

FINANCING CLIMATE ACTION IN MUNICIPALITIES

OPTIONS FOR FINANCING CLIMATE ACTION IN
SMALL AND MEDIUM MUNICIPALITIES
IN POLAND

On behalf of:



Federal Ministry
for the Environment, Nature Conservation
and Nuclear Safety



European
Climate Initiative
EUKI

of the Federal Republic of Germany

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September 2021

The project Bridging European and Local Climate Action is financed by the European Climate Initiative (EUKI). EUKI is a project financing instrument by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU). It is the overarching goal of the EUKI to foster climate cooperation within the European Union in order to mitigate greenhouse gas emissions. It does so through strengthening cross-border dialogue and cooperation as well as exchange of knowledge and experience.

The information and views set out in this study are those of the author(s) and do not necessarily reflect the official opinion of the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety.

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1 Report objectives and scope of analysis

This report was produced as part of the BEACON (Bridging European and Local Climate Action) project, which aims to promote climate protection action and facilitate the exchange of experiences between national governments, local governments, and schools in seven European countries.

Thirty-four cities and municipalities in Poland, the Czech Republic, Romania, Greece, Portugal, Bulgaria, and Germany are involved in the project. All the local governments have collaborated to raise public awareness of ongoing climate change and implement countermeasures. To reinforce the desired effect, the project also included educational institutions from the Czech Republic, Romania, Bulgaria, and Germany that modified their curricula and educational programmes to improve the quality of climate protection measures, among other things. One major project objective was to equip policymakers, city officials, and teachers with skills and knowledge to help them design, improve, and implement effective measures to reduce greenhouse gas emissions.

The technical support that participating cities received, as well as the coaching specially prepared for each, was aimed at propagating and effectively implementing good practices locally. The selected cities were given access to advisory services, workshops, and conferences to accelerate local climate action to benefit residents. At regional events, the cities presented their own achievements and, with partners from the other countries, worked on new strategies and a practical approach to climate change mitigation.

On the Polish side, five cities participated in the project: Bielawa, Cieszyn, Jasło, Sztum (in a bilateral partnership with Ritterhude), and Zamość (in a bilateral partnership with Schwäbisch Hall). Bydgoszcz and Warsaw were also invited to participate in the project as pioneers because of their levels of development and skills, which are a good example to other cities.

The project was implemented from April 2018 to July 2021 and financed by EUKI—the European Climate Change Initiative (www.euki.de) — a project financing instrument by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU). The main goal of EUKI is to strengthen and promote cooperation on environmental protection in the EU to reduce greenhouse gas emissions.

To support the enormous efforts by local governments needed to tackle climate change, this analysis of the available forms and sources of funding that cities can use in their climate actions has been produced. It also aims to lay the foundations for improved strategic financial planning and investment implementation in small and medium-sized municipalities and for the efficient use of any funds obtained.

As of this report's publication, many sources of financing dedicated to local governments for climate protection or climate change adaptation have already been used. At the same time, regulatory work on instruments that will be available to fund city and municipality budgets for 2021-2027 has gained speed. Therefore, this analysis endeavours to present grant and loan programmes that are still available, as well as emerging mechanisms for financing climate action over the next budget period. However, the status of this report represents late February 2021 and may still change significantly. Changes are mainly due to the dynamics of the coronavirus pandemic facing Europe and the ambitious plans to rebuild the European economy, with a particular emphasis on climate and environmental welfare, e.g. through the funding of the EU Recovery and Resilience Facility.

2 Poland-specific local government needs and challenges in financing local climate actions resulting from National Energy and Climate Plan objectives

For several decades, Polish cities and municipalities have recognised the importance of investing in broadly understood environmental and climate protection. It is extremely important to reflect on the type and objective of local government efforts, which often place a heavy burden on their budgets. Research by local government unions and research institutions shows that Polish municipalities declare the implementation of climate change mitigation tasks far more often than climate adaptation tasks.¹ Their mitigation activities usually involve thermal retrofitting projects, followed by investments involving a reduction in pollutant emissions.

Activities to reduce emissions from low altitude sources (up to 40 metres) involve switching municipalities to gas, replacing boilers, and implementing low-emission economy plans. Among renewable energy sources, photovoltaics are the most popular for local governments. Other investments municipalities opt for are biomass burners and, much less frequently, hydropower or wind turbine plants. Many local governments declare investment plans involving energy efficient street lighting, replacing a bus fleet with a low-emission one, and laying new cycle paths. Less frequently, municipalities declare their climate change mitigation measures include campaigns to educate and promote changes in attitudes among inhabitants and increasing green areas.

The experience and practice of Polish local governments to date must be considered in relation to the most important development challenges for the country. One of the most important challenges is the transformation of key sectors of the economy to a low-emission model, taking advantage of development opportunities in green technologies, as is the effective climate change adaptation of the most threatened economic areas and sectors.

Key for decarbonisation is the skilful use of the opportunities offered by the deployment of green technologies, which may become a driving force in the Polish economy. In the face of low air quality, especially in cities and urban areas, and the simultaneous growing energy demand, there is an even greater need to mitigate and adapt to climate change; as a result the following these challenges will be of key importance:

- Increasing the use of renewable energy sources (RES)
- Developing green hydrogen technologies
- Increasing energy efficiency in all sectors of the economy including in houses and public buildings
- Carrying out the green transformation of cities and their surrounding areas

At the same time, green transformation will be an opportunity to modernise the economy. According to a 2018 World Health Organization (WHO) report, as many as 36 of the 50 most polluted cities in the

¹ M. Lackowska, P. Swianiewicz, Czynniki warunkujące preferencje i działania samorządów gminnych w Polsce w zakresie łagodzenia i adaptacji do zmian klimatycznych [Factors determining Polish municipal governments' preferences and actions for climate change mitigation and adaptation], Institute of Geography and Spatial Management of the Jagiellonian University, Krakow 2017

EU are in Poland. Almost 70% of Poland's energy production comes from coal combustion. Poland ranks twenty-first in the world in terms of CO₂ emissions (327 million tonnes per year)².

