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REC4EU

Energy Community Models in Tuscany

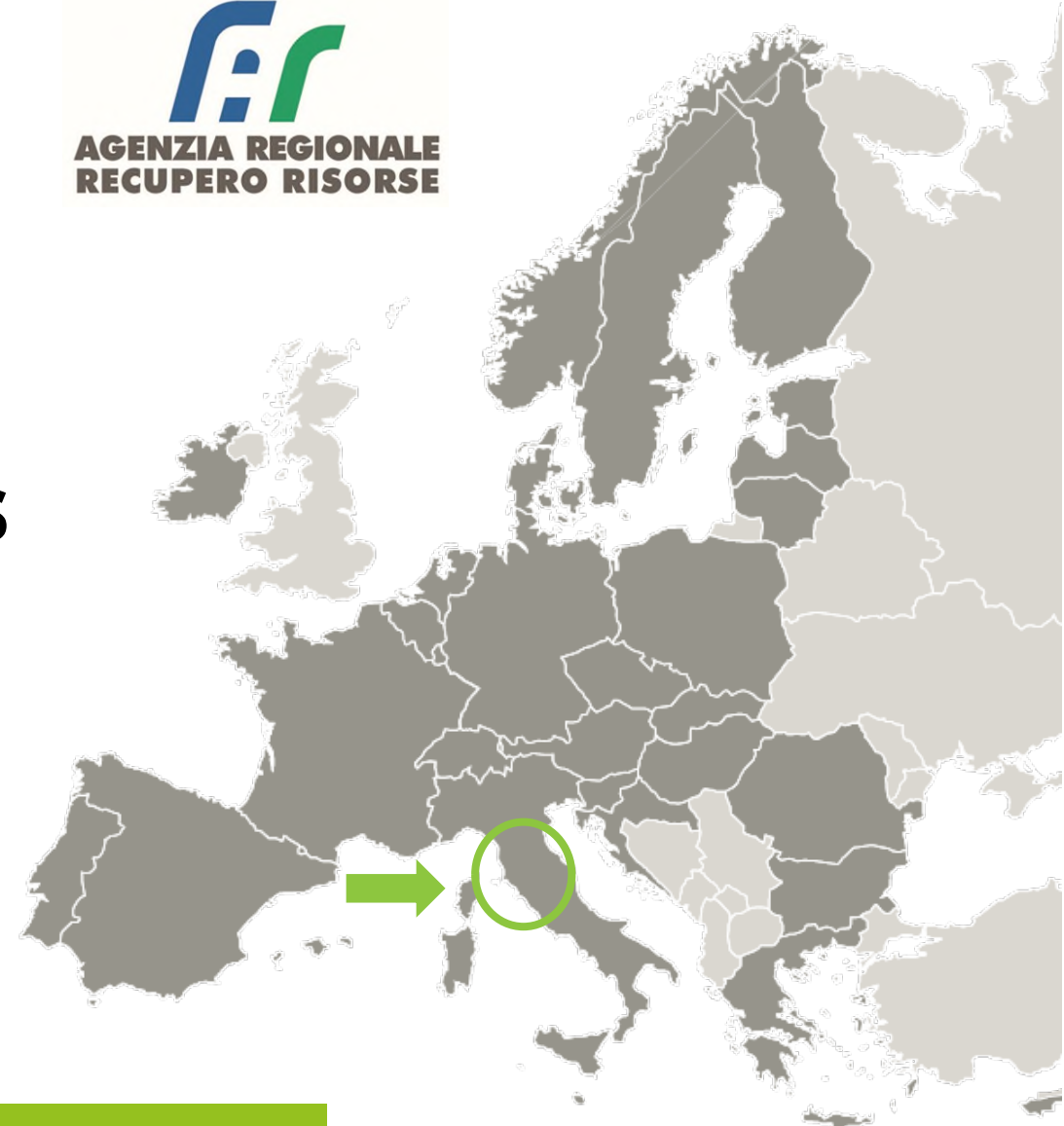
ARRR Spa

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PLP => Energy Communities II – Internal governance for Energy Communities
November, 27th – 14,00 – 15,30

