

Renewable Energy Communities in Italy: Why Still so Few? Insights from the Journey of a Grassroots Initiative

BY ALESSANDRA MOTZ

Despite much interest in the public debate and many information events, renewable energy communities in Italy are not taking off. Delays in the legislation, incoherent incentives, and problems in finding the best set-up are holding them back. Here's some insights from the experience of a grassroots project.

More than five years after the introduction of renewable energy communities (RECs) in the EU legislative framework¹, the picture for RECs in Italy is mixed, and the country is lagging behind its peers. The number of RECs registered in Italy is indeed low: no official data have been published, but the environmental protection organization Legambiente estimates around 20 RECs², and the research centre ENEA around 17 with an overall installed capacity below 1.5 MWp³. These numbers clash with the targets set in the legislation recently approved in the country, that aims at reaching 5 GWp of new renewable-based generation plants within RECs by 2026, also thanks to the 2.2 billion euros provided by the National Recovery and Resilience Plan for RECs in small municipalities⁴. They clash even more with the statements of the Minister in charge of the energy transition, Gilberto Pichetto Fratin, that spoke of around 15'000 or even 40'000 RECs over the next few years.⁵

What is the problem with RECs in Italy? Why is their number so small, and what are the prospects for the next few years? I will provide some insights based on my own experience as an energy economics researcher at the Università della Svizzera italiana (Lugano, Switzerland), but also as one of the founding members of Energia Nostra, an association working on a grassroots REC in Cormons, my hometown in the North-East of Italy.

A lengthy legislative process

Step 1: the provisional framework

RECs were first introduced in Italy in December 2019. The legislation⁶, set up as a provisional framework, described RECs as small groups of consumers and prosumers⁷ entitled to collectively receive an incentive for every kWh of the so-called “shared energy”. Despite its misleading name, “shared energy” is not actually shared or traded among REC's members, but simply computed, for every hour, as the smallest between the aggregate grid injections of the REC's producers and prosumers, and the aggregate net withdrawals of its members.

The legislation was designed with a prudential approach: RECs were not allowed to manage the distribution grid, nor to supply electricity to their members, nor to enable virtual electricity exchanges within the community, as the computation of the “shared energy”

is a simple accounting exercise performed by the GSE, a central entity in charge of paying the incentives to each REC. Even the size of the RECs was constrained within the low-voltage substations and under the threshold of 200 kWp per individual plant. In practice, the main activities that RECs were asked to perform were maximising the use of renewable-based electricity production at the local level, and engaging residents and local stakeholders in the energy transition by promoting local investments in renewables.

Despite positive reactions among local institutions, a good coverage in the press, and a number of initiatives organized by associations and citizens⁸, few RECs actually came to light, among which RECOCER, the REC of the Comunità Collinare del Friuli district, in the North-East of the country. The most cited obstacles were the high administrative burden and the small geographical size, that allowed the inclusion of very few members in each REC and thus dwarfed any expectation of a decent economic outcome⁹.

Step 2: the final framework is outlined

In November 2021 the legislation was amended¹⁰ with a final definition of RECs, that confirmed most of the above-mentioned constraints, but allowed a significant increase in the RECs' size, up to the medium-voltage substation and renewable generation plants up to 1 MWp each. The news was welcomed with enthusiasm among citizens, associations, and stakeholders working on environmental and social issues, as a bigger size of the RECs was expected to yield benefits in terms of scale economies and lower administrative burdens.

Step 3: missing implementing acts leave Italian RECs in the provisional framework

Before the new, bigger RECs were actually allowed to take off, however, three implementing acts had to be approved: a ministerial decree defining the new incentives, and two technical regulations defining the procedures for the registration and management of the RECs.

The ministerial decree, expected by June 2022, was only approved in December 2023 and published in January 2024¹¹, after one public consultation, a change in the government, several leaks, and much gossiping. One of the technical regulations was approved at the end of January 2024, the other one is still missing at the time of writing. The latter is, of course, the one providing the most important details for each REC's business plan.

