



# CITY OF NIEPOŁOMICE

## Building a Just and Citizen-Driven Energy Transition

Country	CS	NUTS 3	LAU 2	Type	Population 2023	Area 2023 (km <sup>2</sup> )	GDP NUTS 3 2022 (mil. €)	GHG (CO <sub>2</sub> e) NUTS 3 2022 (t per capita)	Share of RES (NUTS2)	Share of FVE (NUTS2)	Share of wind energy (NUTS2)
PL	City of Niepołomice	PL214	PL_10011212 01904	LAU 2	32781	96	9399,02	10,33847391	6,95%	0,44%	0,00%

### Introduction & Region Description

Niepołomice is a dynamic and forward-thinking municipality located in the Małopolskie Voivodeship in southern Poland, approximately 25 kilometres east of Kraków. With a population of around 30,000 and a mix of urban and rural characteristics, the municipality forms part of the Kraków Metropolitan Area and is strategically positioned within one of Poland's most economically vibrant regions. Over the past two decades, Niepołomice has effectively used its location, strong local governance, and access to European funding to implement a wide range of infrastructure and environmental improvements.

Historically the municipality known for its royal heritage and natural assets, including the Niepołomice Forest and the Vistula River, has become a model of sustainable local development. It is widely recognised for its proactive approach to environmental governance, participatory planning, and its pioneering role in the local energy transition. Niepołomice was one of the first municipalities in Poland to join the Covenant of Mayors initiative in 2009, showing the first signs of ambitions and approach to climate and energy goals at the European level.

The municipality's energy transition efforts have been defined in a series of forward-looking planning documents and policy frameworks, which evolved from an early focus on infrastructure and emission reduction to a broader strategy of resilience, citizen empowerment, and environmental justice.

[The municipality's sustainability efforts began](#) in the period from 2006 to 2009, when it implemented an integrated water supply and sewage system for the town and the eastern part of the commune. Over time, Niepołomice has become a regional leader in renewable energy deployment, air quality monitoring, and community engagement in energy planning. Its achievements include the widespread installation of solar thermal and photovoltaic systems, innovative models of citizen-led energy cooperatives, and dedicated programs to support low-income households affected by energy poverty.

Nowadays, the municipality keeps improving its energy and environmental work by adding climate adaptation, public health, better management, and youth involvement. Niepołomice's progress shows how technical solutions can go hand-in-hand with local values, fairness, and community spirit - providing good examples for other small and mid-sized towns in Central Europe.

### Key Regional Characteristics

- **Location:** Part of the Kraków Metropolitan Area, benefiting from strong regional connections and the region's dynamic development.
- **Governance & Funding:** Proactive local administration with early climate commitments and effective use of EU funds.
- **Community-Centred Transition:** Frontrunner in citizen-led energy initiatives, includes social equity, energy cooperatives, and energy poverty reduction.

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## Motivation & Objectives

### Motivation for the Change

Niepołomice's commitment to sustainable energy and climate action began as a response to pressing local challenges: poor air and water quality, outdated infrastructure, and rising energy costs. These issues became particularly urgent due to the municipality's rapid development, growing population, and its location within one of Małopolska's most industrially and ecologically sensitive areas.

The town's decision to join the Covenant of Mayors in 2009 was a major turning point, committing Niepołomice to exceed EU climate and energy targets by reducing CO<sub>2</sub> emissions by at least 20% by 2020. As part of this commitment, the municipality developed its first [Plan of Action for Sustainable Energy \(PGN\) in 2010](#). The PGN provided the first comprehensive analysis of local energy use and emissions, setting specific reduction goals and laying out specific actions across multiple sectors, e.g. public buildings and housing, transport and street lighting. The plan also introduced an early focus on citizen awareness, monitoring, and educational campaigns.

Since then, Niepołomice's motivations have deepened. It has no longer been just environmental pressures but also social challenges such as energy poverty that have become more visible, especially among elderly residents, low-income families, and more recently, Ukrainian refugees. These facts have pushed the municipality to see the energy transition not just as a technical challenge but as a social one.