Another key challenge, mainly for cities, will be transforming the transport and mobility sector. It is necessary to increase the share of sustainable forms of mobility and to reduce the environmental and climate impact of transport. Emissions remain a problem—the road transport sector is the second largest source of air pollutant emissions, just after the household and municipal sector; this primarily relates to cities. Low-emission and zero-emission public transport solutions, low-emission mass transport, and passenger and freight rail connections are insufficiently used. In Poland, as much as 93% of greenhouse gases in transport derive from road transport³.

The increase in mobility needs, along with the decrease in supply of public transport services and increasing societal wealth, has translated into a significant increase in the number of personal vehicles in Poland—from nearly 10 million in 2000 to over 23 million in 2018. Congestion has become an extraordinarily significant problem for cities. As a result, greenhouse gas emissions from transport increased, in 2018 reaching the equivalent of 65 million tonnes of CO₂. There is also an insufficient share of mass transport vehicles powered by alternative fuels, including electric vehicles. As of 2018, of almost 12,000 public transport vehicles, only 507 were electric buses⁴.

All the above challenges faced by central and local government authorities are included in a planning document with a strategic dimension, the National Energy and Climate Plan 2021–30 (NECP), which integrates other national public environmental protection programmes and policies. The NECP presents assumptions, goals, policies, and actions for implementing the five dimensions of the Energy Union strategy:

- Energy security
- Internal energy market
- Energy efficiency
- Decarbonisation
- Research, innovation, and competitiveness

The plan presents the most important goals and strategic targets for energy and climate action, as well as the policies and measures to achieve them. Due to the pace of economic and technological changes, including in the energy sector, the catalogue of planned executive activities is neither exhaustive nor set in stone.

Despite the fact that the activities presented in the NECP are highly diverse, it is possible to identify a scope of activities that municipalities could undertake in many areas. However, local governments, and cities in particular, can contribute to achieving objectives under at least two of the strategy's five dimensions, decarbonisation and energy efficiency; these are discussed in more detail in the following sections.

² National Plan for Rebuilding and Increasing Resilience – Draft for consultation, Ministry of Funds and Regional Policy, Warsaw, February 2021 r. s. 11

³ National Plan for Rebuilding and Increasing Resilience – Draft for consultation, Ministry of Funds and Regional Policy, Warsaw, February 2021 r. s. 13

⁴ As above

2.1 Decarbonisation dimension

The priority axis in this dimension, **limiting the negative impact of transport on the environment**, assumes, aligns with the directions indicated in the Sustainable Transport Development Strategy until 2030:

- Intermediate goal: As of 2025, a 15% reduction in average CO₂ emissions in the fleet of new passenger vehicles and light commercial vehicles, as compared to 2021.
- Main goal: As of 2030, a reduction in average CO₂ emissions of 37.5% in the fleet of new passenger vehicles and of 31% among new light commercial vehicles, as compared to 2021.

These goals imply investments related to the transition to clean vehicles, the implementation of intelligent traffic management systems by municipalities, and support for public transport and vehicle-sharing systems, alongside limiting the use of personal vehicles with combustion engines.

The next directions for action are **improving environmental quality and safety** in line with sustainable development principles by 2030 by implementing the 2030 National Environmental Policy and limiting emission to the atmosphere of anthropogenic pollutants: sulphur dioxide (SO₂), nitrogen oxides (NO_x), non-methane volatile organic compounds (NMVOCs), ammonia (NH₃), and fine particulate matter (PM_{2.5}) by 2030.

Their implementation will involve, among other things:

- Increasing the share of the population that uses the sewage network to 85% from 70.5% (as compared to 2017).
- Increasing the share of the population covered by sewage treatment plants to 86% from 73.6% (as compared to 2017).
- Achieving the indicated permissible and target levels of harmful substances.
- Reducing to zero in the number of zones exceeding the PM₁₀ permissible level of particulate matter.
- Increasing to 30 the number of agglomerations and cities of over 100,000 residents for which the average exposure indicator does not exceed the PM_{2.5} concentration threshold.

Striving to achieve the required results will force local governments to

- thoroughly modernise heat power stations and heat plants,
- replace low-efficiency coal installations,
- invest in using renewable energy sources,
- develop energy efficient heating systems and low-emission individual heating,
- and develop low-emission transport and support electro mobility.

The **energy from renewable sources** dimension (framework goal for 2030) also allows for significant local government involvement. Assuming Poland is granted additional EU funds, including for a just transition, the planned activities are intended to lead to achieving a 23% share of renewable energy sources in the gross final energy consumption by 2030.

2.2 Energy efficiency dimension

This dimension, the second-most important specified in the NECP from the point of view of cities, includes goals for the **long-term renovation of the national housing stock**, which is also set out in the National Housing Programme and includes:

- Increasing the share of insulated residential buildings in the total housing stock to 70% by 2030 (as compared to 58.8% in 2015).
- Reducing the number of people living in substandard conditions in terms of overcrowding, poor technical condition, or lack of technical installations to 3.3 million by 2030 (from 5.36 million in 2011).

The efforts and resources of local governments in connection with the size of the municipal housing stock will also be supported by a **domestic residential and non-residential building stock renovation strategy**. Achieving the strategy's objective—to make buildings (both public and private) more energy efficient and low-carbon—is intended to bring about the cost-effective conversion of existing buildings into near-zero-energy buildings. Municipalities will need to be involved in modernising public infrastructure and financing local thermal retrofitting programmes targeted at residents.

