THE ROLE OF MUNICIPALITIES IN THE ENERGY TRANSITION:

5 STEPS, 5 BENEFITS

Renewable energy and efficiency solutions & benefits - **a checklist for Italian municipalities**

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Italy's reliance on fossil fuels has increased energy costs, worsened health and environmental issues, and deepened energy poverty for households across the country.

The global energy crisis and rising fossil gas electricity costs in recent years have exacerbated poverty and highlighted the urgent need for energy independence. Relying on fossil fuels not only causes air, water, and soil pollution but also exposes large sections of society to economic and geopolitical instability. Moreover, the escalating frequency and severity of extreme weather events to which all Italian regions are increasingly exposed—such as heatwaves, droughts, floods, and wildfires—are caused or amplified by the unsustainable extraction and use of fossil fuel-based products. These events threaten the security and livelihoods of our communities and require immediate action at the local level.

In 2023, 2.3 million families—7.7% of all households in Italy—faced energy poverty. At the same time, Italy still has vast untapped potential for renewable energy, particularly from solar and wind sources. To meet the country's 2030 climate targets, renewables *will need to account for 39.4% of total energy consumption and 63.4% of electricity generation.*

If led by local actors with meaningful community engagement and fair benefit-sharing, Italy's energy transition could exceed these goals while simultaneously addressing energy poverty and other related social challenges, such as the impact on the health of the most vulnerable, and isolation and discrimination in access to education and public life.

Savings from reducing fossil fuel imports can be reinvested in strengthening national infrastructure (e.g., bridges, roads, water systems, electricity grids, and buildings) against both human-made and natural disasters, as well as in climate adaptation measures. These funds can support long-term mechanisms to help citizens and small businesses struggling with energy costs.

This document outlines the key steps that municipalities—Italy's governing bodies closest to the citizens—can take to drive the energy transition within their jurisdictions. It also provides Italian and European examples of how the transition can serve regions, cities and their people, and how the benefits of this transformation can be equitably distributed, improving quality of life in cities across the country.

5 STEPS MUNICIPALITIES CAN TAKE TO ACCELERATE THE ENERGY TRANSITION

[1] Piano Nazionale Integrato Energia e Clima (PNIEC), Luglio 2024, *https://www.mase.gov.it/energia/energia-e-clima-2030*

1

IMPROVE ENERGY EFFICIENCY IN PUBLIC INFRASTRUCTURE

Italy has made significant progress in energy efficiency, but renovations are proceeding slowly and 75% of buildings are in the lowest energy classes (E, F, G). Many public buildings still rely on outdated, inefficient systems, leading to high energy costs and unnecessary, harmful emissions. Upgrading municipal infrastructure not only cuts bills but also enhances local sustainability efforts and supports Italy's climate goals.

THE FOLLOWING MEASURES CAN HELP ITALIAN MUNICIPALITIES LEAD THE WAY IN ENERGY EFFICIENCY:

- Retrofit municipal buildings (schools, libraries, gyms, etc.) with electrification and energy efficiency solutions (stop installing gas boilers).

  > *Check out GSE incentives* for heat pumps and energy-saving measures.

- Introduce behavioral guidelines to reduce energy waste in public facilities.
- Use public building renovations as educational showcases for sustainability.
- Optimise public lighting to cut consumption and bills.

Hauts-de-France, France: The "***Pass Renovation" project*** is a technical and financial initiative launched in 12 communities by the regional Public Service for Energy Efficiency (PSEE). PSEE provides advanced financing for renovation work, which beneficiaries pay back through the energy savings generated on their bills, creating a self-sufficient economic model. Since 2014, the project has invested around EUR 67 million, renovating over 800 single-family houses, 600 households, and 2,200 flats. As a result, living conditions have improved by 26%, energy consumption has been halved and 63% of the houses have seen an improvement of at least two classes in energy ratings. The project supports owners, craftsmen, local authorities and innovators in the region.

2

EXPAND RENEWABLE ENERGY USE AND CLEAN FLEXIBILITY ON PUBLIC AND PRIVATE BUILDINGS

Italy has immense potential for solar energy, yet many rooftops and public spaces remain untapped. National programmes have helped drive adoption and from 2022, new or renovated private buildings must be covered by 60% renewable energy (65% for public buildings). However, further efforts are needed to simplify bureaucracy and incentivise installations. Increasing the use of renewable energy on public and private buildings reduces dependence on fossil gas, lowers electricity costs and contributes to national renewable energy targets.