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REC4EU

- **Overview of energy communities (promoting body, legal form, territorial context)**
- **The future RECs Tuscan observatory**



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ARRR and Tuscany Region: our path towards RECs



REGIONE
TOSCANA



- ➔ ARRR is the Regional Energy Agency of Tuscany.
- ➔ Lead Partner of **Interreg REC4EU** (started March 2023).
- ➔ **First EU project on RECs**, helped us deepen the topic and compare experiences across Europe.
- ➔ Tuscany Region Administration had already entrusted ARRR (**Regional Resolution 336/2022**) with tasks to promote and support RECs.
- ➔ **Activities:**
 - 1) territorial facilitation, technical assistance, awareness campaigns.
 - 2) creation of the Tuscan RECs database (see next presentation).

Activities – Facilitation & Technical Support



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**РЕСУРСНО КИЗОКЪЕ
АГЕНЗИЯ РЕГИОНАЛНА**

- o Over **300 initiatives** promoted directly or with stakeholders (through seminars, bilateral meetings, conferences, and training sessions);
- o More than **100 RECs** met across Tuscany, either already established or in the process of being set up/assessed;
- o Over **60 RECs** supported in their establishment and/or development (statutes, business plan analysis, legal form, critical issues, relations with GSE);
- o More than **20 Memoranda of Understanding** signed with associations, public bodies, universities, and banks;
- o Launch of the Cross-boarder **Observatory on RECs**;
- o Start-up, support, and assistance activities for the **operational management** of RECs;
- o Ongoing **technical guidance and support** for two RECs selected through the INVECE project's call for Expressions of Interest.

Policy improvement through REC4EU



We involved the **Tuscany Region as Managing Authority**, owner of the policy to be improved and we **achieved our goal!**

Key steps:

- Nov 2024: first draft of ERDF 2021–2027 call → **no feasibility funding**.
- From partner exchanges, we adapted a **French good practice** (Nouvelle-Aquitaine).
- Proposed inclusion of **pre-feasibility costs** among eligible expenses.
- The Region accepted and integrated this in the final call (Apr 9th, 2025).

✓ **Result:** Policy improvement successfully achieved.



Overview of Energy Communities in Tuscany

(From INVECE D351 – available in English)



At September 2025:

- 51 RECs established (21 GSE qualified)
- 11 in progress
- 31 under evaluation



93 total configurations



By promoter:

N. 44 Public bodies (52%) | N. 21 Enterprises (25%) | N. 12 Associations/Citizens (15%) |
N. 7 Utilities/Esco (8%)



By legal form:

N. 55 Unrecognised association (65%) | N. 15 Foundation of participation (18%) | N. 9 Recognised association (11%) | N. 5 Cooperative (6%)



By scale:

N. 40 Municipal (48%) | N. 22 Wide area (26%) | N. 2 National (2%) | N. 20 Other (24%)





Comparison among Italian regions

RENOSS project (national One-Stop-Shop network, coordinated by **RENAEL**, the Italian network of energy agencies) allows comparison of RECs among Italian regions. National monitoring is still limited; our regional analysis is more advanced.

Nationally, REC **models are similar** due to shared legal rules.

Main difference: **multiutilities' involvement**

- **Lombardy, Emilia-Romagna:** strong role of Hera, Iren, Engie.
- **Tuscany:** process led by municipalities and associations.