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As a result, by mid February 2024, five years after the approval of Directive (EU) 2018/2001 and two years after the introduction of the final framework in the Italian legislation, Italian RECs are still stuck in the provisional setting.

Energia Nostra: insights from a practical experience

The journey of Energia Nostra, the REC I am contributing to build together with six other residents of Cormons, a town of around 7'000 inhabitants in the hills of Friuli Venezia Giulia, developed in parallel with the Italian legislation. It is thus interesting to sum it up and get some insights into what is working and what is not.

From the idea to the decision

In Spring 2022, under the expectation of a quick implementation of the final legislation for RECs, I started discussing the possibility of building a REC together with a small group of local citizens interested in environmental protection. Our goals were:

- Increasing the use of renewables at the local level,
- Engaging households and firms in the energy transition,
- Collecting resources to protect weaker citizens or support projects of local relevance,
- Facilitating the use of roofs, parking lots and similar spaces for new photovoltaic installations, in order to protect landscapes and ecosystems.

Our working group first got in touch with our neighbours of the above mentioned RECOCER, that, as a pilot project, had received 5.4 million euros from the regional government to register a small REC under the provisional legislation, and experiment with this new framework¹². Their REC was too small to pay its administrative costs without external support, but they were optimistic that the final legislation would have been adopted soon, and suggested to start informing the residents and collecting informal memberships.

In October 2022, with the help of the local branch of Legambiente, we organized our first public event, gathering around 130 citizens, entrepreneurs, and stakeholders. The worries for the skyrocketing energy prices of Summer 2022 obviously helped raising interest toward our project, but we were impressed by this positive response, and decided to go on.

One year of work

In February 2023 we officially registered our association, drafted our statute, opened a bank account, subscribed an insurance for our information events, set up a website¹³ and opened our social media accounts. The ministerial decree allowing RECs to start operations was still missing, but at least the map of the medium voltage substations had finally been published, and we were thus able to focus on the most suitable area. It turned out, indeed, that our municipality was split in two substations. The bulk of it, including two thirds of the residents and a small industrial park, belonged to a

substation covering seven other smaller municipalities – all in all, around 25'000 residents. We decided to start with this area.

Between April and November 2023 we organized eight information events in Cormons and the neighbouring villages covered by the same substation, reaching around 500 people. We often received (moral) support from the mayors, but the burden of organizing, promoting, and conducting the events was entirely on our shoulders. We were also invited in events organized by other local stakeholders, such as Legambiente, the University of Udine, the local section of the Chamber of Commerce, and others. As the only expert in energy economics, I was lucky enough that the other six members of Energia Nostra, whose professional path has nothing to do with energy, were quick learners, and rapidly become able to present the project, explain technical details, and answer most questions on their own.

The challenges

The main challenges we faced were:

- Getting in touch with mayors and stakeholders,
- Organising and conducting information events in the various municipalities,
- Collecting funds to cover the cost of these activities,
- Explaining to the audience that our project had a social and environmental purpose, rather than a commercial one.

The latter point may seem trivial, but it is not, as most Italian residents receive frequent phone calls or e-mails from energy suppliers, installers of photovoltaic panels, energy service companies, and other commercial entities broadly associated to the energy field. For the layperson, it is often difficult to see the difference between these offers and a grassroots initiative like ours, that is entirely based on volunteering and aims at environmental and social outcomes.

The first outcomes

By the end of 2023, the outcome of our effort was the following: 116 among households and companies had informally registered for the REC, 80 of which were based in the appropriate geographical area. Together, these 80 prospective members held 329 kWp of photovoltaic generation capacity, and their net consumption summed up to 690 MWh per year. No municipality had joined our REC, first due to the incomplete legislative framework, and secondly because of some uncertainties regarding the legal conditions under which a municipality could join a REC set up by a different entity. It turned out that the best legal entity to register and manage a grassroots REC is a cooperative, but setting up a cooperative requires approximately 3'000 euros, that we decided not to pay before having a complete picture of the legislative framework.