### Strategic Objectives

Each strategic document adopted over the years reflects this growing ambition:

- The [2015 Low-Emission Economy Plan](#) focused on reducing emissions and energy consumption, promoting building retrofits, renewable energy use, and sustainable mobility.
- The [2021 Local Development Strategy](#) reframed environmental goals as part of a wider agenda of community well-being, local identity, and intergenerational cooperation under the theme of "Environmental Responsibility".
- The [2024-2027 Environmental Protection Programme](#) introduces a more integrated and adaptive approach, emphasising climate resilience, air quality improvement, citizen engagement, and environmental health, with a planning horizon extending to 2031.

## Policy & Institutional Framework

Niepołomice's energy transition is grounded in a robust and evolving policy framework that aligns local actions with national priorities and European climate objectives.

The municipality's journey began in 2010 with the adoption of its first [Plan of Action for Sustainable Energy \(PGN\)](#), which set the initial climate goals and laid the groundwork for future action. This effort gained momentum in 2015 with the [Low-Emission Economy Plan \(Plan Gospodarki Niskoemisyjnej\)](#). That plan established a detailed inventory of greenhouse gas emissions, setting clear targets for CO<sub>2</sub> reduction and energy savings, and outlining practical measures for building retrofits, renewable energy development, sustainable transport, and waste management. It also introduced coordination and monitoring mechanisms that enabled more integrated, cross-sectoral implementation.

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## Policy & Institutional Framework

This early work was significantly expanded with the adoption of the 2021 [Strategy for the Development of the City and Commune of Niepołomice](#). In this strategy, environmental sustainability was elevated to one of four key pillars of local development. Rather than being seen as a standalone issue, sustainability became part of a broader vision focused on territorial identity, citizen involvement, and inclusive growth. The strategy promoted energy cooperatives, decentralised governance, and ecological education under the banner of “*Odpowiedzialność za środowisko*” (Environmental Responsibility).

Building on this foundation, the [2024–2027 Environmental Protection Programme](#), with a planning outlook to 2031, signals a shift toward climate resilience and environmental justice. It broadens the municipality’s policy tools to include climate adaptation, smart environmental monitoring, and expanded eco-advisory services. The programme also strengthens the integration of environmental action with public health, noise protection, and spatial planning - framing sustainability not just as a government task, but as a collective effort shared across the community.

These policies are complemented by Niepołomice’s participation in European and regional initiatives such as the Covenant of Mayors, the Energy Poverty Advisory Hub (EPAH), and the EU LIFE Programme (via POWERYOUTH).

## Institutional Responsibilities

Institution	Role
Municipality of Niepołomice	Lead and coordinate planning, implementation, and community engagement
Partner Municipalities	Collaborate on joint procurement, technical capacity building, and shared project execution
NGOs and Technical Consultants	Provide expert support, outreach, and facilitation of citizen participation
Local Households and Homeowners	Active participants and beneficiaries in cooperatives and energy efficiency initiatives
Energy Poverty Advisory Hub (EPAH)	Supplies technical guidance and capacity building for anti-poverty and cooperative programmes
Niepołomice Energy Cooperative	Citizen-led structure for local renewable energy production and co-governance (est. 2022)

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## Financing

Niepołomice's energy transition has been made possible through a well-structured and diversified financial approach. The municipality has effectively combined EU, national, regional, and local funding sources, while also introducing cooperative and citizen-led financing models.

### Financial Model

- Mix of **EU structural and regional funds**, including Cohesion Fund, Swiss-Polish Cooperation Programme, and European Funds for Małopolska.
- **National and regional funding** streams supporting building upgrades, renewable energy systems, and climate adaptation.
- Use of **collective procurement** to reduce technology and installation costs.
- **Municipal budget contributions** to co-finance projects and provide match funding for EU-supported initiatives.
- Establishment of the [Niepołomice Energy Cooperative](#) in 2022, enabling:
  - Citizen co-investment in shared photovoltaic infrastructure
  - Public-private-citizen financing models
  - Inclusion of low-income households without upfront financial contributions

### Incentives and Support Mechanisms

- Subsidies and co-financing schemes for residential solar installations (available since 2013).
- Incentive programmes for replacing outdated coal-based heating systems.
- Support for cooperative participation, including administrative, legal, and financial assistance.
- Energy-saving device distribution and small-scale efficiency upgrades for vulnerable households.
- Eco-advisory services providing guidance on accessing funding and completing applications.

