



ComActivate

Enabling community action for energy sufficiency

NEIGHBOURHOOD ENERGY SUFFICIENCY ROADMAP

KAIŠIADORYS

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List of abbreviations

AC	Air Conditioning
EU	European Union
HVAC	Heating, Ventilation and Air Conditioning
HOAs	Homeowners Associations
MFABs	Multi-Family Apartment Buildings
NESR	Neighbourhood Energy Sufficiency Roadmap
PV	Photovoltaic
RC	Resource Centre



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1 INTRODUCTION

The ComActivate project, funded by the EU LIFE research programme, is a strategic initiative designed to respond to growing issue of energy poverty across Central and Eastern European countries. The ComActivate project continues the efforts of the ComAct project, implemented between 2020-2024, aiming to improve building energy efficiency as a major driver of energy poverty and climate change¹. With rising energy prices and widening economic disparities, vulnerable populations are increasingly at risk of becoming unable to afford adequate heating, cooling and electricity.

The project is being implemented in **four selected municipalities across three countries** to pilot innovative and community-based solutions:

- Bulgaria: Burgas Municipality
- Hungary: Józsefváros Municipality (District 8 of Budapest)
- Lithuania: Kaišiadorys Municipality and Elektrėnai Municipality.

These municipalities and their pilot areas were selected due to the substantial energy inefficiency of multi-family apartment buildings (MFABs) and the deteriorated condition of many structures, making them priority targets for improvements. Renovation efforts are constrained by a combination of structural, financial, governance and behavioural barriers.

Across Europe, a persistent challenge is the gap between the upfront investment required for building renovation and the financial capacity of individual households. This is particularly difficult in MFABs, where households within the same building may have different² financial circumstances. While some households may be able to finance their share of renovation costs, others may face significant difficulties in covering upfront costs or co-financing requirements. Public funding alone does not always solve this problem, highlighting the need for flexible financing and support mechanisms that can accommodate different financial capacities and enable renovations at building level.

Financial constraints are further reinforced by limited access to information, complex administrative procedures and a fragmented financing landscape. Older people and households with lower income may find it especially difficult to identify suitable renovation measures and funding options. These factors can make the renovation process overwhelming and discourage residents from taking action.

Decades of underinvestment have left much of the housing stock in Bulgaria, Hungary and Lithuania below acceptable energy standards. Nevertheless, building performance does not tell the whole story. Even where energy efficiency improvements have been made in recent years, absolute energy consumption is not going down because of the rebound effect. Household behaviour, must therefore, be considered alongside technical improvements.

Another challenge is the legacy of decades of centralised management, which shaped expectations that responsibility for building maintenance and upgrades rests primarily with the state. In many communities, this has contributed to limited initiative at the household level and made collective decision-making more difficult.

For municipalities, addressing these barriers requires more than technical solutions: it requires time, trust, effective communication and local capacity to help residents understand their options, make informed decisions and act together.

Addressing energy poverty therefore requires an integrated approach that combines investment in energy efficiency with accessible financing, straightforward procedures, reliable information and community engagement.

¹ EU and National Level Policy Analysis and Monitoring, ComActivate, January 2024

² Baseline Report on the State of the Art of Resource Centres in the Demonstration Sites, ComActivate, April 2024

In response to these challenges, ComActivate seeks to empower municipalities through targeted interventions, stakeholder engagement and capacity building activities. The project supports efforts to reduce energy poverty, improve energy efficiency and energy sufficiency in MFABs and providing pathways for renovation strategies that integrate renewable energy solutions.

This document, *the Neighbourhood Energy Sufficiency Roadmap(s)* (NESR), is one of the key deliverables of the ComActivate project. It is developed for each participating pilot municipality. The primary focus of this document is MFABs, although NESRs could be applied to a wide range of building types in the future, including public and commercial buildings.

2 OBJECTIVE OF THE ROADMAP

The NESR provides a practical, locally grounded plan for tackling energy poverty and strengthening resilience in each pilot areas. Rather than applying a single template, it is tailored to the socio-economic conditions and the housing stock of each area, so that the guidance is tailored to the specific needs and realities of each of pilot municipalities.

The primary objective of the NESRs is to define a clear and coherent vision for the **housing stock** in each pilot area, outlining concrete steps, activities and measures to reduce energy demand, improve housing quality and sustainability and ensure equitable access to adequate housing conditions for residents, particularly vulnerable households. It serves as a strategic tool to facilitate cooperation among key stakeholders through a structured and results-oriented approach. The approach also reflects European Union (EU) requirements, such as those in the Energy Performance of Buildings Directive (EU) 2024/175, so that each pilot area aligns with the broader strategic goal of achieving a highly-efficient and decarbonised buildings stock. This ensures consistency in implementation and enables measurable progress over time.

2.1 Energy Efficiency and Energy Sufficiency

Energy efficiency and energy sufficiency are the two main pillars of this NESR. They address energy use in different ways:

Energy efficiency is a key component of the EU's strategy to reduce energy consumption, lower costs and achieve climate neutrality by 2050. It involves using less energy to provide the same output or service, thereby minimizing energy waste, reducing energy costs and environmental impacts.

Key efficiency measures include:

- Improving building foundation and ceiling/roof insulation to enhance thermal performance and reduce heating and cooling demand
- Installing energy-efficient windows, doors and roof hatches to prevent heat loss and air leaks
- Installing solar photovoltaic (PV) systems to generate clean, renewable energy and reduce dependence on the grid
- Implementing smart thermostats to automatically optimize temperature settings
- Upgrading high-consumption products such as HVAC³ systems and water heaters.

³ HVAC – Heating, Ventilation and Air Conditioning

For citizens, energy efficiency interventions offer clear everyday benefits: lower energy bills, warmer and healthier homes. They also reduce dependence on imported energy and exposure to geopolitical tensions and price fluctuations in the energy market. Additionally, energy efficient buildings are better protected against rising energy costs and are more likely to retain their value.

Energy sufficiency. Energy efficiency reduces energy per unit of service, but continuous global energy demand keeps growing. The concept of energy sufficiency focuses on moderating energy demand and promoting equitable access, particularly for vulnerable or marginalized populations.

The Intergovernmental Panel on Climate Change defines sufficiency as: *"a set of measures and daily practices that avoid demand for energy, materials, land and water while delivering human well-being for all within planetary boundaries."*

Although energy sufficiency has not been formally adopted as a standalone directive or policy at the EU level (with the exception of France), it appears in many guidance documents, analytical frameworks and academic literature. Across these sources⁴, energy sufficiency is generally understood as changing everyday practices of resource use in ways that lower energy consumption without compromising quality of life or creating negative social or environmental impacts.

