



| we move

## **Italian REC framework and examples**

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### **Seminar on REC in the context of the TARGET Technical Assistance project in Ida-Viru County 16/03/2023**

*Matteo Zulianello – Dipartimento Sviluppo Sostenibile e Fonti Energetiche – RSE SpA*



## MISSION

Research on the energy system for all the final users



## PEOPLE

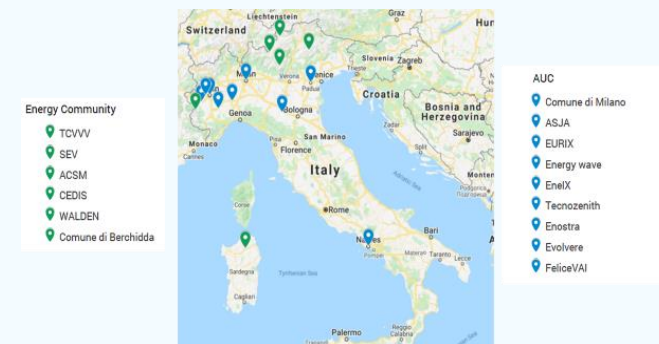
340 people  
2/3 graduates, 80% researchers;  
Milan Headquarters.



## OWNERSHIP and CONTROL

S.p.A. owned by the MEF through the GSE, addressed by MITE and ARERA

- RSE supported the **Ministry of Economic Development** in transposing the parts of the European directives related to **individual and collective self-consumption and Energy Communities**
- In the three-year research period 2019-21, RSE promoted and evaluated a number of **case studies** (9 collective self-consumption projects, 6 energy community projects)

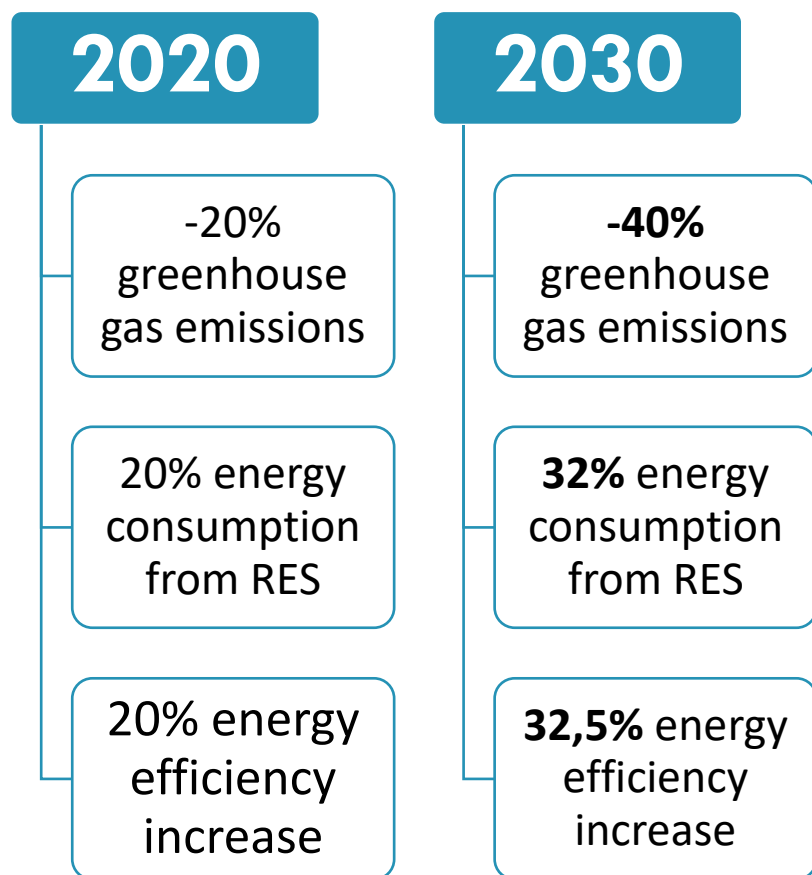


- In 2021, RSE conducted **a survey on Energy Communities in Italy** to identify the most valuable elements of these initiatives to facilitate their replicability
- With Legislative Decree 199/2021 and ARERA Resolution 318/2020, RSE is charged with conducting analyses to **assess the impact of shared energy and extended self-consumption on the electricity system**.