## Stakeholders Community Engagement

The municipality has developed a very thorough participatory approach that brings together residents, local organisations, and institutional partners. The strategy is based on the idea that the energy transition must be inclusive, democratic, and rooted in local values. Citizens of Niepołomice are actively engaged in the transition and contribute to the change.

Public awareness campaigns have played an important role, helping to build understanding of the environmental and financial benefits of solar energy, energy efficiency, and citizen-led energy solutions. Residents are being invited to regular workshops and educational events to learn about community energy models and explore opportunities for participation.

A particularly innovative element is the municipality's "[From Idea to Energy](#)" approach, which encourages citizens to take part in every stage of local energy projects - from concept development and investment to governance and ongoing use. This model has been exemplified in the creation of the Niepołomice Energy Cooperative, a citizen-led initiative launched in 2022 that fosters co-ownership of photovoltaic systems. In one of the cooperative's pilot projects, [ten households living in a shared apartment building co-invested in a PV installation](#), with support provided for one to three energy-poor families to join without financial contribution.

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Niepołomice has also implemented targeted programmes to address energy poverty, supported by the Energy Poverty Advisory Hub (EPAH). The municipality has offered on-site consultations, basic energy audits, and distributed energy-saving devices such as LED bulbs and thermostats to low-income households.

A central role in this community engagement model is played by the [municipality's eco-advisors](#), who provide trusted, personalised guidance to residents. Their advisory work has included more than 31,600 consultations - delivered in person, online, and by phone - and has been instrumental in building trust and opening access to funding and technical support.

Youth engagement has also emerged as a key priority. Through the [POWERYOUTH project](#), Niepołomice is actively involving its Youth City Council in shaping local energy initiatives. This EU LIFE-funded programme supports young people between the ages of 15 and 30 in developing the skills, tools, and platforms needed to lead the next generation of community energy efforts.

## Implementation Timeline

Phase	Timeline	Key Milestones
Foundational	2011-2017	Launched first large-scale RES projects; adopted PGN; joined Covenant of Mayors
Short-term	2022-2024	Established energy cooperative; piloted energy poverty programmes; expanded eco-advisory
Mid-term	2025-2030	Implementing local energy strategy; advancing adaptation and digital monitoring; youth engagement through POWERYOUTH
Long-term	2030-2040	Expanding energy self-sufficiency; embedding energy democracy; scaling community models

## Key Performance Indicators (KPIs)

Indicator	Target by 2027
CO <sub>2</sub> emissions reduction (compared to baseline year 2010)	20%
Increase in share of renewable energy in local energy mix (compared to 2010)	15%
Improvement in energy efficiency of public buildings (compared to 2010)	25%
Increase in share of low-emission vehicles in public transport	30%

These indicators are adopted from the 2024–2027 Environmental Protection Programme.

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## Transnational Cooperation

Although Niepołomice's energy transition is primarily locally driven, it has benefited significantly from regional and transnational collaboration, particularly in the early stages of renewable energy deployment and capacity building. These partnerships have strengthened technical expertise, expanded financial opportunities, and accelerated the diffusion of best practices across municipal boundaries.

One of the most impactful examples of this was Niepołomice's leadership role in the Swiss-Polish Cooperation Programme (2011–2017). As part of the project "[Clean and Healthy Energy in Communes](#)," Niepołomice worked closely with other five Polish municipalities to implement large-scale solar installations. This joint effort, co-financed by Swiss funding (CHF 14.4 million, equivalent of €15.5 mil), resulted in thousands of solar-thermal systems installed on both public and private buildings and laid the foundation for strong inter-municipal coordination on energy projects.

The municipality's experience also demonstrates the value of transnational knowledge exchange through its participation in EU-level initiatives. Niepołomice is actively involved in the Covenant of Mayors, aligning its local energy and climate goals with European targets and gaining access to shared tools, methodologies, and support platforms.