To better understand and apply the concept, sufficiency measures can be grouped into four categories⁵:

- **Dimensional sufficiency:** ensuring an energy service matches to its actual purpose (e.g. using a vehicle suited to the travel need rather than one larger or more powerful than necessary, heating only occupied rooms to the temperature required for their specific use, converting an oversized heated basement storage into an unheated bicycle storage area with natural ventilation, eliminating heating demand entirely; using passive cooling strategies, such as external shading and green infrastructure to reduce or eliminate the need for Air Conditioning (AC), etc.)
- **Cooperative sufficiency:** maximising the shared use of energy services to reduce overall consumption (e.g. car sharing, collective housing arrangements, etc.)
- **Usage sufficiency:** reducing the duration, intensity or frequency of energy-intensive activities and extending equipment lifespan through optimal use (e.g. lowering heating temperatures during unoccupied periods, elevator load management, etc.)
- **Organisational sufficiency:** rationalising the use of space and arranging both physical spaces and daily activities to minimise the need for transportation and resources (e.g. designing urban areas to reduce the distances required to access workplaces and essential public services, including the centralized accessible facilities specifically designed to accommodate elderly users and provide various public services within a single location).

Taken together, these four categories reflect a single idea with two boundaries. As a **minimum**, sufficiency guarantees decent living standards for everyone, ensuring that no household falls below the level of energy needed for a dignified life. As a **maximum**, it calls for avoiding unnecessary energy and resource use so that consumption stays within planetary boundaries⁶.

When putting sufficiency into practice, a clear hierarchy should guide decision-making⁷. The first priority is to preserve and make better use of existing buildings, while new construction should be considered

⁴ Source: <https://journal-buildingscities.org/articles/10.5334/bc.458>; https://enr-network.org/wp-content/uploads/Bohnenberger_EnergySufficiency_18.pdf

⁵ Source: <https://www.enerdata.net/publications/executive-briefing/eu-sufficiency-security-energy.html>

⁶ Prioritising Existing Buildings for People and Climate, BPIE, 2024

⁷ Ibid.

only as a last resort and designed according to sufficiency principles. This hierarchy is summarized in Table 1.

Table 1: Hierarchy of Sufficiency Options: From Most to Least Preferred

Tier	When it applies	Sufficiency solutions	Why it works
Tier 1 (most preferred) <i>“Optimize the existing building”</i>	• High heating bills • High summer electric bills for cooling • Some flats are vacant • Flats are under-occupied	• Match heated space to actual need • Use passive rather than active heating and cooling solutions • Identify why flats are vacant and bring them back into use • Offer support for flat exchanges (move into smaller flats)	• Heating only areas of the house actually used • External solar shading rather than/in addition to AC • Enabling and incentivising rightsizing to adjust space needs to actual needs or residents, reduce the amount of space that must be heated, cooled and lit, cutting energy demand at source rather than relying solely on efficiency improvements.
Tier 2 <i>“Use existing space and materials before adding anything”</i>	• Unused attic space • Empty commercial spaces on the ground floor • Vacant neighbouring office building • A nearby building is being demolished	• Convert attic space into additional flats • Convert unused commercial spaces into flats • Reuse materials such as bricks, timber, etc.	• Reusing existing building structures significantly reduces embodied energy by avoiding the production of new construction materials such as concrete, steel, etc. • Reusing bricks and timber from demolition avoids the energy of manufacturing new materials.
Tier 3 <i>“Least preferred, but if new construction is necessary, build in the most sufficient way”</i>	• A genuine need for new space remains after Tiers 1 and 2 have been fully explored.	• Use low-carbon materials (recycled, bio-based insulation, etc.) • Design flexible layouts with movable walls • Prioritise shared spaces over private ones	• Bio-based insulation such as wood fibre requires far less energy to be produced than conventional foams. • Positioning the building to capture sunlight and

Tier	When it applies	Sufficiency solutions	Why it works
			designing windows to let in the right amount of natural light and warmth cuts the need for heating and lighting. Flexible spatial configurations enable a building to be repurposed over time, avoiding the large energy cost of rebuilding later.

Building on this understanding, the ComActivate Project has developed a comprehensive interpretation of energy sufficiency based on the following principles:

- Equitable Distribution: Reduce energy demand among high consumers while ensuring adequate energy access for vulnerable households (dimensional and cooperative sufficiency at the household level).
- Behavioural Change: Promote energy-saving habits and discourage unnecessary energy consumption in everyday life (usage sufficiency).

This dual approach recognises that effective energy policy must address both climate goals and human well-being.

While each NESR is customized to reflect the unique circumstances of its respective urban area, the methodological approaches proposed in this document are fully transferable to other urban contexts across Europe. As such, they serve as a valuable tool for replication and adaptation in other regions across the EU that face similar energy-related challenges. By sharing best practices and adaptable solutions, the ComActivate project aims to contribute to a fair and inclusive energy transition.

3 INSTITUTIONAL PLACEMENT OF THE ROADMAP

The Energy Efficiency Directive (EU) 2023/1791 mandates that Member States must establish a supportive framework for market actors, such as one-stop-shops, that would provide residents reliable information, individual technical assistance and guidance on available financial schemes for energy efficient renovations. Additionally, the Directive on Energy Performance Buildings (EU) 2024/1275 mandates inclusive one-stop shops providing technical assistance to all actors involved in building renovations, including owners, administrative, financial and economic actors, SMEs, etc. By streamlining the renovation process and coordinating both technical and financial support, these **one-stop-shops or Resource Centres (RC)**, help to overcome major obstacles, such as a lack of understanding, high upfront costs and complicated administrative procedures.

Their core role is to assist households throughout the renovation journey by offering accessible and tailored services that make energy-saving improvements easier to implement.

The key benefits of establishing a RC for community members (residents), including vulnerable people, and property managers are presented in Table 2. While the benefits for community members also apply for vulnerable people, they require additional attention and tailored support, as highlighted in the table.

Table 2: Key benefits of RC for community members (residents)

BENEFITS FOR ALL COMMUNITY MEMBERS	ADDITIONAL BENEFITS FOR VULNERABLE PEOPLE
• Main point of contact • Based on clear and reliable renovation advice, residents can make informed decisions • Professional guidance improves the quality of renovations • Informed access to funding • Guidance on energy-saving measures that improve comfort and living conditions • Better understanding of energy-saving measures and available support • Better coordination of neighbourhood renovation projects and stronger resident engagement	• Reduced mental load • Overcoming information barriers (using understandable language at appropriate literacy levels) • Resource Centre is perceived as a trusted intermediary • Prevention of exploitation (protection from high-interest loans or unnecessary work) • Home visits available when needed • Ensure renovations meet accessibility needs • Identification of households that need wider support (connection to other social services)

Beyond individual support, RC also help implement NESR by engaging residents, providing guidance and translating neighbourhood-level energy strategies into practical actions for all households, including residents with vulnerabilities. Although there are many benefits of energy renovation, there are barriers⁸ that prevent people from engaging in such renovation, such as:

- Lack of understanding of the benefits of measures
- Fear of getting into more debt and higher energy costs
- Stigma associated with receiving free help and subsidy
- Structural barriers related to tenancy type or eligibility for interventions.

While NESR provide the strategic vision for neighbourhood transformation, the Resource Centre offer the infrastructure required to realize the vision through trusted relationships, tailored support and community organizing.