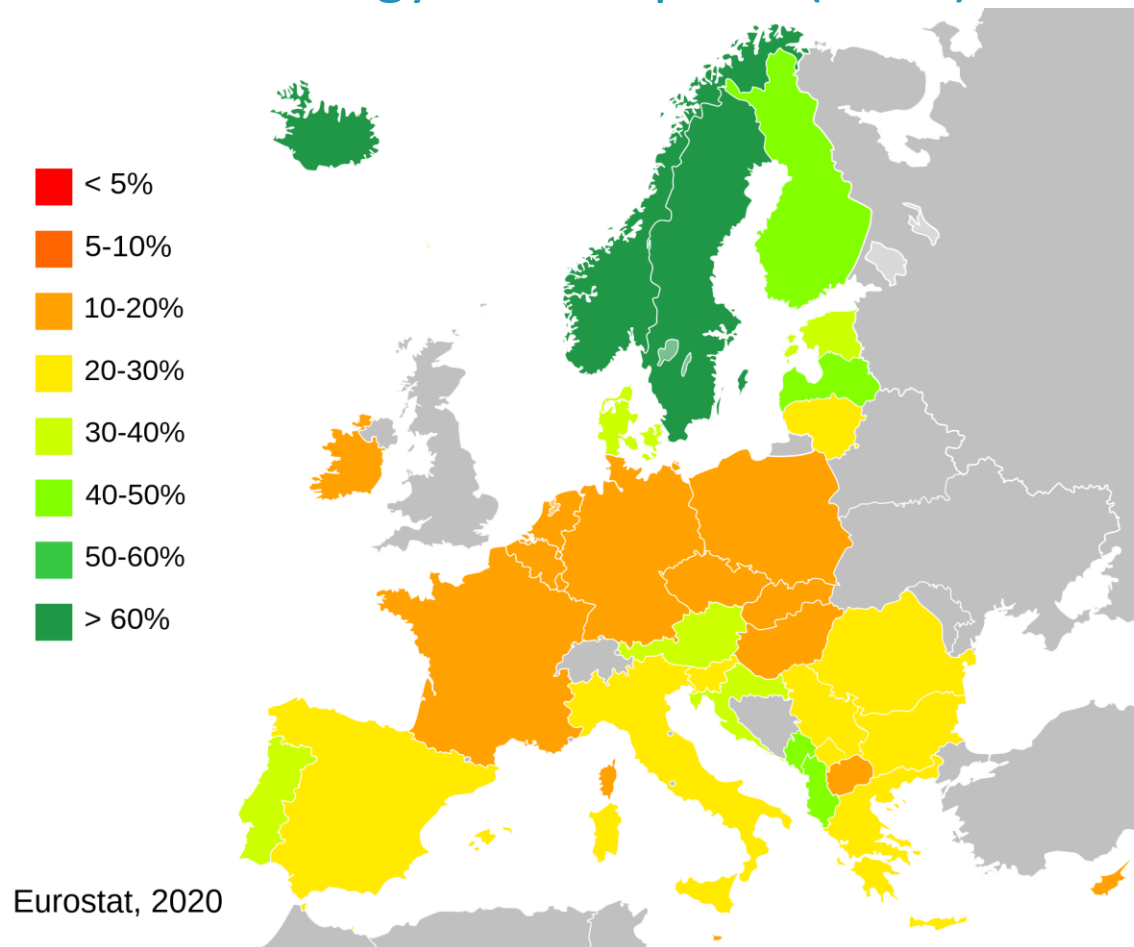


## Framework and definitions

## European Climate and Energy Targets



## Percentage of the renewable energy in the energy consumption (2020)

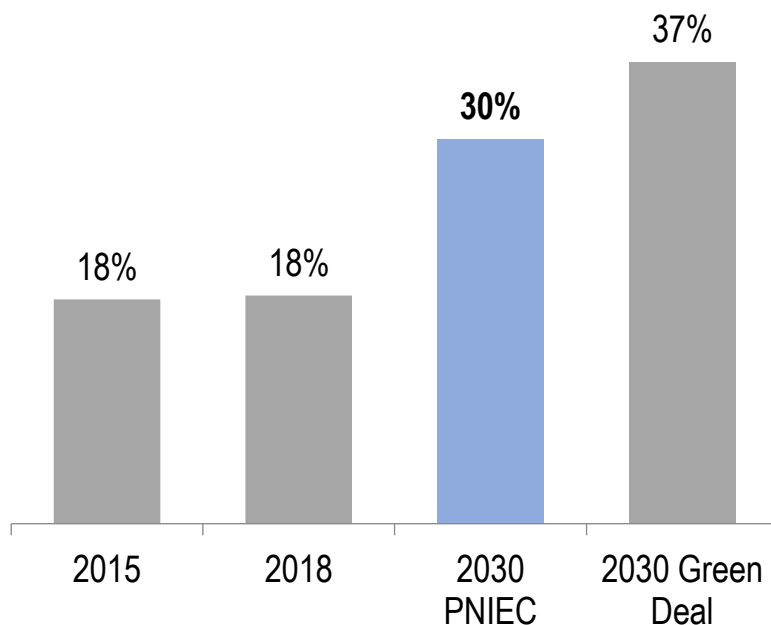


# TARGETS NATIONAL INTEGRATED ENERGY & CLIMATE PLAN (NECP, PNIEC) AND HOW TO REACH THEM

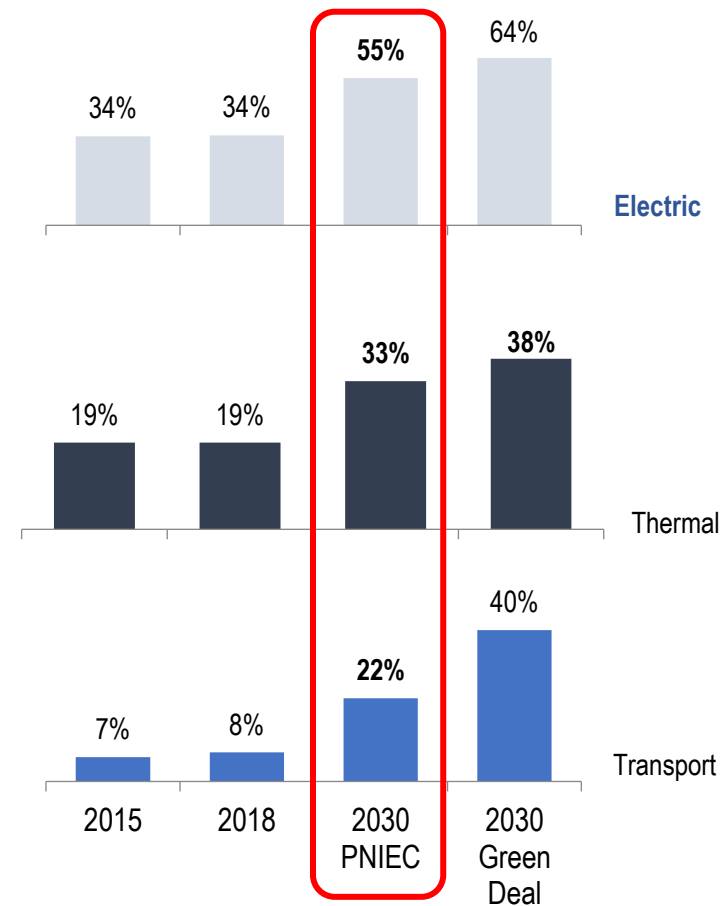