Another priority direction is the **development of ecological and effective heating systems**. This area is of particular importance because, in 2018, the energy efficient system criterion was met by only one-fifth of the heating or cooling networks that provide approximately 85% of the total volume of district heating in Poland. The NECP requires that at least 85% of heating or cooling systems with an ordered capacity in excess of 5 MW meet the criteria of an energy efficient heating or cooling system in 2030. This objective will be served by the following actions, among others:

- Developing combined heat and power
- Increasing the use of renewable energy and natural gas in district heating
- Increasing the use of waste for energy generation
- Modernising and expanding the heat and cooling distribution system
- Popularising heat storage and intelligent networks
- Ensuring conditions for increasing the use of district heating

The plan clearly indicates that heating needs should be covered primarily using district heating. This ensures the high-efficiency use of raw materials, improves citizens' quality of life, and reduces the problem of low altitude emissions. If connection to network heating is not possible, the aim should be to use individual sources generating the lowest emissions possible. In both regards, there is huge scope for action, especially for city governments. In 2015, 61% of households were connected to a heating network in urban areas; the NECP sets the goal of successively increasing this indicator to 70% of households in urban municipalities by 2030. Meanwhile, the goal for 2040 is that all households be covered by either district heating or zero- or low-emission heat sources. Achieving these objectives will require significant investments from local governments to develop combined heat and power, to modernise the heating network, and to promote the use of district heating among residents.

The above-mentioned dimensions and priority directions of the NECP also indicate the types of projects that should be undertaken to achieve the assumed outcomes. Particularly noteworthy projects are those that can be implemented and achieved by local governments, especially city governments.

These include the following:

- Promoting the use of low-emission means of transport
- Implementing innovative transport traffic management systems
- Modernising and expanding the municipal transport fleet and infrastructure
- Supporting collective transport and vehicle-sharing systems while limiting the use of personal (combustion) vehicles
- Striving to reduce pressure on the environment by developing transport infrastructure based on the existing spatial structure
- Accelerating measures to eliminate low altitude emissions from heating systems
- Constructing installations for generating energy from renewable energy sources or high-efficiency combined heat and power installations
- Promoting energy efficiency in enterprises and in public and residential buildings
- Improving the efficiency of heat supply to customers
- Introducing low-emission zones with a stricter entry and parking regime for combustion vehicles, mainly in city centres
- Developing a system of charges and tariffs incentivising the desired transport trends, including those for reducing environmental impact
- Supporting investments to improve the energy efficiency of existing residential buildings
- Improving the energy efficiency of public buildings and having them fulfil an exemplary role, as well as the environmental education of residents

The NECP presents a set of directions in line with and complementary to the country's horizontal development strategy — i.e. the Strategy for Responsible Development—and its integrated sector strategies, in particular Poland's Energy Policy until 2040, as well as the National Environmental Policy 2030 – development strategy in the area of the environment and water management, the Sustainable Transport Development Strategy until 2030, and the Strategy for Sustainable Rural Development, Agriculture and Fishery 2030.

The Polish Energy Policy until 2040 (PEP2040) is one of the integrated sector strategies that derive from the Strategy for Responsible Development. PEP2040 aligns with the NECP and describes the state and conditions of the energy sector. The document indicates three pillars that the eight specific objectives of PEP2040 are built on, along with the activities required for their achievement and strategic projects. The three pillars are as follows:

- A just transition, which means providing new opportunities for development to those regions and communities most affected by the low-emission energy transition.
- A zero-emission energy system, which assumes a reduction in the energy sector's intensity of emissions via the implementation of nuclear energy and offshore wind energy, increasing the role of distributed and community energy generation, while ensuring energy security through the temporary use of energy technologies based on, e.g., gas fuels.
- Good air quality, which focuses on investments in transforming the heating sector (district and individual), electrifying transport and promoting passive and zero-emission buildings, using local energy sources, in order to significantly improve air quality.

3 Overview of current and future funding sources for local climate action

Each successive EU Multiannual Financial Framework brings new solutions and instruments in the field of financing climate protection investments and projects. This diversity is also reflected in national programmes financed by the central budget. There is already a visible trend as the 2014-20 budget period closes towards a growing role of debt instruments. The coming years (2021-27) will only see this pattern strengthen. Ever more programmes will contain two components—subsidy and loan—further modified depending on the specific purposes of the intervention.

The most important sources of financing available to local authorities are presented in the following table, with particular emphasis on the five regions home to the local government partners of the BEACON project. The next section presents information on the upcoming budget period and the amounts for which city and municipality authorities will be eligible to apply.

Area	National Fund for Environmental Protection and Water Management	Provincial Funds for Environmental Protection	EU funds
Energy efficiency, energy poverty, clean air	STOP SMOG – support for single-family houses of energy-poor people (p. 19) District heating (p. 20)	Atmospheric protection (p. 23, 25)	“Supporting energy efficiency in residential buildings in the Silesian Voivodeship” (p. 22) Clean Air (p. 22) Energy efficiency in buildings (p. 24)
Low-emission transport	Green public transport (Phase I) (p. 18)		
Renewable energy sources	STOP SMOG – support for single-family houses of energy-poor people (p. 19)		
Waste management	“Selective collection and prevention of waste generation” (p. 14) “Waste management installations” (p. 14)	Waste management and protection of the earth's surface (p. 23, 25)	
Climate change adaptation	Adaptation to climate change and limiting the effects of environmental threats (p. 17)		

Area	National Fund for Environmental Protection and Water Management	Provincial Funds for Environmental Protection	EU funds
Other topics	<p>“Activities to rehabilitate degraded areas” (p. 15)</p> <p>“Reducing nuisances resulting from mineral extraction” (p. 16)</p> <p>Water and sewage management in agglomerations. Part 1) Wastewater management under the National Municipal Wastewater Treatment Programme (p. 16)</p>		

3.1 Nationwide programmes

The greatest source of funds is the **National Fund for Environmental Protection and Water Management (NFEPWM)**. These funds come from domestic sources, which under the annual list of priority programmes approved by the Supervisory Board of the NFEPWM are granted to beneficiaries implementing projects that fit their assumptions. In the current programming period, the main areas of activities of the NFEPWM are as follows:

- Rational waste management and protection of the earth’s surface
- Adaptation to climate change and protection of waters against pollution
- Zero-emission transport
- Good air quality
- Just transition
- Zero-emission energy system
- Biodiversity
- Education and environmental monitoring
- Tasks in the field of horizontal programmes

Rational waste management and protection of the earth’s surface

The NFEPWM has funds under the rational waste management priority, and applications are being received on a continuous basis **from 24 August 2020 to 30 June 2022**.