⁸ Assert, D.2.1 Report on the state of the art on energy poverty and disability and relevant indicators

Resource Centre Kaišiadorys

RC Kaišiadorys named Renovacijos informacijos centras (Renovation information centre) is located in the Kaišiadorys District Municipality Administration Building at Katedros str. 4, Kaišiadorys. The center will be staffed by one employee with live consultations available once a week. The Kaišiadorys Municipality support the RC's operations by providing space within its building and ensuring its activities as part of the region sustainability goals.

The RC's main activities will include in-person consultations, financial guidance, application assistance, collaboration with stakeholders (including Municipality), training sessions, capacity building events, etc. All planned activities are designed to support the RC in becoming a trusted local hub for information and guidance on the renovation process.

4 ENERGY VULNERABILITY

While the assessment of building performance and the design of renovation measures rely primarily on technical expertise, addressing energy vulnerability demands a human-centred approach. In the context of energy poverty, vulnerability encompasses the social, economic, demographic and housing-related factors that increase the risk of households facing insufficient access to affordable and adequate energy services⁹.

Energy vulnerability should not be understood as an inherent characteristic of individuals or groups, but rather as the results of the contextual conditions that shape households' capacity to secure essential energy services, cope with energy-related challenges, adapt to changing circumstances. These conditions are multiple and frequently intersecting, including factors related to income, age, health, housing tenure, building characteristics and other context-specific factors. While low income is the most commonly cited factor, it is rarely the only one. Vulnerability typically emerges where several of these factors overlap and reinforce one another. Understanding vulnerability in all its dimensions is therefore a precondition for targeting support accurately, so that measures reach the households where disadvantage compounds rather than those who are simply easiest to identify.

Dimensions of Energy Vulnerability. Energy vulnerability is defined by a range of interconnected dimensions that shape households' capacity to secure essential energy services and to access available support. These dimensions include economic, demographic, health-related, social and housing-related factors.

⁹ EPAH Guidelines, Addressing Vulnerability & Equity in Energy Poverty Action, 2026

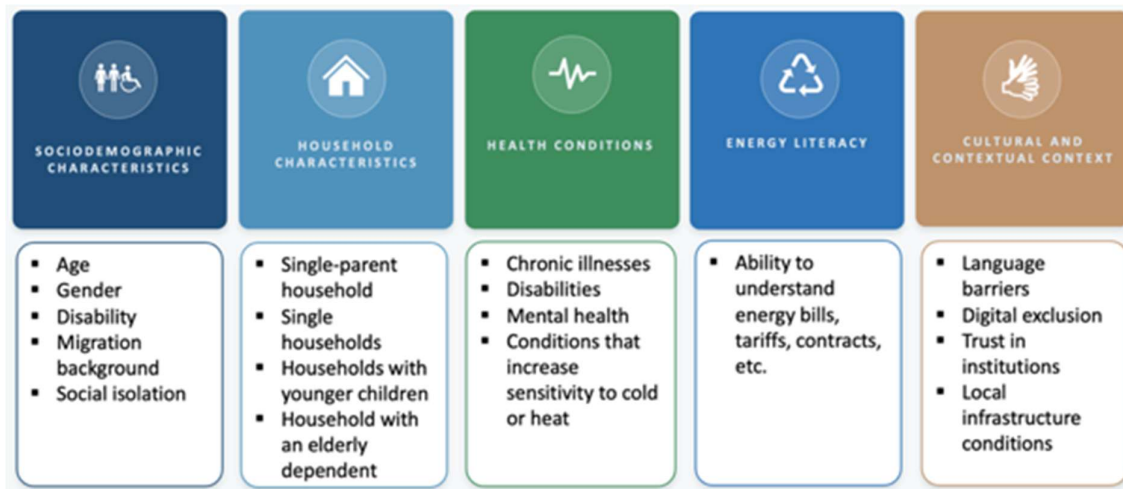


Figure 1: Key dimensions of vulnerability that shape access to essential energy services and available support¹⁰

Energy Poverty. When vulnerability factors, such as economic, infrastructural and contextual dimensions, accumulate and exceed a household's adaptive capacity to overcome energy-related barriers, the household may experience energy poverty. Energy poverty¹¹ is defined as a condition experienced by households unable to secure sufficient energy services, encompassing thermal comfort, illumination and appliance operation, required for maintaining physical health, well-being and social participation. The impact of energy poverty may also extend to other household members (e.g. caregivers of people with disabilities), who may face stress and fatigue when providing support in poorly resourced households.¹²

5 LOCAL CONTEXT

The city of Kaišiadorys is located in the central lowlands of Lithuania, between the two largest cities, Vilnius and Kaunas. The municipality consists of 11 elderships, covering a total area of 108,700 hectares. Kaišiadorys has a temperate continental climate, characterized by cold, humid winters and mild to warm summers. Its position along the A1 Vilnius-Kaunas-Klaipėda highway and main railway lines makes it a strategically important hub for commuting.

Kaišiadorys developed as a railway settlement in the late 19th century and experienced significant growth during the Soviet era, when most of the existing housing stock was built. This historical development has a lasting impact on the neighbourhood structure, building typologies, and infrastructure layout. The city of Kaišiadorys is characterized by Soviet-era housing blocks dating from the 1970–1980s, surrounded by green areas and low-rise buildings.

¹⁰ EPAH Guidelines, Addressing Vulnerability & Equity in Energy Poverty Action, 2026

¹¹ https://www.researchgate.net/publication/259543840_Energy_poverty_in_the_European_Union_Landscapes_of_vulnerability

¹² Assert, D2.1 Report on the state of the art on energy poverty and disability and relevant indicators, 2025



Figure 2: Overview of Lithuania and ComActivate project municipality

Population. As of early 2024, the Kaišiadorys Municipality had 29,602 residents, representing 1% of Lithuania's total population. The population distribution shows that 61.5% of the residents live in urban areas, while 38.5% reside in rural parts of the municipality. The population density of Kaišiadorys Municipality is 27.4 inhabitants/km², which is notably below the national average of 43.8 inhabitants/km².

The population is relatively stable, with a significant proportion of long-term residents. Lithuanian is the main language, and while large ethnic minorities are absent, small Polish and Russian-speaking communities are present, reflecting Lithuania's broader demographic composition.

The working-age population constitutes 65.4% of all residents, indicating that nearly two-thirds of the population are within the economically active age range.

Education. In 2021, the educational structure of the population aged 10 and over in Kaišiadorys municipality was as follows: approx. 19% had higher education, 15% had vocational education, and 34% had completed secondary education.

Business landscape. The local economy is diverse, with agriculture and food industry, manufacturing and processing, trade & retail services, construction & building services playing key roles. In 2025, 901 businesses were registered in Kaišiadorys district, of which 712 are small and medium-sized enterprises (SMEs). Majority of businesses are micro enterprises (up to 9 employees). Despite the SME-driven market, large companies employ the majority of workers.

Housing stock. Kaišiadorys' construction market has long been characterized by very slow development, especially in the apartment segment. For many years, no new multi-apartment residential buildings have been built in the city, and only this year has the construction of the first MFABs since the restoration of Lithuania's independence finally begun. This prolonged lack of supply has led to a structural shortage of rental housing, which in turn has led to constantly increasing rental prices and limited choice for residents looking for modern apartments.

