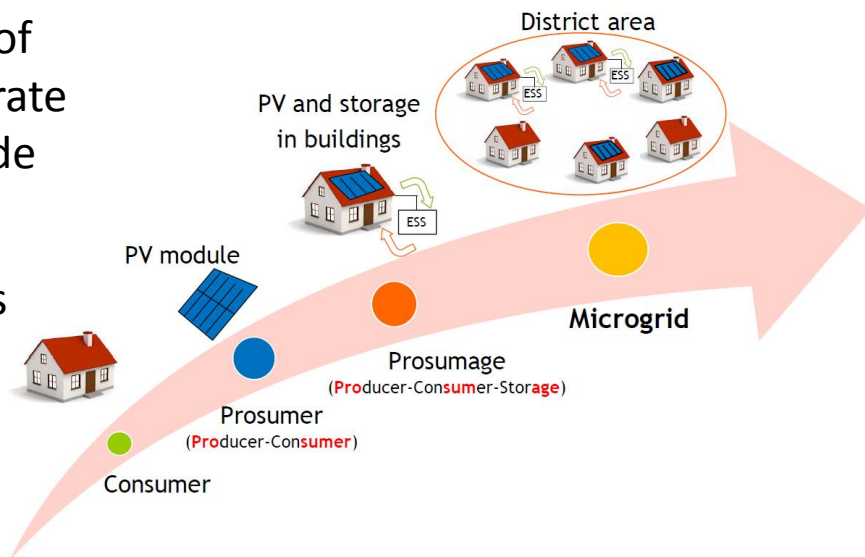
# Energy communities in France

- Recent evolution of the French regulatory framework to facilitate the participation of citizen (and municipalities) in RES companies
- Many citizen-owned companies in development
  - Governance often based on a cooperative status
  - Mainly operate electric RES plants



# Microgrids

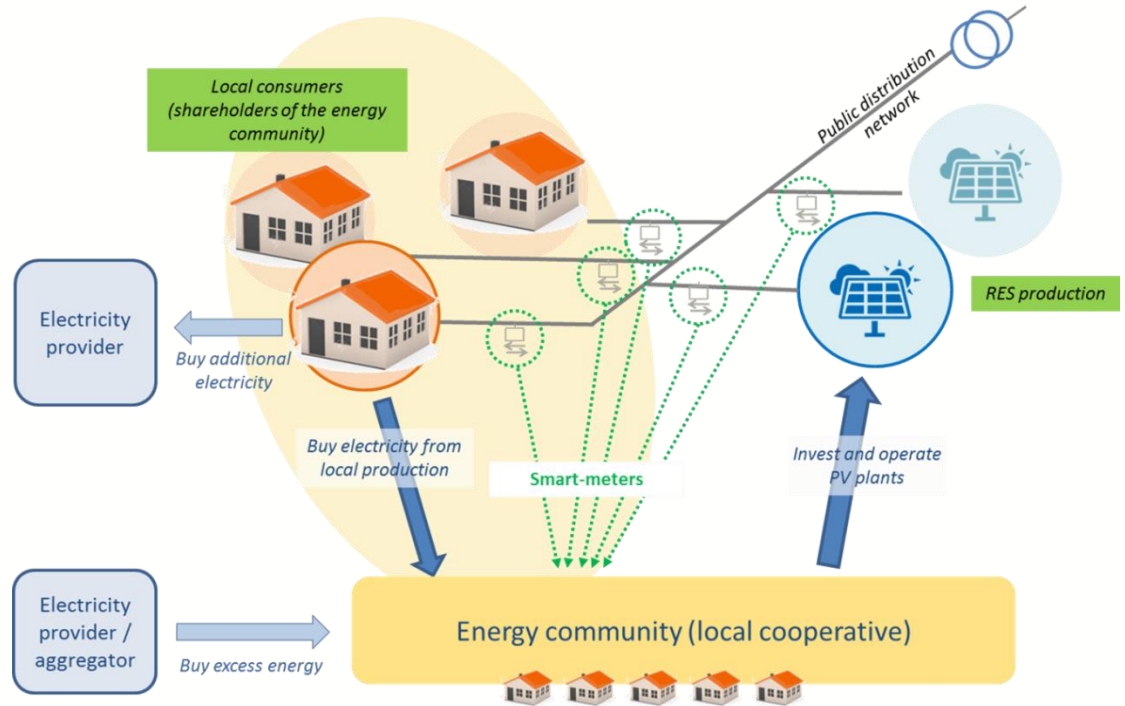
- Microgrid
  - Group of consumers, producers, storage systems, which share a common point of coupling to the main grid, and can operate both in grid-connected or islanded mode
- Several objectives
  - Increase the share of RES in rural areas
  - Reduce infrastructure costs
  - Reduce electric losses
  - Provide services to the grid
  - Ensure electricity during power outages
  - Propose a lower cost of electricity to local consumers





# Microgrid communities

- When energy communities get involved in microgrid operation
- France : « Collective self-consumption » scheme with a direct sale of energy between local energy community and local consumers
- Pilot site of Saint-Julien-en-Quint (PEGASUS project)



# Pilot site of Saint-Julien-en-Quint (PEGASUS project)

[Video]





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