The ministerial decree and its problems

And then, in December 2023, the ministerial decree was published and our project got stuck, at least temporarily, like many others with which we had been in touch.

The ministerial decree, indeed, set up relatively generous incentives for the “shared energy” of RECs, and provided a grant up to 40% of the investment cost to investors in new renewable generation capacities within RECs located in municipalities with less than 5'000 residents.

Next to this positive aspect came some major problems.

First and foremost, while the primary legislation published in November 2021 stated that all renewable-based plants below 1 MWp starting operations after December 15th 2021 could join a REC, the ministerial decree seems to suggest that the incentive for the “shared energy” is only paid for the productions of the new renewable-based plants that start operations “after the registration of the REC”. It is understandable that the Ministry is only willing to incentivize new plants developed within the framework of a REC, but the delay in the completion of the legislative framework has been such that the underpinnings of this provision are, at the very least, shaky. The ministerial decree is not entirely clear on this point, and we'll need to wait for the last piece of technical regulation to discover what will happen. It is obvious, however, that this point is crucial for both the investors who have built their own plant during 2022 and 2023, and the RECs in which they are engaged. In Energia Nostra, we estimated that 169 kWp of the 326 kWp of renewable-based generation capacity that joined our REC might receive the incentive according on the legislative decree of November 2021, but only 8.3 kWp would be entitled to the incentive pursuant to what we seem to read in the ministerial decree of December 2023.

Secondly, while the ministerial decree provides generous funding for new renewable-based plants joining RECs in municipalities with less than 5'000 residents, it is not clear if each municipality will need to have its own REC. If so, this could hinder the exploitation of scale economies and thus the success of RECs in rural areas. Moreover, there is no funding at all for setting up the REC itself, a challenge that is often beyond reach for short-staffed local administrations or groups of goodwill citizens. These two aspects, combined to the fact that the funding for new plants should be requested already by March 31st 2025 and the new plants should be commissioned by June 30th 2026, may seriously undermine the success of this provision.

A third negative aspect comes from the interaction between the ministerial decree and the support schemes for renewables set up, often hastily, by the national and regional governments in the past four years. The ministerial decree (correctly) suggests that new renewable-based plants receiving any grant exceeding 40% of the investment cost may join RECs, but they are not entitled to any incentive for the “shared energy”. In the aftermath of the Covid crisis, however,

the national government introduced the “Superbonus 110%”¹⁴, a stimulus to building renovation that provides a fiscal rebate up to 110% of the investment cost, and set up a number of grants for companies investing in renewables through the National Recovery and Resilience Plan. The government of Friuli Venezia Giulia, the region in which Energia Nostra is located, also introduced a grant up to 40% of the investment cost for families and firms investing in renewables¹⁵, and allowed this support scheme to be added on top of the ordinary 50% fiscal rebate provided by the national legislation for the investments in renewables that do not qualify for the “Superbonus 110%”. As for the other Italian regions, while it is hard to compile a list of the different support schemes, it is also well known that most administrations set up comparable, albeit less generous measures. As a result, any owner of a new renewable generation plant needs to choose between these grants and fiscal rebates, providing quick refunds based on the investment costs, and the uncertain outcome of the REC incentive, that depends on the hourly production and consumption profile of a community of producers, prosumers, and consumers. It is rather obvious who is going to win this contest, and how support schemes favouring individual investment will crowd-out the incentives set up for RECs.

When the going gets tough, the tough must get going

What does this mean for Energia Nostra and the other grassroots initiatives at the starting line? It is still too early to draw conclusions, first of all because the most crucial question, that is, which new plants will be entitled to receive the incentive, is still to be clarified in the missing piece of technical regulation.