As a result, the local real estate market is dominated by individual housing. The majority of residential buildings in Kaišiadorys are single-family houses, semi-detached houses or similar low-density buildings, and apartments make up a relatively small part of the total housing stock. While this reflects the traditional development model of the city, it also highlights the growing imbalance between housing demand and supply, especially for younger households, renters and people looking for smaller, cheaper housing close to the city.

Culturally, Kaišiadorys has a strong local identity and community traditions, with historical buildings and cultural sites contributing to the town's character. Nevertheless, none of the town's buildings are officially protected as cultural heritage.

6 HOUSING

Construction Periods of Multi-Family Apartment Buildings. Most of the housing stock consists of MFABs constructed between 1970 and 1980, made of brick or large concrete panels. The average apartment size is 50 m². Average heat consumption is 160 kWh/m² per year, ranging from 71 to 195 kWh/m². In terms of energy efficiency, unrenovated buildings fall into classes F-G, while renovated buildings achieve classes B-C.

Energy Efficiency Status. Most buildings have single-pipe heating systems, old heating substations and outdated electrical wiring, which lead to uneven heat distribution and significant energy losses. The absence of automated heating control significantly reduces energy efficiency potential. These systems often require full replacement or complex retrofits as part of renovation projects. Degraded joints, connections and façade details often require repairs prior to or during thermal insulation, adding to both technical complexity and total renovation costs. Additionally, buildings typically rely on natural ventilation, and the majority of windows have already been replaced with airtight windows by residents. This reduces air exchange, leading to poor indoor air quality. „Kaišiadorių šiluma“ Ltd., owned by the Kaišiadorys District Municipality, supplies central heating only to the central part of the city, while buildings in other areas rely on individual heating systems.

Renovation strategies must therefore address both district heating optimization and individual heating solutions. Thermal insulation of walls and roofs, replacement of old windows with low heat-transmission windows. Glazing of balconies and replacement of stairwell windows and doors in some buildings. Installation or partial upgrade of automated heating substations. Sealing of joints in prefabricated buildings. Renovation of heating systems (though most still use one-pipe systems).

Recent Renovations on Energy Efficiency. As of 2023, 17 buildings had been renovated, representing 5% of the housing stock. By early 2024, 19 buildings were renovated, 7 were under renovation and 4 were awaiting funding. The overall renovation rate remains below the national average of 12%.

Residents are generally interested in reducing heating bills and improving living comfort. However, actual participation is limited by

- the required personal financial contribution,
- perceived administrative complexity, and
- uncertainty about payback periods.

Nevertheless, residents' financial constraints remain the main obstacle to initiating renovation projects.



Furthermore, renovation decisions must be approved by the majority of homeowners in each building. This process is often slow and fragmented. Permitting, project preparation, and compliance with regulations can delay or discourage projects. Another challenge is that smaller municipalities, like Kaišiadorys, have limited access to experienced energy experts, project managers, and qualified contractors, which slows project development.

In Kaišiadorys, „Kaišiadorių butų ūkis“ Ltd. acts as the administrator for 157 multi-apartment buildings (over 4000 apartments), which helps coordinate decision-making. This company manages common areas and utilities, ensures regulatory compliance, collects repair funds and coordinates maintenance and renovation projects. Acting as a liaison between residents and service providers, it keeps apartment buildings safe, well-maintained and efficiently managed.

Subsidies for Renovations. Residents have access to the following form of financial support: National subsidies are provided under the Ministry of Environment's calls for renovation projects. Households eligible for heating cost compensation can receive 100% support, and VAT reliefs are available under national tax regulations (PVM) Nr. IX-751, Article 1252.

Additionally, Environmental Project Management Agency under the Ministry of Environment (APVA) provides funding and support for comprehensive and partial renovations (“major” and “minor” renovation schemes). This has already led to significant energy savings in renovated buildings.

Subsidies are available to a significant portion of the housing stock, though low- to middle-income households often lack sufficient funds to co-finance renovation, which remains the main barrier to accelerating the refurbishment rate.

The Multi-apartment Building Renovation (Modernization) Programme (Programme) is administered in Lithuania by the Environmental Projects Management Agency and the support is provided according to the terms and conditions of the call of the Minister of Environment of the Republic of Lithuania. Multi-apartment buildings participating in the Programme must comply with the technical construction regulations effective as of 1993.

The foreseen state subsidy covers the following:

- costs for the arrangement of the project or its part, including project supervision and expert examination of the renovation project, if it is mandatory under the Law on Construction – in 100%;
- costs for administration of the project implementation and technical supervision of construction work – in 100%;
- investment for energy efficiency measures set by the government – in 30%;
- additional state support, when a separate heating point is equipped or an existing non-automated heating point is modernized, the heating system is rearranged or replaced in the multi-apartment building by equipping individual heat metering devices or a divider system in the apartments or other premises in the framework of the renovation project – in 20%.

The residents are provided with a preferential loan whose annual interest exceeding 3% is covered for five years from the day of disbursement of the first part of the loan. It is important to note that owners of apartments eligible for compensation for heating costs are granted 100% support.

Also, calls are launched where municipalities and building administrators participate. For example, considerable attention was given to the comprehensive neighbourhood renovation programmes that were started by municipalities in 2016. During the implementation of these programmes, along with

buildings, their surroundings (yards, streets, lighting of public spaces, relaxation zones) are being renewed. Separate calls are launched, and partial costs are covered by EU funding.

Recently, a call for applications to renovate old multi-apartment buildings with the use of panels has been launched. 200 million EUR is allocated for it; the funding is purposed to finance construction contract work. It is expected that the panel renovation will not only increase the energy efficiency of the building but also accelerate the renovation process by at least 3 times. These projects benefit from the usual subsidies plus additional compensation (10%) for the renovation of the heating and hot water systems of a multi-apartment building.

Subsidies are also available for the renovation of family houses with the following conditions:

- renovation or modernisation must achieve an energy performance class of at least B,
- The maximum compensation per home is up to EUR 14,500.

Additional subsidies are available to individuals for the installation of solar power systems.

7 PILOT AREA

The pilot area is located in the Kaišiadorys District Municipality, in central Lithuania, between the country's two largest cities, Vilnius and Kaunas, and between the Nemunas and Neris rivers.

The pilot neighbourhood is primarily situated in the central part of Kaišiadorys town, where most of the MFABs are concentrated.

The majority of the population is Lithuanian (about 95%), with small minorities of Russians, Poles and other groups. Kaišiadorys, like many other regional municipalities in Lithuania, has an aging population, with a large proportion of middle-aged and older adults. Based on 2025 data from Statistics Agency of Lithuania¹³, the proportion of older people is higher in rural areas, while the age structure is more balanced in urban areas.

Many of the MFABs in the pilot area are five-storey structures, which is characteristic of residential buildings built during the Soviet era. In addition to these, the city has smaller apartment buildings with four or fewer storeys.