Local government authorities may obtain funding in the form of a **subsidy or loan** under the first part of the programme, entitled **selective collection and prevention of generation of waste**, for allocation

to activities such as constructing or modernising permanent points for the selective collection of municipal waste and for developing selective municipal waste collection systems.

Beneficiaries may apply for funding in the form of a **subsidy covering up to 50% of eligible costs**, in which case the subsidy is awarded on the condition of a loan being taken out with the NFEPWM to cover any shortfall in own funds or other nonreturnable forms of project financing (applies to total net investment costs or gross equivalent) or for funding in the form of a **loan covering up to 100% of eligible costs**.

The interest rate on loans to local government authorities is **WIBOR 3M but not less than 1%**, and the financing period shall not exceed **15 years**. Additionally, local government authorities may apply for **relief on up to 30% of the principal**.

The second part of the rational waste management programme, **waste management installations**, also provides for support for local government authorities in the form of a **subsidy or loan** for activities related to:

- Adapting existing mechanical-biological waste treatment installations to treat selectively collected municipal waste
- Constructing new installations, or expanding or retrofitting existing ones:
 - a) Recovery, including recycling of selectively collected municipal waste, including bio-waste
 - b) Thermal transformation of waste generated from municipal waste with combined heat and power generation
 - c) Recovery, including recycling of nonmunicipal waste, including waste generated from municipal waste
 - d) Disposal of hazardous waste by thermal transformation
 - e) Aimed at reducing the amount of nonmunicipal waste generated, alongside constructing, extending, or retrofitting associated selective waste collection infrastructure
- Extension or retrofitting of existing end-of-life vehicle dismantling stations
- Extension or retrofitting of the biological part of existing mechanical-biological waste treatment installations

Beneficiaries may apply for support in the form of a **loan of up to 100% of eligible costs** or a subsidy in the amount of:

- Up to 50% of eligible costs, not exceeding PLN 50 million (construction or extension of an installation for thermal treatment of waste generated from municipal waste; construction or extension of an existing installation for the treatment of hazardous waste by thermal transformation).
- Up to 30% of eligible costs, not exceeding PLN 30 million (with the proviso that the amount of the subsidy not exceed 50% of any amount loaned by the NFEPWM for the same project) for projects consisting of construction, extension, or retrofitting of fermentation or composting installations for selectively collected municipal bio-waste; installations for recycling plastic waste, used tyres, or multi-material packaging; installations for recycling construction waste; and adapting existing installations for mechanical-biological waste treatment.

In this part, a **subsidy** can be granted only on the condition a loan is taken out with the NFEPPM to cover any financing shortfall in own funds or other nonreturnable forms of project financing (applies to total net investment costs or gross equivalent).

Loans are granted **on market terms** or at an interest rate equal to **WIBOR 3M +50** basis points (**bp**) **and not less than 2%** in most cases for a period not exceeding **15 years**.⁵

Another programme available under the priority area protection of the earth's surface is **activities to rehabilitate degraded areas**. Local government authorities may apply for funding in the form of a **loan** (up to 100% of eligible costs) to rehabilitate land degraded by human activity through waste removal, remediation, reparatory activities, and in the event of environmental damage, restoration of functions, or preparation for new functions.

A loan may be granted **on market terms** or at an interest rate of **WIBOR 3M and not less than 1%** (per annum), for a maximum of **12 years**.⁶

The sources of financing available also include a programme called **reducing nuisances resulting from mineral extraction**, which aims to reduce the negative environmental impact of mineral extraction and the closure of mining plants. The scope of financed projects may include:

- Rehabilitate land degraded or devastated by mining activities
- Introduce technologies aiming to reduce greenhouse gas emissions, generate waste from the extraction, or process raw materials in the mining industry
- Treat, drain, or manage mine waters

Local government authorities may apply for funding in the form of a **subsidy** covering **up to 100% of eligible costs**. The call for applications is continuously open **from 15 July 2019 to 30 December 2026** until 15:30 or until all available funds have been allocated.⁷

Climate change adaptation and protection of waters against pollution

The NFEPPM is also calling for applications under the priority programme, **water and sewage management in agglomerations**, specifically **sewage management under the National Programme for Municipal Wastewater Treatment**. Local government authorities and their associations may apply for a minimum **loan** of PLN 1,000,000 for a period not exceeding 15 years. The assumptions also provide for a grace period in the repayment of principal, but it must not exceed 12 months after project completion. The loan interest rate is **WIBOR 3M but may not be less than 2%** per annum, except for projects carried out by so-called green municipalities, where the interest rate is 3M WIBOR 50 basis points but not less than 1.5% per annum.

⁵ <http://www.nfosigw.gov.pl/oferta-finansowania/srodki-krajowe/programy-priorytetowe/racjonalna-gospodarka-odpadami/>

⁶ <http://www.nfosigw.gov.pl/oferta-finansowania/srodki-krajowe/programy-priorytetowe/ochrona-powierzchni-ziemi/nabor-wnioskow-2020-dla-czesci-1/>

⁷ <http://nfosigw.gov.pl/oferta-finansowania/srodki-krajowe/programy-priorytetowe/zmniejszenie-uczalnosci-wynikajacych-z-wydobywania-kopalin/>

Funds obtained under this programme can be spent on:

- Construction, expansion, or retrofitting of municipal sewage treatment plants, including for processing sewage sludge and producing energy from renewable sources (for operator's needs only, i.e. for water- and sewage-related activities)
- Construction, expansion, or retrofitting of collective sanitary sewage systems, and construction work to connect buildings to the sanitary sewage system that is the object of the project being applied for.