SUGGESTED MEASURES:

- Install solar panels on public buildings and parking lots.
- Streamline permits for public and private solar installations.
- Provide incentives for the installation of widespread photovoltaic systems in domestic and condominium systems (promote the available resources in Reddito Energetico). (e.g., *Energy Income support*).
- Adopt *Green Public Procurement* to integrate energy efficiency and renewable energy solutions into your purchasing system, and to improve the environmental quality of your supplies and contracts.
- Integrate clean flexibility into local energy planning such as energy storage systems and shifting demand toward moments of high renewable energy offer.

GOOD PRACTICE EXAMPLES

Ravenna, Italy: In 2024, Ravenna's ***Teatro Alighieri*** received the go-ahead from the Superintendency to install 156 red solar panels on the roof of the city's historic theatre. Their colour was chosen to allow the panels to blend in with the historic roof tiles.

Florence, Italy: In 2022, the municipality removed ***installation restrictions for solar panels*** outside the UNESCO historic centre to speed up deployment.

Milan and Roma, Italy: The ***RomeFlex*** and ***MindFlex*** pilot projects, promoted by Areti and Unareti respectively, test local clean flexibility solutions, i.e. the ability to intelligently modulate electricity consumption and input in order to better manage the grid, reduce overloads and integrate renewable energy sources. In practice, through a market platform (MLF - Market Local Flexibility), citizens, companies and other actors can offer their willingness to temporarily reduce or increase energy use in exchange for a fee. This avoids costly infrastructural interventions on the grid and enhances the active participation of the territory. The projects demonstrate how a local flexibility market can also be activated at municipal level, facilitating the transition to a more sustainable and resilient electricity system.

3

ELECTRIFY LOCAL PUBLIC TRANSPORT AND MUNICIPAL FLEETS

Italian cities face challenges related to air pollution and carbon emissions from transport, making the transition to electric mobility a crucial step in achieving sustainability goals. Despite efforts to promote a homogeneous and coordinated approach to the preparation of *Sustainable Urban Mobility* Plans throughout the country, progress is often slowed down by infrastructural deficiencies and bureaucratic obstacles.

SUGGESTED MEASURES:

- Replace diesel buses and municipal vehicles with electric alternatives.
- Expand public charging infrastructure.
- Promote sustainable, clean and innovative modes of transport, such as e-cars, e-bicycles, e-scooters and car- and bike-sharing platforms, which offer environmental and efficiency benefits.
- Promote more and safer walking and cycling infrastructure that incentivise citizens to avoid using their private cars for short journeys.

GOOD PRACTICE EXAMPLES

Milan, Italy: By the end of 2024, the operator that manages the city's public transport system, ATM Milan, had built up a fleet of 300 electric buses out of a total of 1,200 vehicles. The Milanese transport company's goal is well known: to achieve a completely *zero emissions fleet* by 2030.

At a EU level, nearly half (49%) of all new buses bought in 2024 were zero-emission (ZE), making city buses one of the early success stories of the European Green Deal. Because battery electric buses have lower operating costs, they made up 42% of Italy's new bus fleet, while hydrogen fuel cell buses made up only 2% of new Italian city buses in 2024.

Bologna, Italy: For years, Bologna has also positioned itself as a leader in public transport, offering its residents a ***fleet of cars, scooters and e-bikes*** powered entirely by 100% renewable energy. To encourage their use, the city offers a promotion to public transport season ticket holders, who can also take advantage of two free rentals per day of these shared electric vehicles.

4

ESTABLISH AND SUPPORT RENEWABLE ENERGY COMMUNITIES (CERs)

Renewable Energy Communities (Comunità Energetiche Rinnovabili, CERs) allow citizens, businesses, and municipalities to collectively produce, share, and consume clean energy. Despite available *incentives and funding programs*, red tape and financial barriers pose a challenge. Municipalities can support CERs by providing space, simplifying procedures, and facilitating access to funding.

SUGGESTED MEASURES:

- Grant public rooftops and spaces to CERs.
- Help local actors (citizens, companies and associations) join CERs for collective self-consumption.

  > *Legambiente's guide* for small towns on setting up CERs.

- Municipalities under 5,000 inhabitants *can apply for funding* (40% of funding for solar panels in renewable energy communities) before the deadline 30/11/2025. The threshold will soon rise to 30,000 inhabitants.
- Support energy communities' access to finance, for example by guiding them to access regional funds.

  > Emilia-Romagna provides all information and contact details on its *web portal.* This easy accessibility encourages citizens to apply.