¹³ Source: <https://osp.stat.gov.lt/>



Figure 3: Overview of the pilot area and its surroundings, with selected buildings highlighted in beige, orange and red

8 FINDINGS FROM THE TECHNICAL SURVEY OF THE PILOT AREA

Kaišiadorys has 72 buildings, in an area of approximately 0.85×1.60 km. All buildings but two are of the same type, under five storeys and featuring separate entrances, and those two are nine-storey buildings. While some buildings are arranged in residential blocks, they do not share exterior walls. These buildings or blocks are positioned with large spaces between them, often parks, playgrounds, or green spaces. Approximately one fifth of buildings is fully refurbished (façade, roofs, windows and doors).

Table 3: Overview of buildingstock, Kaišiadorys, current state

Buildings	-	72
Heated area, total	m ²	146,059
Heated area, average	m ²	2,029
Heat required for heating, total	kWh/a	14,489,217
Heat required for heating, average per m ²	kWh/m ² a	99,20
Small buildings (≤500 m ²)	-	7 (10%)
	m ²	2,576 (2%)
	kWh/a	467,690
	kWh/m ² a	181.57
	tCO ₂ /a	186.27
	tCO ₂ /m ² a	0.072
Mid-sized buildings (500-2,000 m ²)	-	32 (44%)
	m ²	39,071 (27%)

	kWh/a	4,674,212
	kWh/m ² a	119.63
	tCO ₂ /a	1,861.65
	tCO ₂ /m ² a	0.048
Large buildings (≥2,000 m ²)	-	33 (46%)
	m ²	104,412 (71%)
	kWh/a	9,347,314
	kWh/m ² a	89.52
	tCO ₂ /a	3,722.85
	tCO ₂ /m ² a	0.036

Kaišiadorys has a humid continental, no dry season, warm summer climate, with summer temperatures going up to 30 °C, while winter temperatures can be as low as -25 °C, with prolonged periods with temperatures -15 °C or lower.

All apartments in the MFABs are connected to district heating systems, which relies on biomass-based boilers, primarily using wood chips. The heating system is a fully developed network that includes a heat source (boilers / heat exchangers), a main heat pipeline, substations, additional exchangers, pumps, automation systems, internal building piping, and heating units (most often radiators). Air conditioners are not used as the primary source of heating, and small number of outdoor units is visible on the buildings, as they can be used during transitional periods when district heating system is not in use.

Table 4: Overview of buildingstock, Kaišiadorys, after implementation of energy efficiency measures

Heat required for heating, total	kWh/a	7,959,605
Heat required for heating, average	kWh/m ² a	54.50
Small buildings (≤500 m ²)	kWh/a	254,436
	kWh/m ² a	98.78
	reduction %	45.60
	tCO ₂ /a	101.34
	tCO ₂ /m ² a	0.039
Mid-sized buildings (500-2,000 m ²)	kWh/a	2,661,505
	kWh/m ² a	68.12
	reduction %	43.06
	tCO ₂ /a	1,060.02
	tCO ₂ /m ² a	0.027
Large buildings (≥2,000 m ²)	kWh/a	5,043,664
	kWh/m ² a	48.31
	reduction %	46.04
	tCO ₂ /a	2,008.79
	tCO ₂ /m ² a	0.019

In the Reports on possibilities for energy production from renewable sources needed for energy autonomy/independence of target districts, various renewable sources have been analysed and considered for further improvement of sustainability and independent energy supply after implementation of energy efficiency measures. As it is already using biomass, sustainability would be further empowered by installation of photovoltaic (PV) panels on rooftops and inverters within the buildings.

Considering that baseline assessment and proposed energy efficiency measures are already covered and included in Buildingstock (with all details), the next step would be prioritisation and selection criteria. Based on numbers presented in Table 3 and Table 4, it would be reasonable to start implementation from large buildings. Present in the largest number and largest by heated area, while also accommodating most residents, they would provide great start. Some of these buildings are built in connected segments. Small buildings would require smaller investment, but the expected impact would be almost insignificant, considering these buildings take only 10% (by number) and 2% (by heated area) of analysed buildingstock. They could be included in later stages of renovation, as well as mid-sized buildings.

It is hard to give implementation timeline, as it includes many mutually connected and intertwined steps. Preparation could take 6 to 12 months, and include coordination with HOAs and verification of legal documentation and ownership. Residents should acknowledge that implementation of the RES measures makes sense only if all the EE measures are implemented. Fortunately, some buildings are already fully refurbished. Implementation of measures, i.e. actual works on buildings, could take up to 5 years to complete, considering number of buildings and available resources, weather (relatively short summers and harsh and cold winters) and other influencing factors.

There are many key actors to be involved in this process, some of them being HOAs, municipalities (technical assistance, social programmes and, if available, co-funding support), construction companies and electricity distributor/operator (for PV grid connection). With their joint work and assistance to residents, financing plan and analysis can be made, including municipal and EU-funded subsidies, “green” and other loans or other co-financing programmes.

Following the implementation of the measures (both on buildings and heating system), energy consumption in buildings and renewable energy production should be monitored for a minimum of 10 years.

9 VISION FOR THE PILOT AREA

The overarching vision for the pilot area is to create a sustainable, energy-efficient, and socially inclusive neighbourhood, where improved housing quality, energy performance, and community well-being are integrated with urban identity.

Beyond climate protection, this vision aims to:

- increase residents' quality of life,
- strengthen community participation and
- modernize infrastructure and housing.

9.1 Findings from the resident survey of the pilot area

To understand how residents actually use shared indoor and outdoor spaces and what prevent them from using these spaces more, a well-being survey was conducted among residents in the Kaišiadorys pilot area in August 2026. Out of 133 households, a total of 84 households participated in the survey. The findings contributed to setting goals and priorities in Section 9.2, rather than serving as background context.

The main survey findings are:



- **Access to shared spaces:** Most respondents have access to some shared space, most commonly a yard, while access to playgrounds is less common. Access to seating areas and nearby parks is limited and a minority of respondents report having no access to shared outdoor spaces.
- **Frequency of use:** Around half of respondents use shared outdoor spaces daily, while roughly a third never use them at all. Only a small proportion use them occasionally.
- **Purpose of use:** Shared spaces are used mainly for walking and physical activity, relaxation, meeting neighbours and children's play. They are also considered important for thermal comfort: 57% of respondents rate them as very important during hot days, compared with 45% during very cold days.
- **Well-being:** Residents report that shared spaces encourage physical activity and improve mood. Around half of respondents also report a lack of social contact in their neighbourhood at least occasionally.
- **Barriers to use:** The main barriers are poor maintenance and insufficient seating, followed by time constraints and inadequate lighting. Accessibility issues were cited by a small share of respondents overall, but by the large majority of the small group who reported having a disability.
- **Openness to improvements:** There is strong interest in upgrading shared spaces: 89% of respondents would spend more time in shared indoor spaces and 92% would spend more time outdoors, if these were improved.
- **Preferred upgrades:** Residents prioritise regular maintenance and additional seating above all else, followed by greenery, improved lighting, shade and play areas.

A more detailed analysis of the survey, including findings by survey topic and methodology, are provided in Annex.