## Total Target - Italy

Share of renewable sources in gross final energy consumption

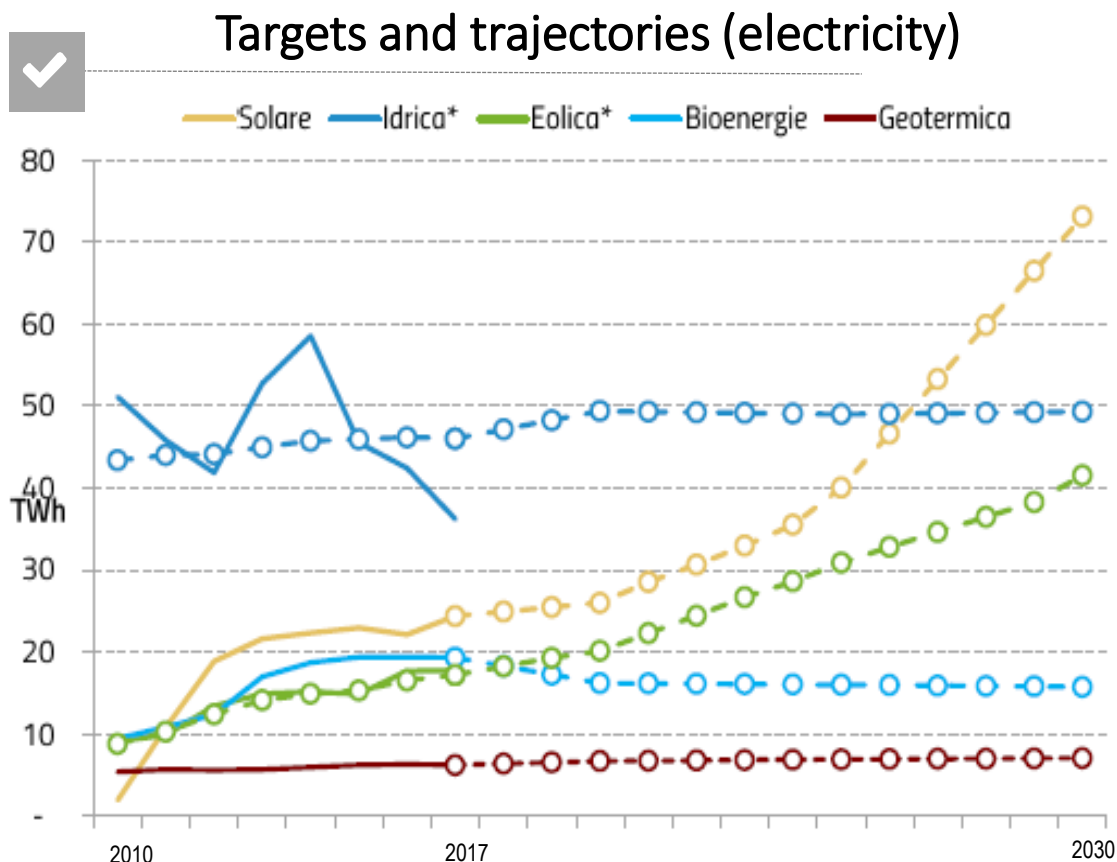


## Increase for the sectorial targets



# TARGETS NATIONAL INTEGRATED ENERGY & CLIMATE PLAN (NECP, PNIEC) AND HOW TO REACH THEM

Energy from RES up to 187 TWh (114 in 2018) in 2030, large contribution of PV with + 31 GW (today 20 GW)



## Measures and tools



- **Incentives:** auction mechanisms and PPA for price stabilization for large plants. Tariff support mechanisms for small ones. Ad hoc tools for plants far from being competitive
- **Permitting:** Simplifications, especially on revamping and repowering
- **Policy:** Identifying suitable areas with regions on which new installations can be accelerated
- **New models:** Promotion of self-consumption through energy communities, including storage.