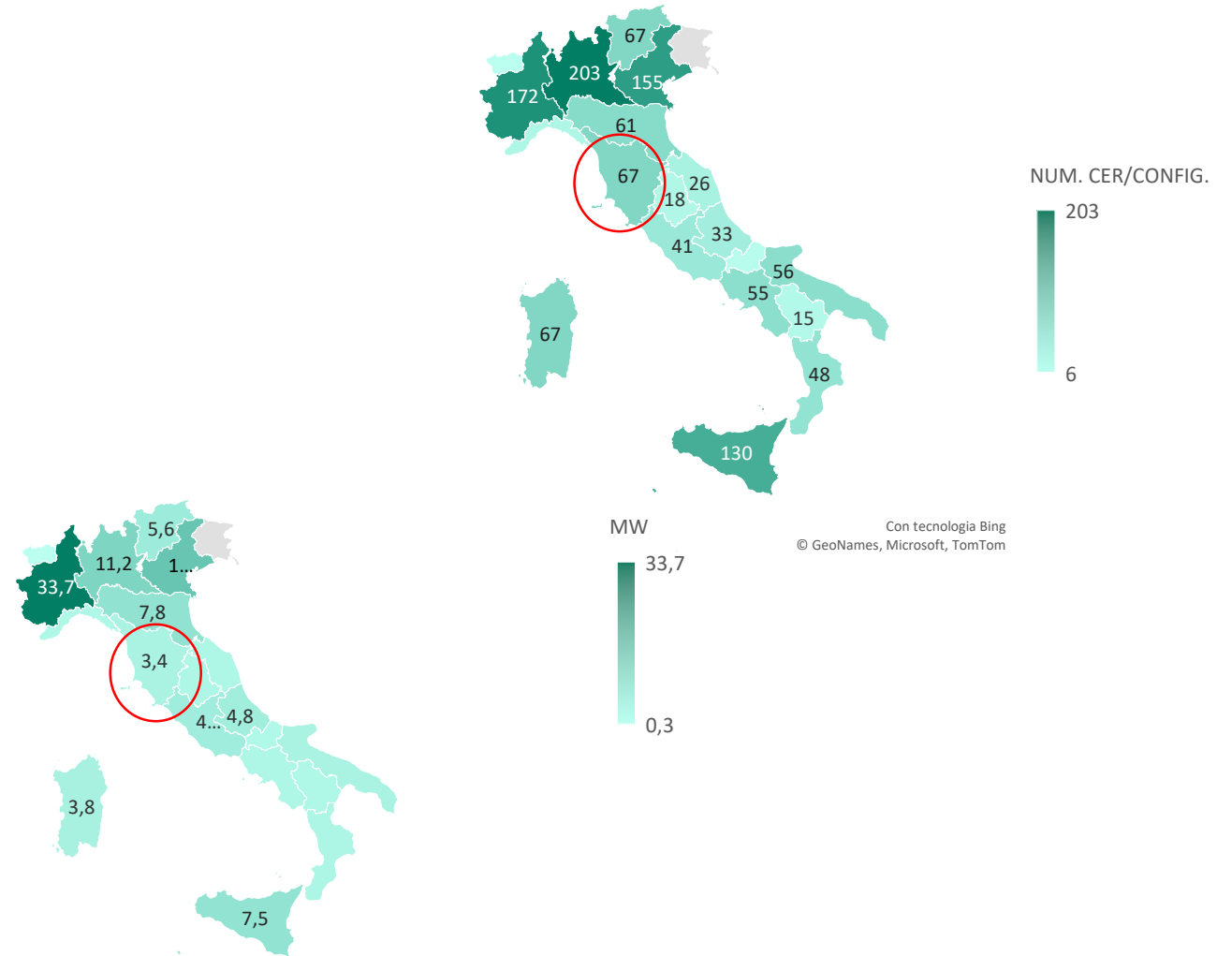
Ongoing work with Universities will strengthen our modelling capacity; results for Sardinia and Liguria expected soon.



National Integrated Energy and Climate Plan (PNIEC)

Italy's strategic document outlining goals, policies, and measures to achieve energy transition and climate change mitigation targets by 2030 – update 30/9/2025

REGIONE	NUM. CER/CONFIG.	MW	UTENZE
LOMBARDIA	203	11,2	2066
PIEMONTE	172	33,7	3231
VENETO	155	15,3	893
SICILIA	130	7,5	956
FRIULI V. G.	89	10,6	730
TOSCANA	67	3,4	398
TRENTINO	67	5,6	868
SARDEGNA	67	3,8	503
EMILIA	61	7,8	435
PUGLIA	56	3,3	466
CAMPANIA	55	2,6	355
CALABRIA	48	2,9	315
LAZIO	41	4,9	559
ABRUZZO	33	4,8	243
MARCHE	26	2,7	293
LIGURIA	20	2,4	103
UMBRIA	18	2,7	304
BASILICATA	15	2,5	72
MOLISE	10	2,2	57
VALLE D'AOSTA	6	0,3	31
Totale	1339	130,2	12878





Comparison among European countries

REC4EU showed very different levels of REC development in Europe:

- **France & Spain:** advanced in stakeholder engagement, communication, dissemination and energy-poverty actions;
- **Poland & Slovakia:** still defining RECs legally, no dedicated regulations yet;
- **Belgium:** no specific incentives for shared energy, only energy bill discounts.