More recently, Niepołomice has benefited from its involvement in the [Energy Poverty Advisory Hub \(EPAH\)](#), which connects European municipalities facing similar challenges. Through this partnership (2023-2024), the city received tailored technical assistance to support energy-poor households and pilot inclusive energy cooperative models. Peer learning with other cities, such as Rybnik, has enriched the municipality's strategic planning and helped embed social equity into energy governance.

Finally, Niepołomice is currently piloting activities under the [EU LIFE-funded POWERYOUTH project](#) (2024-20206) in collaboration with the town of Kęty. This initiative promotes youth leadership in the energy transition through joint development of educational tools, participatory models, and community engagement strategies.

Through these efforts, Niepołomice continues to demonstrate that transnational and inter-municipal cooperation can play a vital role in building local capacity, scaling innovation, and ensuring that small municipalities are active contributors to Europe's broader climate goals.

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## Challenges & Risks

Air quality is of the most persistent challenges in the Małopolska region. Despite significant investment in renewable energy and cleaner heating systems, improving air quality remains a long-term task requiring coordinated action across sectors and municipalities.

A second pressing issue is energy poverty, which affects an estimated 200 households in the municipality. Ensuring that vulnerable residents - especially low-income families and newly arrived migrants - are not left behind in the energy transition is both a moral imperative and a practical challenge. While pilot programmes and technical assistance from the Energy Poverty Advisory Hub (EPAH) have provided a strong starting point, sustained support and structural solutions are still needed.

Initial public scepticism toward renewable energy and cooperative models also presented barriers, particularly in the early stages of implementation. This has been largely overcome through sustained outreach, trust-building, and the visibility of successful pilot projects. However, maintaining momentum and broadening participation will require continuous engagement.

From a financial perspective, Niepołomice's relies on external funding, especially from EU and national sources, and that could pose a risk to long-term continuity. While the municipality has been highly successful in securing project-based grants, ensuring stable, long-term financing for operational costs (e.g., eco-advisory services or maintenance of installed systems) remains a concern. Similarly, institutional capacity and staffing limitations also affect the speed and scope of implementation and could face other pressures of changing priorities. Use of established cooperation partners and support network, e.g. [Polish Network of Energy Cities](#), helps to mitigate such risk.

## Conclusions & Lessons Learned

### Key Findings

Over past two decades, the municipality has evolved from making foundational infrastructure investments to piloting inclusive, participatory energy governance models. This progress shows not only better technical and administrative skills, but also a clear effort to make sustainability a natural part of everyday life and local culture in the municipality.

What sets Niepołomice apart is its integrative approach that links renewable energy deployment with climate adaptation, energy poverty reduction, and youth engagement. The municipality has shown that success in the energy transition depends as much on people and partnerships as it does on technology. The interviewee no.33 praised the municipality efforts: *"They are working with EPAH on the energy poverty project, they make use of participatory processes and they are thinking of setting a second energy community."* Niepołomice has built a flexible and replicable model for local energy transition with aspects of social justice by actively engaging citizens, cleverly using available funds and cooperating with other municipalities and expert partners.

While challenges remain, particularly regarding air quality, funding continuity, and long-term maintenance, the town's proven record in testing and implementing various measures show a strong basis for future progress. Niepołomice is well-positioned to act as a reference point for other towns and regions across Central Europe that are seeking to localise climate action in inclusive and practical ways.

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## Lessons Learned

- **Citizen ownership is key.** Inclusive models like energy cooperatives help build trust and enable broad participation, especially when they are accessible to low-income households.
- **Start small, then scale.** Pilots such as the apartment-building PV system created low-risk opportunities to test, adapt, and expand.
- **Local advisors build momentum.** Dedicated eco-advisors have been essential in translating plans into action, helping residents navigate funding and overcome scepticism.
- **Cross-municipal cooperation adds value.** Collaborations with neighbouring towns and transnational platforms strengthen capacity, reduce costs, and create learning opportunities.
- **Youth involvement matters.** Engaging young people through structured initiatives like POWERYOUTH brings fresh ideas and builds long-term ownership of sustainability goals.
- **External funding is vital - but so is local continuity.** While project-based grants fuel innovation, local budgeting for ongoing services and maintenance is essential for sustainability.