9.2 Goals for the pilot area

To achieve these goals, focus will be on four key thematic areas:

- **Energy and climate:** Reduce energy consumption in residential buildings by promoting energy-efficient renovations and technologies, optimizing the use of indoor spaces and supporting residents in adopting lower consumption habits through targeted awareness-raising and engagement activities.
- **Social:** Ensure affordability and accessibility for low-income households through targeted subsidies.
- **Urban development:** Create a safer, greener, and more comfortable living environment by improving the maintenance, seating and accessibility of shared indoor and outdoor spaces.
- **Community engagement:** Build trust through local events, information campaigns, and resource center.

A detailed overview of defined activities has been presented in Table 5.

Table 5: Overview of defined activities and responsibilities

Objective	Activities	Lead actors	Supporting actors	Target group	Timeline (years)
Energy and Climate: Reduce energy consumption in residential buildings by promoting renovation and introducing energy-efficient technologies					
Orientation meeting	Conduct introductory session for HOA and residents to familiarize with RC and its services	HOAs RC	Municipality Residents	Residents	1 year
HOAs-RC	Defining roles and responsibilities of both stakeholders	HOAs RC	Municipality	-	1 year
Energy audits	Carry out energy audits of residential buildings to identify the most effective renovation measures	External experts	RC	-	1 year
Building Use Optimization	Identify shared areas (storage rooms, basements) to reduce heated volume or repurpose for community use	HOAs RC	RC Municipality	Residents	1 year
Dissemination of information¹⁴	Inform the residents about the audits findings	RC	HOAs	Residents	1 year
Increase the capacity and technical skills of local contractors and engineers	Organize workshops on energy-efficient renovation technologies for local contractors and engineers	RC	External experts Municipality	Contractor(s), Subcontractor(s) and engineers	Continuously
Communicate renovation proposals	Presentation of renovation proposals including plans, budgets and timelines	RC	HOAs	Residents	Continuously

¹⁴ To ensure accessibility for vulnerable groups, particularly those with chronic illnesses or mobility impairments, information should be provided through multiple communication channels.



Objective	Activities	Lead actors	Supporting actors	Target group	Timeline (years)
Accessible information about funding opportunities	Provide information about financial incentives and co-financing schemes to residents	RC HOAs	Municipality	Residents	Continuously
Increase residents' awareness and knowledge on energy-efficient and energy-sufficient practices	Conduct workshops for residents on energy saving and provide guidance on energy-efficient and sufficiency lifestyles	RC HOAs	Municipality	Residents	TBC
Evaluate renovation proposals	Review renovation proposals (planned measures) and gather residents feedback and address concerns	HOAs	RC	-	TBC
Social: Ensure affordability and accessibility for low-income households through targeted subsidies					
Capacity building	Train RC staff to provide targeted support to vulnerable households by cooperating with social services (e.g. mapping of vulnerable households, conducting open dialogue sessions, etc.)	Municipality	Municipal social support department	RC staff	TBC
Informed financial decisions	Provide tailored financial counselling (offer in-person, phone consultations for households needing additional help)	RC HOAs	Municipality	Residents	TBC



Objective	Activities	Lead actors	Supporting actors	Target group	Timeline (years)
Coordination with authorities	Liaise with relevant government agencies to clarify requirements and follow up on the status of submitted applications	RC	Municipality	Government agencies	TBC
Information dissemination	Regularly update the Municipality's website with information on funding opportunities, application forms, application guidance, FAQs, etc.	RC	Municipality	Residents	TBC
Increase access to funding opportunities	Assist eligible households in applying for national renovation subsidies or heating compensation programs (e.g. eligibility criteria, deadlines, help households complete application forms, review applications, etc.)	RC	Municipality	Residents	TBC
Collaboration of social services and energy programs	Establish cooperation with social services to identify and prioritize households at risk of energy poverty		RC	Social services personnel	TBC
Targeted support	Social services to refer low-income households to RC	Social services	RC Municipality	-	TBC
Data sharing	Use social services data to identify households who struggle with energy costs	RC Social services	Municipality	-	TBC



Objective	Activities	Lead actors	Supporting actors	Target group	Timeline (years)
Accessible communication channels	Communicate subsidy opportunities through multiple communication channels (e.g. SMS, social media platforms, WhatsApp, easy-to-read leaflets or brochures, local radio, etc.)	RC	HOAs	Residents	TBC
Information sessions	Organize information sessions in neighbourhoods with high number of low-income households	RC HOAs	Municipality	Residents	TBC
Community engagement: Build trust through local events, information campaigns and RC					
Raise awareness and knowledge among residents	Host workshops and open days (e.g. reducing energy bills through energy efficient energy use and informed consumption choices, reducing energy demand through behavioural changes while maintaining comfort), participate in local energy efficiency and renovation events/fairs	RC	Municipality	Residents	TBC
Information campaigns	Run targeted awareness campaigns for schools and community associations	RC	Municipality	School students and community associations	TBC
Engagement of younger generation	Arrange school visits to renovated or energy-efficient buildings to demonstrate practical energy-saving examples and engage students	RC	Municipality HOAs	School students	1 year



Objective	Activities	Lead actors	Supporting actors	Target group	Timeline (years)
	through competitions or projects (e.g. students compete to redesign a building for maximum energy performance, etc.)				



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9.3 Tailored outreach and communication

Effective communication is not an additional aspect of the NESR, but rather its cornerstone. Regardless of funding or technical quality, no renovation initiative will succeed if the target population neither understands it nor feels sincerely considered.

This chapter outlines NESR approach to outreach and stakeholder/citizen engagement that is organized around five interrelated pillars:

- Language-accessible information
- Communication through culturally and locally appropriate channels
- Trust-building activities
- Continuous two-way dialogue and
- Ongoing monitoring and adaptation.

These five pillars form a communication framework designed to reach all residents of the neighbourhood, regardless of their language, age, digital access or prior experience with public programmes. At the same time, the framework is built to adapt continuously to changing needs and circumstances, ensuring that residents are engaged as active partners than passive recipients.

Language-accessible Information. The starting point for any communication strategy is an assessment of the audience's capacity to understand and engage with the message. Where neighbourhoods have a diverse linguistic composition, the answer can not be taken for granted.

All communication materials (leaflets, frequently asked questions, application forms, workshop handouts) need to be produced in Lithuanian as the primary language. Where there is a significant presence of other language groups, equivalent versions should also be made available in those languages.

To ensure accessibility, all materials need to be written in plain language, using clear, concise and easy to understand wording while avoiding complex sentence structures, technical jargon and ambiguous terms. Once the content has been simplified and finalized, it can then be translated into other languages.

NOTE

Messages should be tested rather than assumed to resonate.

- Where technical and legal terms must appear, they should be followed by a plain language explanation in parentheses.
- Before anything is finalized or shared, materials must be reviewed by community individuals (volunteers) from each language group.
- Every key messages (energy savings, eligibility for subsidies, application deadlines and contact details) is supported with simple visual icons, so the information is accessible even for those with lower literacy levels.

Communication Through Culturally and Locally Appropriate Channels. A communication strategy that relies solely on one channel will consistently fail to reach the populations that need it most. The NESR combines traditional and digital communication channels, aiming for both broad outreach and meaningful engagement.