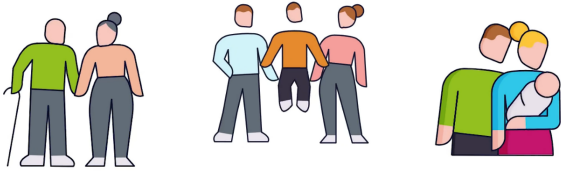
Cross-border work:

Cooperation with France/Corsica (INVECE project) is helping us prototype shared approaches to REC governance and data harmonization.



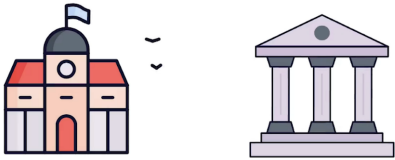


Factors shaping RECs



Territorial & social context:

- Strong local identity → many small, independent RECs.
- Risk of fragmentation and sustainability issues.



Incentives:

- Regional call + PNRR push → boom since June 2025 with many “rushed” RECs to meet funding deadlines.



Future perspective / sustainability:

- Need to unite smaller RECs for efficiency.
- Surviving ones will be those combining social value and innovation (e.g. thermal energy, efficiency).



Best practices

- Focus on social impact → incentives donated to vulnerable families via parish
=> **REC SievEnergia**
- Local development (tourism) => **REC Elba**
- Merge/cooperate to reduce costs, share infrastructure, optimize management → wide-area REC => **REC SAVE Livorno province**
- Hypothesis to Exploit the energy of an old Hydro plant (other RES than PV) => **REC Sienaenergie**

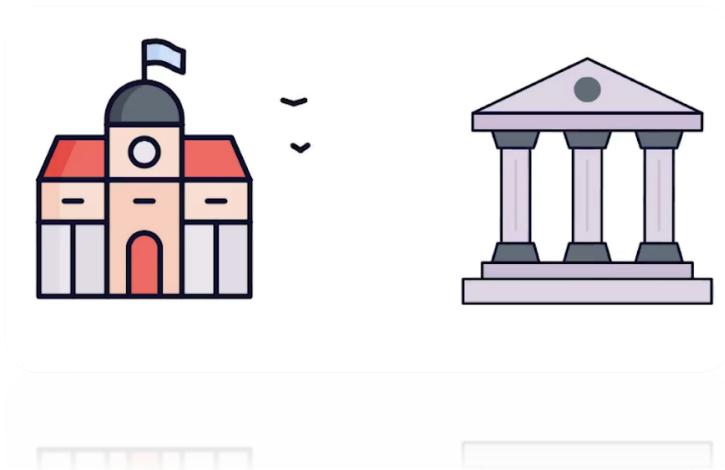




Role of public authorities

Public bodies can play a key role in supporting RECs by:

- **Acting as guarantors** of the process (without needing to invest in plants or join the REC).
- **Giving visibility and guidance**, becoming the “narrator” of local REC opportunities.
- **Supporting citizens and new RECs** while *not* taking over their management.
- **Facilitating connections**: bringing stakeholders together and opening dialogue.
- Integrate RECs into the local **planning**



From excel database to Future Tuscan Observatory

Since 2022 ARRR's tasks:

- Communication campaign ("CERTO")
- Facilitation, helpdesk, and training
- Creation and management of the REC Platform

Thanks to **INVECE** project: excel database =>
Future Tuscan Observatory (digital platform)

With the **Universities of Florence and Siena**, the REC database will evolve into a **digital platform**:

- Open data on all Tuscan RECs
- Simulation & management tools
- Georeferencing and business analysis
- Additional modules under development with universities



Objectives:

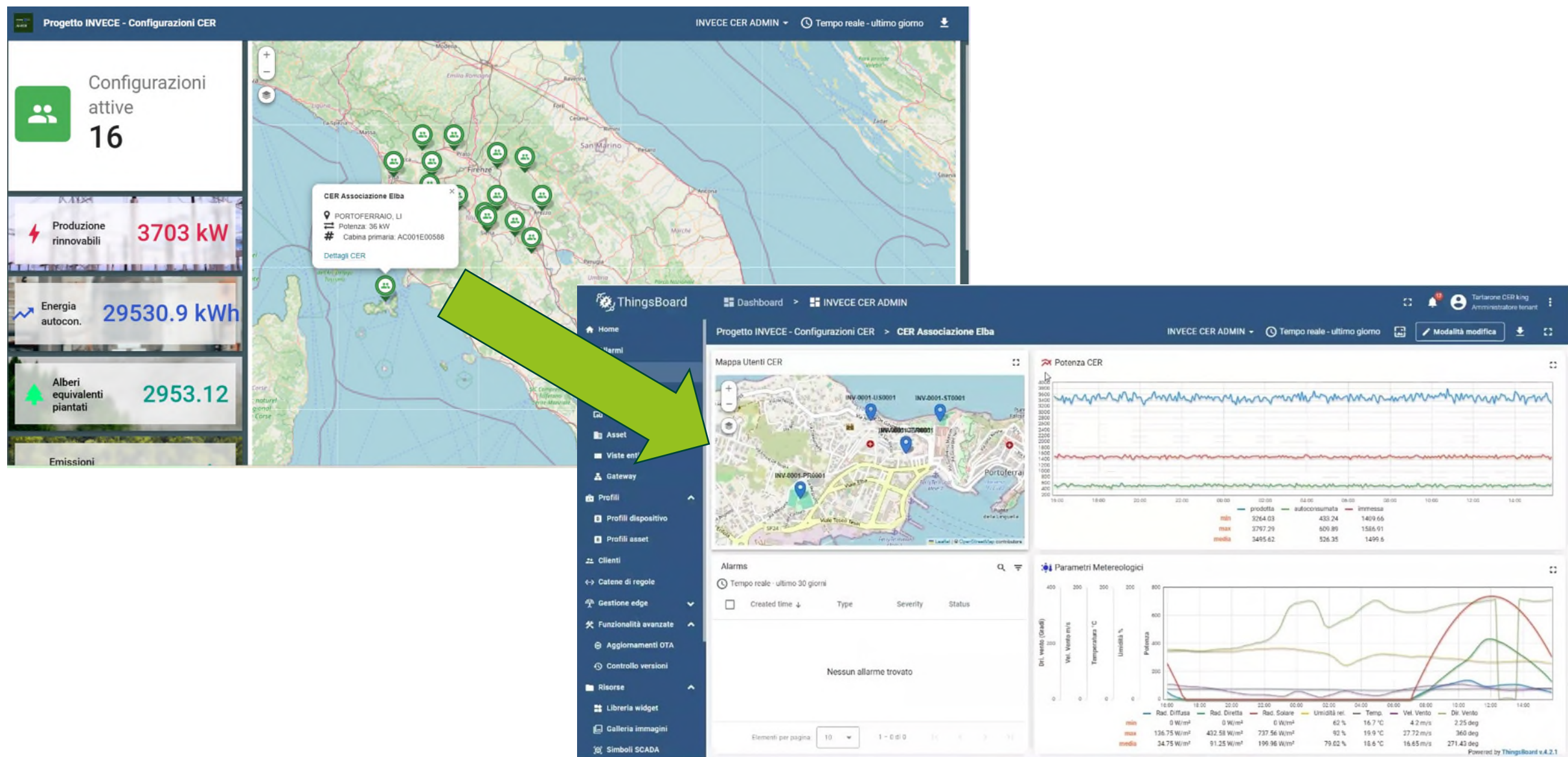
- Support stakeholders how to join a REC
- Collect operational models & best practices
- Support regional energy/climate policies
- Ensure continuous monitoring & instant updates
- promoting networking among RECs



Call to action:

ARRR is also exploring **comparisons with EU platforms** to enhance future services.