# THEMATIC OUTLINE: Renewable Energy Communities (RECs)

## Definition from the EU:

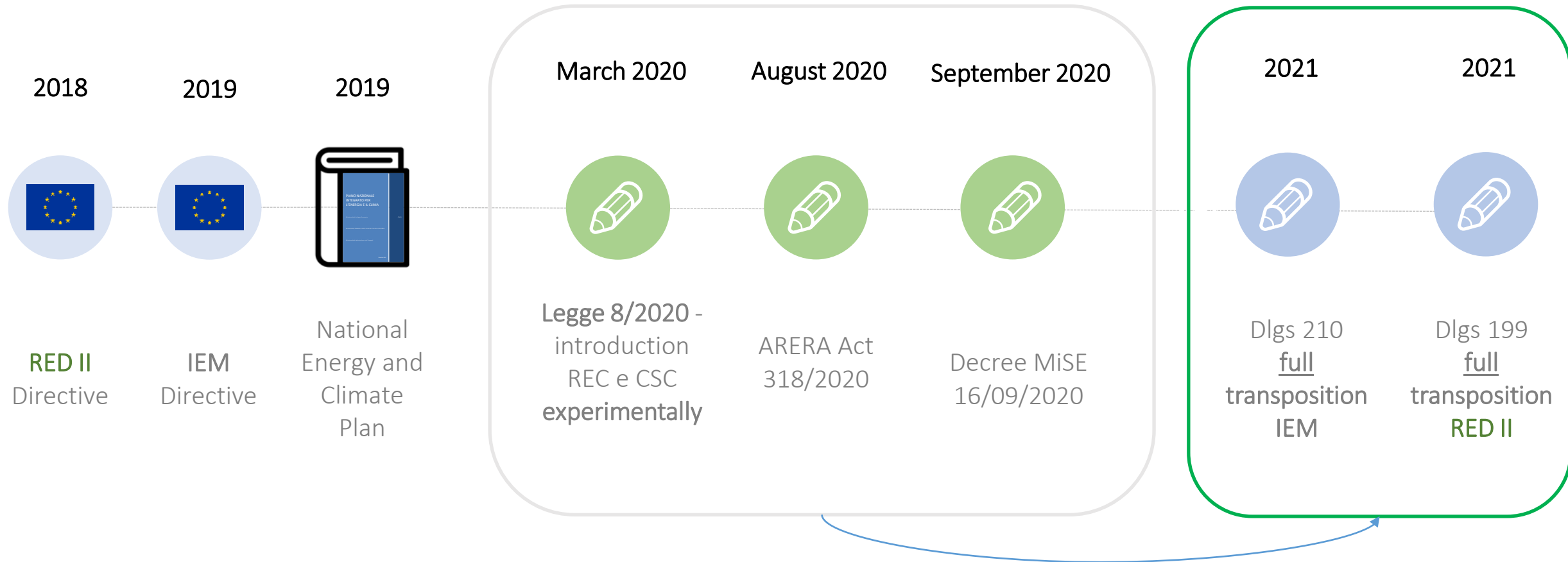
- Energy communities **organize collective and citizen-driven energy actions** that help pave the way for a clean energy transition, while moving citizens to the fore.
- They contribute to **increasing public acceptance of renewable energy projects** and make it easier to attract private investments in the clean energy transition.
- At the same time, they have the potential to **provide direct benefits to final users** by increasing energy efficiency, lowering their electricity bills and creating local job opportunities.

[https://energy.ec.europa.eu/topics/markets-and-consumers/energy-communities\\_en#citizens-and-renewable-energy-communities](https://energy.ec.europa.eu/topics/markets-and-consumers/energy-communities_en#citizens-and-renewable-energy-communities)

# CURRENT LEGISLATION FOR RECs



# THE FULL TRANSPOSITION OF RED II AND IEM EU DIRECTIVES





## COMMUNITY ENERGY MAP – Approach and methodology

## Research Aim

Framing the *modus operandi* of Renewable Energy Communities and providing a first overview of the most significant experiences

## Research Questions

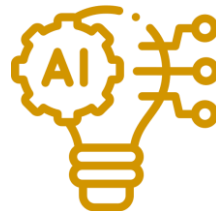
I

How do energy communities fit into the relationship between legal/ownership profiles and the relevant project partnerships?



II

How is the process of open and voluntary participation managed by stakeholders in a proximity rationale?



III

How are the environmental, economic or social benefits ensured to the communities and RECs members?





## HOW TO...

### Desk analysis

- Review and cataloguing of 57 cases of Energy Communities

### Two meetings with an «experts panel»

### Three focus groups

- FG1: with Public Administrators
- FG2: with actors from the private and entrepreneurial sectors
- FG3: with Foundations and Third Sector

### 9 case studies

- Semi-structured interviews + fieldworks

How Can We Frame Energy Communities' Organisational Models? Insights from the Research 'Community Energy Map' in the Italian Context <https://www.mdpi.com/2071-1050/15/3/1997>



# COMMUNITY AND TECHNOLOGIES

How is the REC organized?