- Community meetings: Meetings are scheduled at times that accommodate working adults, elderly residents and parents with school-age children. These meetings are held both at the



RC and within community spaces across the neighbourhood, if convenient for the residents and the specific circumstances.

- **Focus groups:** Focus groups are a structured form of small-group discussion used to gather insights, opinions and perceptions from people who may share similar experiences or challenges such as tenants, youth, elderly residents, etc. By bringing together participants with similar backgrounds this approach encourages more open discussion and allows a safe environment where all participants feel comfortable contributing.
- **Door to door visits:** This approach is used when targeting vulnerable groups as it enables direct, personal and trust-based interaction with these people who are often difficult to reach through conventional communication channels. Many vulnerable groups (e.g. elderly people, low-income households, socially isolated individuals, people with limited digital access, etc.) may not participate in public meetings or actively seek information about services and support mechanisms.
- **Printed materials:** Materials need to be distributed and made available for residents to pick up at the RC and frequently visited locations within the neighbourhood. This may include community centers, public utility company premises, local shops, residential building entrances, etc. Placement of materials take into account the daily movement and habits of residents to maximize visibility and accessibility.
- **Digital outreach channel:** Channels such as SMS or mobile applications (e.g. WhatsApp) are an effective and low-cost communication channel for wider outreach at neighbourhood level. Since WhatsApp is already widely used in many communities, it provides a familiar and accessible platform for communication. However, when using mobile applications an administrator respects privacy and data protection principles such as obtaining participant consent, limit the sharing of personal information and clearly communicating the purpose and rules of the group.

Trust-building Activities. Important preconditions for effective communication such as language accessibility and the use of appropriate communication channels are not sufficient to establish trust. In communities that have experienced failed promises or administrative complexity, trust must be built through consistent, transparent and open dialogue.

The NESR trust infrastructure is based on three elements:

- A credible intermediary institution
- Community knowledge sharing
- Meaningful participation

Credible Intermediary Institution: The RC as Trusted Intermediary. Its role is not only to distribute information but to accompany resident through the renovation process from first enquiry to project completion. Specific functions include:

- **Home visits:** representatives of the RC visit households at their request, assessing the building's situation, explaining eligible measures and walking residents through the application process.
- **Personalised technical advice:** each households receives advice tailored to their specific building type, tenure situation and financial circumstance.
- **Follow-up:** the RC proactively follows up with households that expressed interest but have not yet progressed, identifying and addressing barriers rather than waiting for residents to re-engage.

Continuous Two-Way Dialogue. This pillar represents the most transformative change to traditional public communication approaches. Traditional communication method is predominantly one-way and passive, focusing on sharing, preparing and distributing materials to a public. The NESR takes a different approach by engaging residents as active participants in shaping their neighbourhoods.

Before any outreach activities begin, a stakeholder mapping exercise should be carried out to identify the full range of stakeholders who may either support or hinder renovation efforts. This extends beyond apartment owners and tenants and includes:

- Vulnerable groups: older residents living alone, energy poor people, people with disabilities, etc.
- Community intermediaries: trusted individuals with informal influence within the community, such as religious leaders, respected local figures, social workers, school directors, etc.

Open dialogue sessions should be held regularly with the primary goal of hearing from residents rather than presenting information to them. These sessions should begin with a brief project update, leaving most of the time for residents to share their views, concerns and suggestions. Facilitation needs to be conducted by trained professionals who can create an environment that prioritize listening, encourages participation and ensures that all voices are heard. During these sessions raised concerns need to be documented exactly as expressed, ensuring that their specificity are not diluted through paraphrasing. Residents who raised specific concerns need to receive individual follow-up from the RC.

NOTE

Fostering ongoing conversation.

- Research on public participation¹⁵ shows that residents who feel genuinely heard are more likely to trust decision-making processes and maintain engagement even during challenging periods

Monitoring and Evaluation. A communication strategy without systematic evaluation is only a plan that hopes to succeed. The NESR integrates monitoring and evaluation into the communication framework from the beginning, treating communication effectiveness as a performance indicator with the same relevance applied to other metrics (technical or financial).

Communication effectiveness need to be assessed through a combination of quantitative and qualitative indicators:

- Participation rate: How many people are showing up to community meetings and open dialogue sessions? Additionally, it should be tracked how many households respond to door-to-door visits and break this down by age and gender.
- Repeated contact rate: measuring the number of households that contact the RC more than once is worth since it could mean they did not get a clear answer the first time or It could mean they trust the channel enough to come back.
- Satisfaction survey: using short surveys after community events to assess the quality, accessibility and usefulness of information provided.
- Grievance mechanism: tracking communication-related grievances, response times and information accuracy, with results reviewed on a monthly basis.

The above-mentioned indicators need to be read differently for energy poor people because low turnout does not necessarily mean low interest. It often reflects real barriers. Energy poor households are more likely to skip meetings because they are less comfortable with digital or written materials if literacy or internet access is limited. The following indicators should be considered on energy poor households:

- Track participation of energy poor households separately, not just by age and gender, to see if they are being reached at all.

¹⁵ OECD Survey on Drivers of Trust in Public Institutions, 2024

- Watch for a low repeat-contact rate as a potential warning sign. It may mean the first contact left people confused or discouraged rather than satisfied
- Conduct satisfaction surveys verbal or in-person where possible, since this group may be less likely to fill out written forms.
- Flag grievances from energy poor households separately, since they may be more hesitant to complain in the first place.

However, the purpose of measurement is not simply to evaluate performance, but to generate insights that lead to meaningful action and lasting impact. The NESR therefore propose monitoring data to guide continuous improvements through:

- Monthly communication review meetings attended by RC staff, municipal staff and one community representative to identify trends and agree on adjustments.
- Transparent communication of changes through all active channels, explaining what was changed and why, reinforcing trust between the project and residents.

NOTE	Communication framework that learns. • Success is not measured by how many materials are produced, how many meetings are held or messages sent. It is measured by how many eligible residents understand the programme or project well enough to make informed decisions, trust it enough to engage with it and feel heard enough to recommend it to their neighbours.
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10 ANNEX

SURVEY FINDINGS

A well-being survey was conducted among residents in the Kaišiadorys pilot area between 12 and 26 August 2026, receiving 84 responses. The survey explored access to and use of shared indoor and outdoor spaces, their role during extreme weather conditions, barriers to their use and residents' priorities for future improvements. The survey findings served as an input to the development of the NESR.

Women were significantly overrepresented among respondents, accounting for 61% of the sample, compared with 32% men and 7% who preferred not to disclose their gender. Only four respondents (5%) reported a disability restricting their use of shared spaces. Respondents were predominantly flat owners (88%), with smaller shares of tenants (6%), HOAs (5%) and other categories (1%).

The largest age group was 30-39 (27%), followed by 50-59 (23%) and 40-49 (21%). Residents aged 60 and above account for 24% of the sample.

Yards were the most commonly available shared spaces (71%), while one-third (33%) have access to a playground. Access to other types of shared amenities is considerably more limited, with only 13% reporting access to seating areas and 7% to a nearby park. Overall, **17% of respondents reported having no access** to any of these shared spaces.