The Tuscan REC Platform (preview)



From Regional to Cross-border REC Observatory (INVECE)

Interreg



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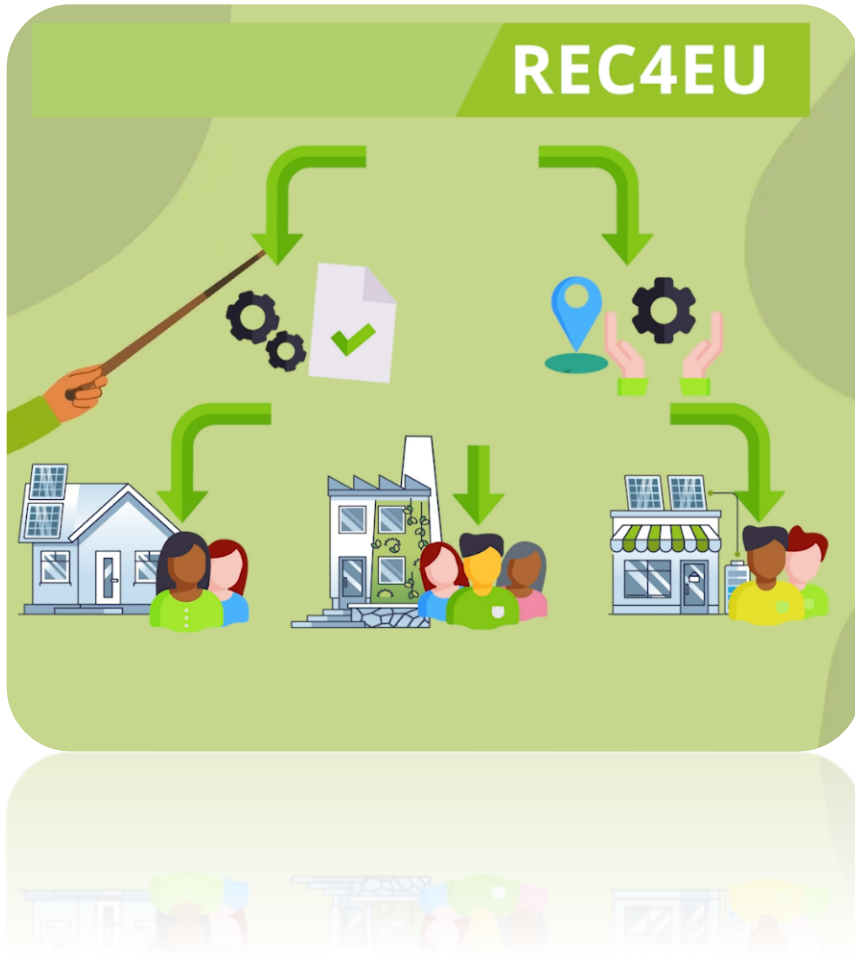
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INVECE

OTCE

- o Goal of **INVECE project**: build a **transnational REC Observatory**
- o Starting with **France**, then extend to other countries
- o **Exchange** of data, methods, and governance models
- o Common goal: **harmonize** monitoring tools and indicators.

Key lessons & recommendations



1. Promote **networks**, not isolated RECs.
2. Ensure flexible policy design (support pre-feasibility).
3. Strengthen the **social dimension** (fight against energy poverty, citizen involvement).
4. Build **open, updated data systems**.
5. Combine technical, social, and environmental goals.

Case study: Elba REC

Watch the REC4EU reel on  **YouTube**

Less than 2 minutes to discover how the
Elba REC works!



<https://youtube.com/shorts/rkavykN9mJM?si=YwrPoLPZ2-MXQMLP>





Thank you!



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Visit the **ARRR** and **REC4EU** websites for more information:

www.arrr.it

<https://www.interregeurope.eu/rec4eu>

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REC4EU Renewable Energy Communities for EU regions

REC4EU addresses challenges by reinforcing or creating regional support systems for the creation or development of RECs.

[REC4EU Renewable Energy Communities for EU regions](#)