Beneficiaries may also apply for **relief of up to 10% of the disbursed loan amount, not exceeding PLN 1,000,000**. The relief can be granted upon repayment of 75% of the disbursed loan amount, subject to submission of an application in the required form.

Applications can be submitted from **01 March 2017 to 22 December 2023**, or until all funds have been allocated.⁸

The fund is also calling for applications under the **Adaptation to climate change and limiting the effects of environmental threats** programme. The programme aims to increase protection against the effects of climate change and natural hazards.

Local government authorities may apply for a **loan to cover 100% of eligible costs** of projects, such as:

- Measures aimed at adapting to climate change in cities (e.g. in the form of building green and blue infrastructure), eliminating impermeable surfaces, and building rainwater management systems and stormwater drainage
- Measures to prevent floods and droughts
- Measures to supply the population with drinking water, including constructing and retrofitting water intakes, water treatment stations, and water supply networks
- Activities to develop and implement a threat monitoring system and a threat early warning system
- Activities to remove the effects of failures and environmental threats on sites associated with environmental protection and water management, marine coastal areas, and natural water bodies

Loan applications can be submitted at any time **from 01 February 2019 to 17 December 2021** until 15:30, or until all funds have been allocated.⁹

Zero-emission transport

Programmes supporting climate activities on the 2015-20 list of priority programmes are still available.

Applications are being received for funding under the priority programme, **green public transport (Phase I)**. The programme aims to reduce air pollution emissions by reducing the use of emitting fuels in public transport. Local government authorities that are organisers of public road transport within the meaning of the *Act on public collective transport* may apply for a subsidy and a loan, depending on the purpose of the financing, in the amount of **50% to 90% of eligible costs (subsidy)** or even **up to**

⁸ <http://nfosigw.gov.pl/oferta-finansowania/srodki-krajowe/programy-priorytetowe/gospodarka-wodno-sciekowa-w-aglomeracjach/nabor-wnioskow-2021-dla-czesci-1/>

⁹ <http://nfosigw.gov.pl/oferta-finansowania/srodki-krajowe/programy-priorytetowe/przeciwdzialanie-zagrozeniom-srodowiska/nabor-2019---2021/>

100% of eligible costs (loan); in the case of a loan, this amount cannot exceed the difference between eligible costs and co-financing via a subsidy granted for this project.

The funds obtained can be used for:

- Purchasing or leasing new electric buses propelled by electricity accumulated via connection to an external source or electricity generated for propulsion from hydrogen in internally mounted fuel cells; funding may also cover the costs of training drivers and mechanics.
- Purchasing or leasing new trolleybuses, i.e. buses adapted to be supplied with electricity from a traction network and equipped with an additional drive system allowing them to cover a route without electric traction.
- Retrofitting or constructing infrastructure enabling the servicing and proper use of purchased or leased vehicles, in particular charging or hydrogen refuelling points, with the necessary infrastructure.

Applications for the first stage of the programme are being received on a continuous basis **from 04 January 2021 to 15 December 2021**, or until all funds have been allocated. Applications (separate ones for applying for co-financing as a subsidy or as a loan) should be submitted electronically via the Generator of Grant Applications (in Polish: GWD - co-financing application generator) at <http://gwd.nfosigw.gov.pl>.¹⁰

Good air quality

One of the NFEPWM's most commonly used instruments is the **STOP SMOG programme**, which **supports single-family houses of energy-poor people**¹¹ and is aimed at municipalities. Alongside the **Clean Air** programme, this is one of the largest government anti-smog programmes supporting activities to improve air quality and to counter energy poverty.

The NFEPWM's and Ministry of Climate and Environment's takeover of tasks related to the **STOP SMOG** programme on March 31, 2021 resulted in the call for funding applications being renewed.

Authorities entitled to submit applications for co-financing are municipalities, inter-municipal unions, poviats, and metropolitan unions (in the Silesia Voivodeship). Applicants (commune, inter-communal association, powiat, metropolitan association in the Śląskie Voivodeship) may obtain up to 70% co-financing of investment costs. The remaining 30% is their own contribution. Thanks to this, residents of communes (located in the area where the so-called anti-smog resolution is in force) can receive a non-returnable subsidy up to 100% of the project costs. According to the terms of the programme, the average project cost per building (or one flat, for a single building with two flats) may not exceed PLN 53,000.

The **STOP SMOG** programme supports the replacement or elimination of heat sources and thermal retrofitting in single-family residential buildings. The end beneficiaries of the support are energy-poor

¹⁰ <http://nfosigw.gov.pl/oferta-finansowania/srodki-krajowe/programy-priorytetowe/zielony-transport-publiczny-faza-i/nabor--zielony-transport-publiczny-faza-i/>

¹¹ The beneficiary may be a member of the household where the monthly average income per household member does not exceed 175% of the lowest retirement pension in the household for one person and 125% in a multi-person household

persons who own or co-own single-family residential buildings, as well as municipalities implementing low-emission projects in single-family buildings in the municipal housing stock.

The scope of activities covered by the support includes implementing projects in single-family residential buildings that consist of:

- Eliminating or replacing high emission heat sources with low-emission ones
- Thermal retrofitting
- Connecting a district heating or gas network
- Providing buildings with access to energy from RES installations
- Reducing the single-family residential buildings' energy demand for heating the building or domestic water

The maximum duration of project implementation is 3-4 years, depending on the proportion of low-emission projects as a function of the municipality's total number of single-family residential buildings.