Just over half of respondents (**51%**) **use shared outdoor spaces on a daily basis**, while 32% reported never using them. The most common purpose is walking or physical activity (37%), followed by relaxation (31%). Children's play, thermal comfort and meeting other people each accounted for 29% of reported purposes. Shared spaces are perceived as more important for thermal comfort during hot days than during cold days: **57% of respondents rate them as "very important" during hot days**, compared with **45% during very cold days**.

This suggests that **heat adaptation is a somewhat stronger consideration** than cold-weather comfort in the use and perceived value of shared spaces.

Residents reported **positive effects from using shared spaces**. The most commonly reported benefit was increased physical activity (44%), followed by improved mood (32%) and reduced stress (18%). However, 36% indicated that shared spaces have little or no effect on their well-being. This high share may point to weaker perceived relevance, limited amenity quality or insufficiently attractive conditions for some residents. While 51% of respondents reported never experiencing a lack of social contact, 20% reported experiencing isolation almost daily.

The most frequently identified barriers to using shared spaces are **poor maintenance (42%)** and **insufficient seating (41%)**. These are followed by **time constraints (32%)**, **inadequate lighting (29%)**, **lack of child-friendly features (23%)**, **noise (18%)**, **accessibility problems (13%)** and **safety concerns (8%)**. The findings suggest that basic improvements in maintenance, seating and lighting could have a particularly strong impact on encouraging greater use of shared spaces.

There is **strong interest in upgrading shared spaces: 89% of respondents indicated they would spend more time in shared indoor spaces** if these were improved, while **92% would spend more time outdoors** if outdoor spaces were improved. The most preferred upgrades were regular maintenance and benches and tables (55% each), followed by greenery (51%), improved lighting (44%), shade (42%) and play areas (41%).



METHODOLOGY

The survey assessed how residents of MFABs in the pilot area of Kaišiadorys use and perceive shared indoor and outdoor spaces. It focused on well-being, social interaction, isolation, comfort and behaviours that may help reduce household energy demand.

The target sample was 133 respondents. To ensure statistical reliability while keeping the survey feasible for the pilot area, the sample size was determined using a 90% confidence level with $\pm 7\%$ margin of error.

The questionnaire included Likert scale, closed ended and open-ended questions. It was translated and adapted to the Lithuanian context and no personally identifiable information was collected.

Data were collected through Microsoft Forms. The survey link was shared through social media (Facebook), HOAs and direct email distribution.

QUESTIONNAIRE

Introduction

The ComActivate project is a strategic initiative designed to respond to growing issue of energy poverty in Central and Eastern European countries by supporting municipalities in their transition toward more sustainable and resilient neighbourhoods. The project is funded by the EU LIFE research programme and implemented in four municipalities: Burgas Municipality (Bulgaria), Józsefváros Municipality (Hungary), Kaišiadorys Municipality and Elektrėnai Municipality (Lithuania).

By understanding how residents use and perceive common outdoor spaces in their neighbourhoods, this survey will help inform the development of the Neighbourhood Energy Sufficiency Roadmaps (NESRs). Communal outdoor spaces can encourage people to spend more time outside, interact with others and reduce reliance on indoor living. The survey examines how these spaces contribute to overall wellbeing, reducing social isolation and encouraging behaviours that may contribute to lower energy demand and improve quality of life.

Your responses will contribute to developing integrated renovation strategies that combine energy efficiency with the well-being and social inclusion. Completing the survey will require approx. 5 minutes to complete.

Questions marked with an asterisk () are mandatory.*

General information about the survey respondent

1. City*

Elektrėnai [☐]

2. Please add your building's address

3. Gender*

Female [☐]

Male [☐]

Prefer not to say [☐]

4. Age groups*

Up to 18 [☐]

19-29 [☐]

30-39 [☐]

40-49 [☐]

50-59 [☐]



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60-69 []
70+ []

5. Are you differently abled in a way that restricts your capacity to visit shared spaces?*

Yes []
No []

6. Stakeholder

Please answer according to the role in which you are completing the questionnaire. If more than one role applies to you, select only the primary role relevant to your response.

Flat owner []
Tenant []
HOA []
Other []

7. Which shared outdoor or indoor spaces are available in your building or nearby?*

- a. Shared yard
- b. Playground
- c. Seating area (benches, tables)
- d. Park nearby
- e. None
- f. Other _____

8. How often do you use shared outdoor spaces connected to your building (such as yard, playground, etc.)?*

- a. Daily
- b. Once a week
- c. Several times a week
- d. Never

9. What is the primary purpose of these spaces for you?* *(Please select all that apply)*

- a. Walking or physical activity
- b. Meeting neighbours or friends
- c. Relaxing
- d. Children's play
- e. Taking pets outside
- f. Spending time outdoors to feel more comfortable during hot or cold days
- g. Other _____

10. How does using shared indoor and outdoor spaces make you feel?* *(Please select all that apply)*

- a. Helps reduce stress
- b. Improves my mood
- c. Encourages physical activity and movement
- d. Helps me feel more connected to other residents
- e. Provides a comfortable environment that reduces time spent indoors
- f. Has little or no effect
- g. Has a negative effect on my wellbeing
- h. Other _____

11. During very hot days, how important are shared spaces for your comfort and wellbeing?*

- a. Very important
- b. Somewhat important
- c. Not important
- d. Neutral

- 12. During very cold days, how important are shared spaces for your comfort and wellbeing?***
- a. Very important
 - b. Somewhat important
 - c. Not important
 - d. Neutral
- 13. In the past month, how often have you felt a lack of social contact or connection in your neighbourhood?***
- a. Almost every day
 - b. Several times a week
 - c. A few times during the month
 - d. Never
- 14. What prevents you from using shared outdoor spaces as an alternative to spending time indoors at home?*** *(Please select all that apply)*
- a. Poor maintenance, making the space uncomfortable to use
 - b. Not enough seating area
 - c. Inadequate lighting during nighttime
 - d. Loud noise (e.g. neighbours, traffic, nearby activities, etc.) reducing comfort
 - e. Accessibility issues such as stairs and uneven terrain
 - f. Not child-friendly
 - g. Time constraints
 - h. Not feeling safe enough
 - i. Other _____
- 15. I would spend more time in shared indoor spaces if they were improved with better access, lightening, cleanliness, etc*:**
- a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
- 16. I would spend more time outdoors if the shared outdoor spaces were improved with more seating, shade, greenery, lighting, safety, etc*:**
- a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
- 17. Which improvements would make you use and interact socially more in these spaces?*** *(Please select all that apply)*
- a. Benches and tables
 - b. Shades (trees, pergolas)
 - c. Improved illumination
 - d. Greenery and flowerbeds
 - e. Improved safety through better visibility
 - f. Play area for children
 - g. Outdoor fitness features
 - h. Accessibility upgrades (ramps, smoother paths)
 - i. Regular maintenance
 - j. Community/neighbourhood events
 - k. Other _____
- 18. What new communal or outdoor spaces would you like to see that could improve your well-being?***

19. Please share any other thoughts, suggestions or experiences on how shared indoor or outdoor spaces could better support comfort, wellbeing, and social interaction in your neighbourhood.

Thank you for taking the time to participate in the survey.



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