GOOD PRACTICE EXAMPLES

Campania, Italy: In 2024, the municipalities of San Giuseppe Vesuviano, Palma Campania, San Gennaro Vesuviano and Striano in Campania launched a joint pilot project (UCSA - Municipal Office for Environmental Sustainability), installing photovoltaic systems on public rooftops to share renewable energy with members of the energy community. The project involves 200 households, including vulnerable families, who can receive a share of the incentives generated based on the amount of energy produced by the photovoltaic systems and consumed by the members. UCSA is also promoting the installation of renewable energy sources in public buildings and spaces confiscated from criminal associations. ***UCSA is assessing the activation of a "one-stop shop" in each of the 4 municipalities involved in the project.***

Valencia, Spain: Valencia aims to establish 100 Energy Communities by 2030, focusing on fuel poverty prevention and the 'Right to Energy.' The city council's efforts include setting up an Energy Office in the Ayora neighborhood, and offering support and workshops on renewable energy. Two new Energy Communities have formed, benefiting from municipal guidance and resources. The initiative promotes citizen participation in energy production, sharing, and consumption, aligning with Valencia's climate strategy. The city's collaborative approach involves various stakeholders to ensure a comprehensive energy transition.

5

ENSURE COMMUNITY INVOLVEMENT AND FAIR BENEFIT SHARING

A just and inclusive energy transition in Italy requires direct community engagement and fair distribution of benefits. Many municipalities are already setting up energy desks or one-stop shops to provide residents with technical guidance, financial support, and assistance in accessing national and regional incentives. Additionally, renewable energy projects can actively contribute to reducing energy poverty, ensuring that low-income households and public housing benefit from clean and affordable energy. Transparent planning and economic benefit-sharing also help build local support for large-scale renewable energy developments.

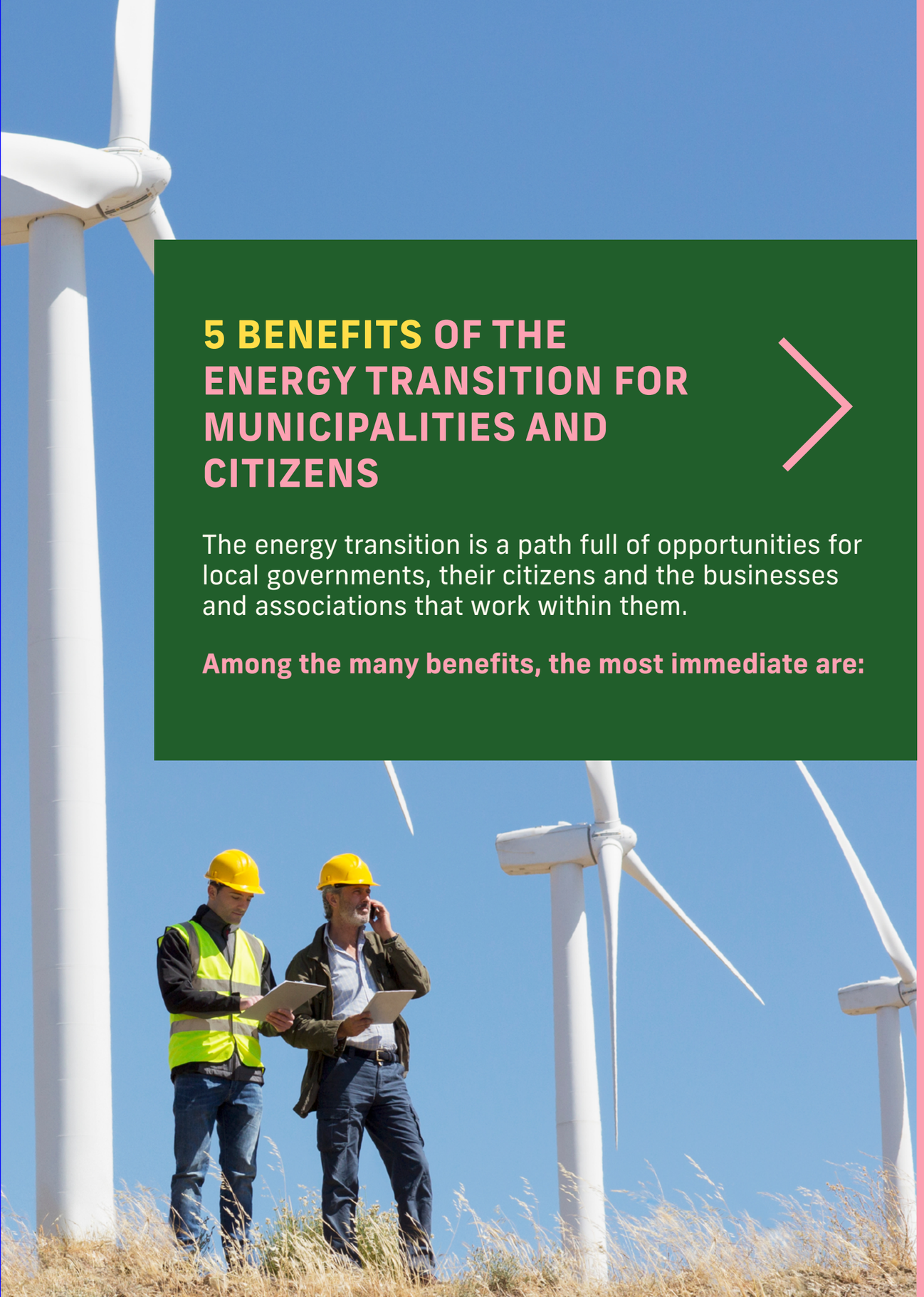
SUGGESTED MEASURES:

- Support and encourage residents by creating an energy desk or one-stop shop for technical support and funding.
- Use this one-stop-shop to support home energy audits and heat pump adoption.
- Integrate renewable energy sources into plans to mitigate local energy poverty, ensuring that low-income households and public housing have access to clean, affordable energy through renewable energy projects in the municipality.
- Ensure that your residents are engaged in the planning of large-scale renewable energy projects, and that these projects bring economic benefits to your entire community.

GOOD PRACTICE EXAMPLES

Bolzano, Italy: Since 2017, the municipality of Bolzano has set up an ***Energy Desk*** service open to all citizens. The main objectives of the service are: 1) to provide information on energy efficiency measures that citizens can carry out in their homes (purchase of new appliances, lamps, etc.) and in their buildings (insulation, replacement of window frames, etc.); 2) to provide technical assistance to identify the most appropriate solution and guidance on the possible costs of the intervention; 3) to provide information on the economic incentives available at national and local level.

Lubián, Spain: In Castilla y León, Lubián is a municipality in the community of Alta Sanabria, located in north Zamora. The resources generated by the installation of wind farms have been managed by the town hall and the neighbourhood councils. Both of them have worked together for the sake of the municipality and its six villages. The neighbourhood councils have invested in different actions and goods in the interest of the community, for example a swimming pool in Hedroso, the cultural centre and canteen in Aciberos, a space for cultural activities, a padel tennis court, a park for both children and the elderly, and the restoration of the parish church in Lubián.



5 BENEFITS OF THE ENERGY TRANSITION FOR MUNICIPALITIES AND CITIZENS

The energy transition is a path full of opportunities for local governments, their citizens and the businesses and associations that work within them.

Among the many benefits, the most immediate are:

1

SAVES RESIDENTS MONEY, BRINGS IN MONEY FOR COMMUNITIES

Energy efficiency measures and the use of renewable energy sources lead to lasting cost savings. By reducing energy bills, municipalities can allocate more resources to public services and the development of social policies. In this way, municipalities are less affected by price changes related to fossil fuels and can make better budget planning with renewable energy sources. Supporting residents to deploy renewables can make a difference to their monthly costs and lead to a more resilient thriving local economy.

In addition, aligning municipal policies with EU directives and national renewable energy targets can help municipalities access funding and incentives. When municipalities lead by example with support for clean energy and public transportation electrification, they can attract new investments through public-private partnerships.

2

BOOSTS LOCAL EMPLOYMENT

Retrofitting buildings, installing renewables, and developing charging and storage systems create local employment opportunities. These projects strengthen the local economy by providing work opportunities in various fields, such as assembly, maintenance and management of the new infrastructure.

3

IMPROVES COMMUNITY RESILIENCE

The energy transition provides municipalities with higher resilience against crises in energy supply by reducing dependence on imported fossil fuels. By increasing local energy production and energy storage capacity, it ensures that residents and businesses have access to uninterrupted energy and can plan for the long term because of stable energy prices. Electrifying public transport and municipal fleets ensures stable running costs and improves resilience to price volatility and fuel supply disruptions.

After earthquakes and unnatural climate disasters (such as increased flooding in urban areas), uninterrupted energy supply is of vital importance. Local governments can increase the safety of the local community by providing electricity security in emergencies through renewable energy sources and energy storage systems; this can accelerate the post-disaster recovery process.

4

ENHANCES PUBLIC HEALTH AND LIVABILITY

Reducing fossil fuel use in buildings and transport also improves air quality by lowering air pollution, thereby enhancing community health. This, in turn, significantly reduces public spending on health. Cleaner air and quieter streets increase community safety and well-being, improve quality of life and make cities more pleasant and healthy places to live and work.

5

EMPOWERED, ENGAGED COMMUNITIES

By demonstrating practical ways to save and produce energy, local governments can inspire and empower communities to take a more active role in the energy transition.

Energy-sharing initiatives and one-stop shops enable residents to participate in and directly benefit from the energy transition. Addressing energy poverty through targeted programmes ensures vulnerable households benefit from efficiency measures and renewable energy.

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