Our back of the envelope estimates suggest that if all plants commissioned after December 15th 2021 will receive the incentive, our initial configuration will receive approximately 14'000 euros per year, a decent basis on which we may be able to grow. Otherwise, we would have to start with as little as 800 euros per year, hardly worth the effort. The picture may change if, as we hope, some bigger investors not benefitting from additional support schemes should join our community later on... but hard work will be needed to get things done.

So what? Missing steps and lessons learned

The future of RECs in Italy is not (yet) doomed, but these initiatives, including Energia Nostra, will have to navigate carefully through the many obstacles and delays outlined above.

It is hard to see how small or medium-sized municipalities might develop, in just a few years, the technical skills needed to set up their own RECs ensuring transparency and democracy for their citizens. Energy service companies may play a role in supporting municipalities and other local stakeholders, but it is unclear to what extent they will be seen as a reliable partner by households and small firms. Environmental organisations and local associations could be able to fill the trust gap, but they will need to work on educating their

members and sharing best practices to overcome the technical challenges entailed in the construction of a REC. A general lack of transparency about the RECs that completed or failed the registration process does not help the many people working on these projects. All in all, the Italian framework for RECs does not seem able to actually bring citizens on board of the energy transition, and thus fulfil the main goal of RECs according to Directive (EU) 2018/2001.

While Italy is well positioned to face the technical and financial challenges of the energy transition, a lot is missing in the social dimension. More work should be done in designing policies that favour democratic processes and active participation of households and business consumers, and in coordinating national and regional support schemes to avoid undesirable outcomes.

Footnotes

¹ Directive (EU) 2018/2001.

² Legambiente, 2021: "Comunità rinnovabili 2021", (<https://www.legambiente.it/wp-content/uploads/2021/07/Comunita-Rinnovabili-2021.pdf>).

³ Qualenergia, 2023: "Comunità energetiche, ad oggi 54 esistenti e quasi cento in formazione" (<https://www.qualenergia.it/articoli/comunita-energetiche-oggi-54-esistenti-quasi-cento-formazione/>).

⁴ <https://www.italiadomani.gov.it/it/Interventi/investimenti/promozione-rinnovabili-per-le-comunita-energetiche-e-l-auto-consumo.html>.

⁵ Gramigni N., 2023: "Comunità energetiche, ecco la mappa dei progetti nelle principali città italiane", Il Sole 24 Ore, March 23rd 2023 (https://www.ilssole24ore.com/art/comunita-energetiche-ecco-mappa-progetti-principali-citta-italiane-AEh0Y54C?refresh_ce); D'Alessandro J., 2023: "Il ministro Pichetto Fratin: "Nel 2030 due terzi dell'energia dalle rinnovabili. Ma il gas ci accompagnerà fino al 2050", La Repubblica, June 10th 2023, (https://www.repubblica.it/green-and-blue/dossier/festival-greenandblue-2023/2023/06/10/news/earth_for_all_gilberto_pichetto_fratin_gas_rinnovabili_2050-403474096/).

⁶ Law-decree 162/2019.

⁷ A prosumer is a consumer who also owns a renewable-based generation plant serving its own consumption.

⁸ De Vidovich L., Tricarico L., Zulianello M., 2021: "Community energy map - Una ricognizione delle prime esperienze di comunità energetiche rinnovabili", Franco Angeli.

⁹ Motz A., Petrovich B., Ballabio A., Traini S., Bianchini R., 2022: "Comunità energetiche: soluzione per tutti o per pochi?", Laboratorio Ref Ricerche, Position Paper Transizione Energetica n. 221.

¹⁰ Legislative decree 199/2021.

¹¹ Decreto del Ministero dell'Ambiente e della Sicurezza Energetica 7 dicembre 2023.

¹² <https://www.regione.fvg.it/rafvig/comunicati/comunicato.act;jsessionid=4D8B6F9CFB433BB7FD1C7BD567DBFF3F?-dir=&nm=20210828195831005>.

¹³ www.energianostra.it

¹⁴ Law-decree 34/2020 and prorogations.

¹⁵ Regional law 1/2023, Regione Autonoma Friuli Venezia Giulia.