- Legal profile of the project
- Activities carried out (co-production, collective self-consumption, etc.)
- Typology of the “enabling technologies”
- Territorial repercussions of the projects in terms of proximity



# ORGANIZATION AND STAKEHOLDERS

Who does what?

- Actors: role and position in the governance arena
- Economic and operational responsibilities
- Technical and technological know-hows



# PARTICIPATION AND ENGAGEMENT

How and through which modalities local communities are involved?

What sort of benefits are ensured by the REC project?

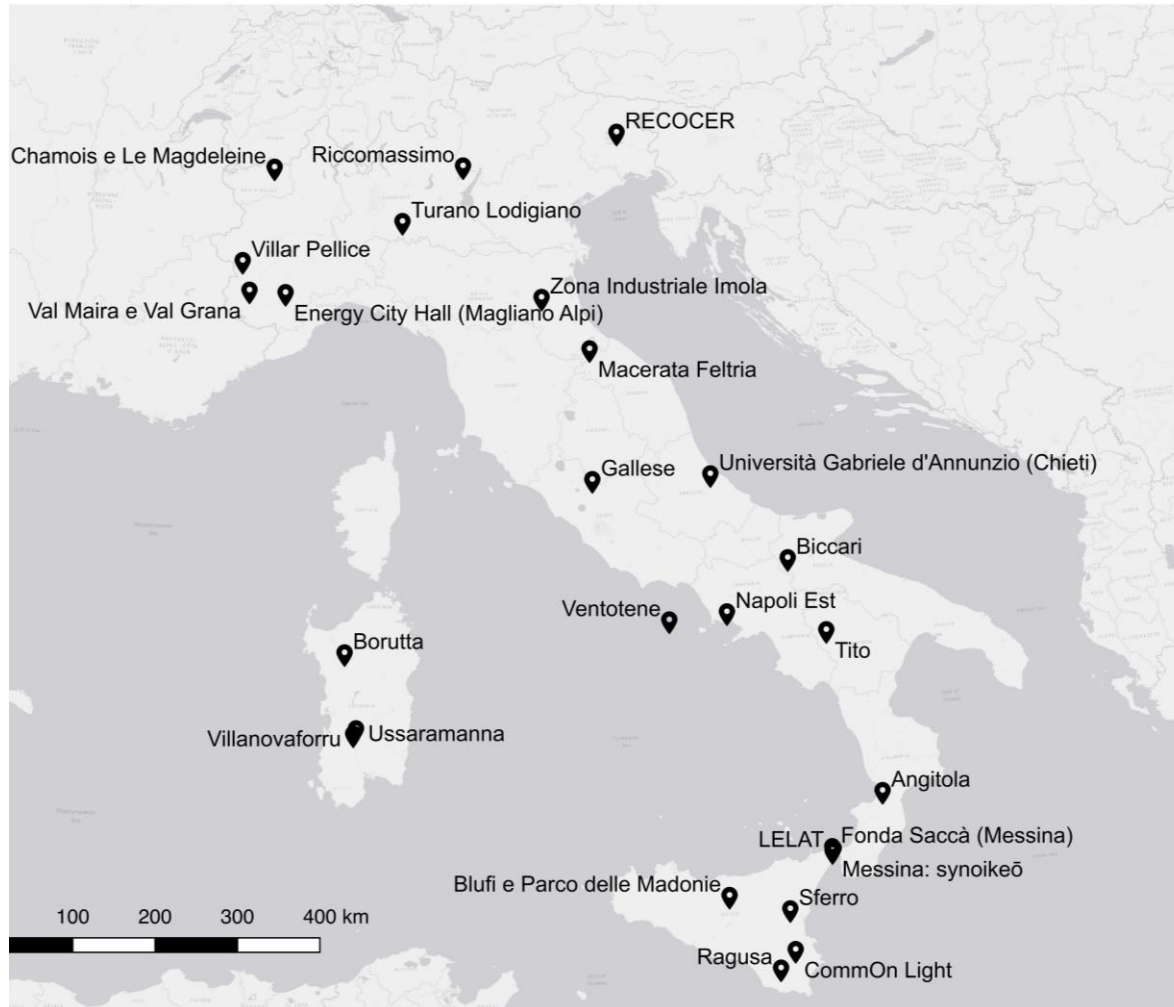
- Individual and collective benefits



## Results



# MAPPING: ENERGY ENTERPRISES NON- COMPLIANT WITH THE CURRENT LEGISLATION



# MAPPING: RENEWABLE ENERGY COMMUNITIES STARTED THROUGH THE LAW 8/2020

# THE 3 ORGANIZATIONAL CLUSTERS

## 1. Public lead cluster

Nature of REC and  
key stakeholders

Public-private local  
proponents; promoting role  
played by PA

Produced benefits

Creation of collective and  
local benefits

Engagement and  
participation  
processes

Predominantly top-down  
approach and modus  
operandi



# THE 3 ORGANIZATIONAL CLUSTERS

## 2. Pluralistic cluster

Nature of REC and  
key stakeholders

Application of horizontal  
community models