The application must be completed and sent via the Co-financing Application Generator (GWD). An application with attachments should be submitted electronically or in hard copy.¹²

The amendments to the *Act on supporting thermal retrofitting and repairs* has greatly changed and facilitated access to the **STOP SMOG** programme, including:

- Allowing inter-municipal associations and poviats to apply to the programme as a coordinator for several municipalities
- Extending the implementation period from 3 to 4 years
- Allowing low-emission projects to also be implemented in buildings belonging to municipal housing stock
- Equipping municipalities with tools to verify the data of persons applying to participate in the programme
- Improving certain conditions for residents participating in the programme
- Extending the catalogue of eligible costs, including the addition of RES installations
- Removing the obligation for municipal authorities to prepare low-emission programmes
- Reducing the minimum number of single-family buildings applying for the programme (from 2% to 1% or 20 buildings)
- Reducing the required reduction in heat demand from 50% to 30%
- Shortening the period for which the municipality must maintain the effects of projects from 10 years to 5 years from the completion date of the agreement under which the projects were implemented.

The NFEPWM is collecting funding applications to the **poviat district heating** programme. The aim of the programme is to support investment projects aiming to reduce the negative environmental impact of heating companies and to improve air quality. The beneficiaries eligible to apply to the programme are not local governments but rather municipal limited companies producing heat for municipal and domestic purposes. The funds can be used for the following, among other things:

¹² <http://czystepowietrze.gov.pl/stop-smog/>

- Constructing, expanding, or retrofitting existing production installations or industrial equipment to reduce the consumption of raw materials, including replacing them with secondary raw materials
- Implementing projects to reduce harmful emissions to the atmosphere for installations described in Directive (EU) 2015/2193 of the European Parliament and of the Council
- Implementing projects to improve air quality by reducing emissions from fuel combustion sources with a total fuel capacity above 50 MW
- Implementing projects aiming to improve air quality by reducing emissions to the atmosphere from industrial activities (not directly related to fuel combustion sources)
- Implementing projects aiming to improve energy efficiency
- Implementing projects related to constructing or modifying generating units (including connecting them to the distribution and transmission grid) that generate energy using energy from renewable sources, waste heat, heat from combined heat and power, low-emission gas fuels, gas mixtures, synthetic gas, or hydrogen
- Retrofitting or expanding district heating networks

Applicants may apply for loans covering up to 100% of eligible costs or for grants of up to 50% of eligible costs. Subsidies are granted on the condition that a loan is taken out with the NFEPWM to cover all remaining eligible costs. Loans are granted on market or preferential terms at the level of WIBOR 3M + 50 bp and not less than 1.5% per annum. Applications for loans of PLN 0.5 million to PLN 300 million may be submitted until **17 December 2021** or until all funds have been allocated.

3.2 Regional programmes

In addition to the range of nationwide subsidy and loan programmes, regional-level financing for environmental investments is also available to local governments. The funds are usually distributed by the Provincial Funds for Environmental Protection and Water Management (PFEPWM). In some voivodeships, EU funds from the 2014-20 financial framework are still available. It should be noted, however, that **only two of the regions of origin of local governments participating in the BEACON project offer support instruments dedicated to municipalities.**

Silesian Voivodeship

As part of sub-measure 1.7.1 of the Operational Programme Infrastructure and Environment, **supporting energy efficiency in residential buildings in the Silesian Voivodeship**, PLN 92 million was allocated in 2020 for EU funding of projects aimed at the comprehensive thermal retrofitting of multifamily residential buildings in the voivodeship. Due to great interest in the PFEPWM programme in Katowice, it has planned a sixth round to support such initiatives for 2021. Local governments and cooperatives, as well as housing communities, will be eligible for funds to implement projects. According to the schedule, the call for applications will open in March 2021 and will include projects in the field of deep, comprehensive energy retrofitting of multifamily residential buildings.

The board of the Silesian Voivodeship has announced a call for applications for subsidising projects under the Regional Operational Programme, sub-measure **4.6.1 clean air**. The planned application period is 25 February 2021 to 30 April 2021, and the expected date of adjudication is October 2021. The programme targets the following municipalities: Bielsko-Biała, Dąbrowa Górnicza, Gliwice,

Godów, Katowice, Knurów, Myszków, Pszczyna, Rybnik, Sosnowiec, Tarnowskie Góry, Tychy, Wodzisław Śląski, Zabrze, Żory, and Żywiec.

The funding may be used to replace or retrofit individual heat sources (including solid fuels, except for lignite), with the aim of improving air quality by reducing CO₂ emissions and PM10. The maximum allowable level of project co-financing is 95% of costs.¹³

Subsidy applications should be submitted electronically in PDF format to the institution running the competition, using one of the following:

- Public e-services platform PeUP (a system used by a limited number of municipalities) - at <https://www.sekap.pl/> (*Katalog usług » Rozwój regionalny » Regionalny Program Operacyjny Województwa Śląskiego na lata 2014-2020*)
- ePUAP electronic platform of public administration services (national system) at <http://epuap.gov.pl/> using a general letter to a public entity (*Pismo ogólne do podmiotu publicznego*).

As part of the environmental policy of the Silesian Voivodeship, the PFEPWM in Katowice supports ecological activities by public administration, including in protection of the atmosphere, waste management, and protection of the earth's surface. The main objective of **atmospheric protection** is to improve air quality, reduce energy consumption, and increase the use of energy from renewable sources. Investments eligible for funding should include activities such as:

- Building or replacing heating systems to be more ecological and economical
- Implementing programmes for reducing low altitude emissions (*PONE – programy ograniczenia niskiej emisji*)
- Thermal insulation of buildings
- Financing installations to produce low-emission fuels or biofuels
- Use of renewable or alternative energy sources

Tasks carried out by municipalities may be subsidised only if the municipality has introduced or set a date for introducing legal solutions regarding systemic measures to reduce the level of pollution (*Low-emission economy plan, Short-term action plan, Heat supply plan, Area development plan* containing heat supply conditions, or another document regulating the above issues).¹⁴