Produced benefits

Citizen members and  
prosumers;  
Coalitions of local actors

Engagement and  
participation  
processes

Predominantly bottom-up  
processes and modus  
operandi



# THE 3 ORGANIZATIONAL CLUSTERS

Nature of REC and  
key stakeholders

Produced benefits

Engagement and  
participation  
processes

## 3. Community energy builders cluster

Intermediation between  
external interests, local  
projects, and individual  
consumers

Alternative energy  
consumption models; acting  
on savings for consumers

Variety of approaches  
between top-down and  
bottom-up

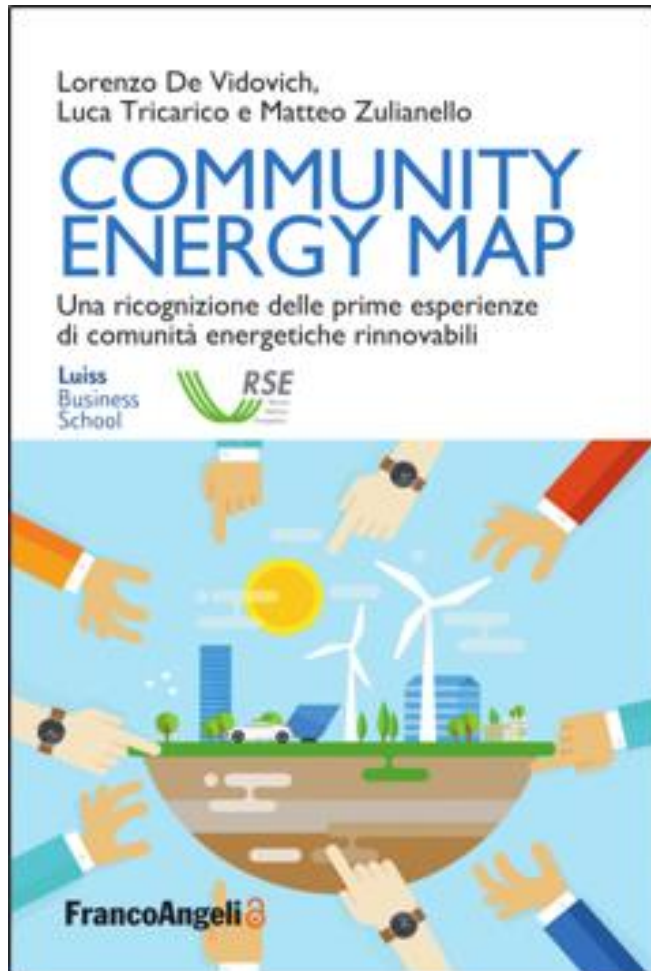




## CONCLUDING REMARKS: WHAT WE HAVE LEARNT

Four key issues towards further researches:

- RECs entail a complex **combination** between a **plurality of know-hows**: organizational, managerial and technological skills
- **Social impacts of RECs** with reference to social issues: energy poverty, community-engagement, social inclusion of inhabitants and enterprises
- **RECs in the transition policies**: separation between the economic and the collective impacts
- **Proximity** as an **added value** on the **local scale** embedded in the RECs developments



*Thanks for your attention!*

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