The above programme can provide financing in the form of a **loan (forgivable or non-forgivable)**, including a **non-forgivable bridge loan**. Applications are received on a continuous basis.¹⁵

The main objective of the **waste management and protection of the earth's surface** programme is to subsidise investments aiming to minimise generated waste, to increase the reuse and reduce the storage of waste, and to revitalise post-industrial areas. The following are preferential areas of the above scope:

- Measures to reduce and prevent waste generation
- Waste disposal

¹³<https://www.funduszeuropejskie.gov.pl/nabory/46-czyste-powietrze-461-czyste-powietrze-konkurs-40321/#Na%20co%20i%20kto%20mo%20C5%BCe%20sk%20C5%82ada%C4%87%20wnioski?>

¹⁴ https://www.wfosigw.katowice.pl/files/regulamin_OA_20.pdf

¹⁵ <https://www.wfosigw.katowice.pl/ochrona-atmosfery.html>

- Construction, expansion, and retrofitting of waste landfills
- Asbestos removal and disposal
- Revitalisation of post-industrial and degraded areas

Within this programme, the PFEPWM in Katowice supports these goals through **loans, subsidies, and partial relief on loans**. Applications are accepted on a continuous basis.¹⁶

Lower Silesian Voivodeship

On 15 February 2021, as part of the Regional Operational Programme, a call for competitive applications was launched that was directed to, among others, local government authorities from the Lower Silesian Voivodeship (excluding the Wrocław Functional Area, the Jelenia Góra Agglomeration ITI (Integrated Territorial Instrument), and the Wałbrzych Agglomeration ITI), under sub-measure **3.3 energy efficiency in buildings** of the public and residential sectors. As part of the competition, funding of up to 85% of eligible costs can be obtained for projects related to comprehensive energy retrofitting of public buildings, limited to buildings used by nurseries, kindergartens, and schools (excludes universities). The funds can be used to replace or retrofit heat sources and install RES micro-installations.

For a project to be eligible, a minimum of 51% of a building's usable area must be allocated to the activities of nurseries, kindergartens, or schools.

Applicable indicators of direct project outcomes include the amount of heat energy saved, the amount of electricity saved, a reduction in annual primary energy consumption in public buildings, the estimated annual decrease in greenhouse gas emissions, or an annual decrease in PM 10 and PM 2.5 particulate emissions.¹⁷

The maximum possible level of funding for a project presented by local government authorities is:

- Project not covered by state aid: Up to 85% of eligible costs
- Projects covered by public aid under the GBER (General Block Exemption Regulation)¹⁸: Maximum of 65% pursuant to Article 38 or maximum of 80% pursuant to Article 41

The level of co-financing for a project or part of a project may be reduced if the project includes revenue generation.

Applicants complete a co-financing application via the European Regional Development Fund (ERDF) online application generator at <https://snow-umwd.dolnyslask.pl/> and send it to the Authority who is organizing competition (IOK) as part of this call from 08.00 on 26 April 2021 to 15.00 on 10 May 2021 (round 2).

¹⁶ <https://www.wfosigw.katowice.pl/gospodarka-odpadami-i-ochrona-powierzchni-ziemi.html>

¹⁷ <https://www.funduszeuropejskie.gov.pl/nabory/33-efektywnosc-energetyczna-w-budynkach-uzytecznosc-publicznej-i-sektorze-mieszkaniowym-331-efektywnosc-energetyczna-w-budynkach-uzytecznosc-publicznej-i-sektorze-mieszkaniowym-konkursy-horyzontalne-3/>

¹⁸ Commission Regulation (EU) No 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty Text with EEA relevance

Only one application per applicant is allowed, and a hard copy of the application must be sent to the Office of the Marshal of the Lower Silesian Voivodeship.

The PFEPWM in Wrocław offers support to local governments in priority projects such as **atmospheric protection** and **waste management and protection of the earth's surface**.¹⁹ The basic conditions for support include achieving a specific ecological outcome and complying with ecological efficiency criteria.²⁰

Co-financing under the **atmospheric protection** priority covers activities aiming to:

- Reduce particulate and gas emissions, with particular emphasis on reducing sulphur dioxide, nitrogen oxides, and greenhouse gases
- Reduce low altitude emission of pollutants
- Reduce the emission of toxic substances
- Rationalise energy management
- Implement comprehensive thermal retrofitting programmes for local government authorities and public utilities
- Increase energy management efficiency

Local governments may obtain support in the form of a subsidy granted together with a loan (on the condition that the amount loaned cannot be less than the subsidy). **The loan may constitute up to 85% of eligible costs, and the subsidy up to 25%**, for tasks related to replacing or retrofitting a heat source in public utility facilities. It is also possible to obtain support in the form of **interest rate subsidies** for bank loans. Applications are received on a continuous basis on general terms.²¹

Co-financing by the PFEPWM in Wrocław as part of **waste management and protection of the earth's surface** includes the following:

- Tasks resulting from the implementation of the Provincial Waste Management Plan for the Lower Silesian Voivodeship
- Waste recovery and recycling activities
- Rehabilitation of degraded areas and elimination of sources of exceptionally negative environmental impact
- Hazardous waste disposal
- Pilot projects for biodegradable waste collection and treatment²²

As part of a continuous call for applications, support is granted in the form of **a loan covering 85% of eligible costs**. For activities financed by EU funds or other non-returnable foreign sources, it is possible to use a liquidity loan up to the amount of these subsidies.²³

¹⁹ <https://wfosigw.wroclaw.pl/zloz-wniosek>

²⁰ https://wfosigw.wroclaw.pl/zloz-wniosek/oa-ochrona-atmosfery/w_62,informacje

²¹ https://wfosigw.wroclaw.pl/zloz-wniosek/oa-ochrona-atmosfery/w_62,informacje

²² https://wfosigw.wroclaw.pl/zloz-wniosek/oz-gospodarka-odpadami-i-ochrona-pow-ziemi/w_84,zakres-dofinansowania

²³ https://wfosigw.wroclaw.pl/zloz-wniosek/oz-gospodarka-odpadami-i-ochrona-pow-ziemi/w_83,informacje

3.3 2021-2027 EU financial framework

In December 2020, the **EU's 2021-2027 Multiannual Financial Framework** was adopted with a total budget of €1,074.3 billion. Together with the EU's €750 billion **Next Generation EU** recovery instrument, the community will gain an unprecedented **€1.8 trillion** for the coming years. This money will serve to counter the economic and social effects of the COVID-19 pandemic and to implement long-term priorities, including a central role for the transition to climate neutrality. In total, over **€730 billion** will be allocated to financing activities to protect natural resources and the environment. The amount of these outlays corresponds to the EU climate goals. To achieve the EU's intention to become climate-neutral by 2050 in line with the Paris Agreement, the EU must increase its ambitions for the coming decade and update its climate and energy policy framework. The European Council has already approved a **binding target** to reduce the EU's **net greenhouse gas emissions by at least 55%** compared to 1990 levels **by 2030**.

A new **Just Transition Fund** (which is one of three parts of Mechanism mentioned below: https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/finance-and-green-deal/just-transition-mechanism_de) was created to support those high emission regions that will suffer most from the transition to a climate-neutral economy. It will be funded by the long-term budget and the EU's recovery instrument.

The **Just Transition Mechanism** is a key instrument for ensuring that the transition to a climate-neutral economy is carried out fairly, leaving no one behind. This mechanism helps mitigate the social and economic impact of the transition by focusing on regions, industries, and their workers affected by job losses and the need to re-skill; it mobilises at least **€100 billion** using three pillars:

- **Just Transition Fund** with a €40 billion budget, which will generate investments of at least €89 billion-€107 billion
- **Just Transition Scheme under InvestEU**, which will mobilise €45 billion of investments
- **Public sector loan facility implemented by the European Investment Bank** with a €10 billion budget, backed by €1.5 billion from the EU budget, which will mobilise investments of up to €30 billion.

Details of local governments' use of the Just Transition Mechanism are still being prepared. It can be assumed that co-financed projects will involve reducing the environmental impact of industrial activities, improving water relations in areas impacted by mines, reusing post-industrial areas for development purposes, and revitalising urban spaces. Changes in mobility will also be supported through investments in zero-emission transport infrastructure, development of cycling infrastructure, and subregional and local transport (vehicle purchases, investments in transport stops, and smart transport solutions). Support is also planned for the social and health needs of residents: reducing energy poverty, preserving regional cultural identity and industrial heritage, and developing social services, including mitigating negative outcomes in health protection.

3.4 The 2021-2027 Partnership Agreement

In connection with the beginning of the next budget period, Poland is preparing to complete a Partnership Agreement that will include implementing the five main objectives of the cohesion policy and an additional objective to enable citizens and regions to **mitigate the social, economic, environmental, and spatial effects of the transition towards a climate-neutral economy**. One of the

priority areas in the new budget will be achieving climate neutrality of the economy, which is designed to stimulate the development of areas of economic activity that help build a less environmentally invasive global economy. In connection with the objectives adopted by the EU, in the 2050 timeframe, Poland will focus on an environmentally friendly economy and will strive to significantly reduce the level of emissions of its economy. Activities to reduce emissions will be associated with the need for a transition in sectors such as energy, transport, industry, and services. As the state of the environment and climate, significant effects on the competitiveness and productivity of enterprises as well as the conditions and quality of life (and in consequence health of the inhabitants) it will be crucial to achieve the objectives at the local level also. The role of local governments in the 2021-2027 budget will also be important due to the regional approach to fund distribution.

As part of the goal for **a greener, low-carbon Europe**, the draft Partnership Agreement designates individual areas of activities designed to reduce emissions in the economy. Many of them may also contribute to climate change mitigation. For example, energy efficiency measures should focus on:

- Increasing the energy efficiency of public buildings
- Constructing or retrofitting district heating and cooling systems (networks) together with heat storage
- Replacing ineffective solid-fuel heat sources for renewable or gas sources

Particular preference can be given to projects in **small and medium-sized cities at risk of losing economic or social functions**, those implemented in areas of strategic intervention, and those implemented by the most (air-)polluted cities.

The Partnership Agreement will also provide **support for producing energy from renewable sources** to better use existing potential. Support for RES includes the following plans:

- Investing in constructing and expanding installations
- Eliminating the instability of energy production from RES
- Constructing or expanding networks enabling the accommodation of renewable energy

Another important area of the Partnership Agreement will be **climate change adaptation**, mainly by adapting infrastructure to extreme weather conditions, developing green and blue infrastructure, and eliminating urban heat islands.

Other activities promoted in this area include supporting water retention; developing systems for the intake, treatment, supply, and storage of water; and developing emergency monitoring, forecasting, and warning systems against extreme conditions and rescue systems.

Given the specificity of cities and towns, the territorial approach indicates the need for a **preferential approach to urbanised areas** engaging in climate change adaptation by implementing the green city concept and to areas particularly affected by disasters related to weather anomalies, including drought and floods.

These areas are only some of the elements distinguished in the Partnership Agreement to contribute to achieving **a greener, low-carbon Europe**. The distinguished activities will be financially supported in accordance with the *Strategy for Responsible Development* **through subsidies and a gradual increase in the scale and scope of financing tasks via the use of repayable forms of support**.

The Ministry of Development Funds and Regional Policy is conducting a series of open consultations on the Partnership Agreement that will take place in each voivodeship. In the new timeframe, as in 2014-20, about **60% of cohesion policy funds will be allocated to national programmes, while the remaining 40% will be allocated to regional programmes** managed by the heads of voivodeships. The money for regional programmes has been divided according to an algorithm based on several criteria, including population and per capita GDP. Under the draft Partnership Agreement, 75% of funds have already been allocated and 25% have been allocated to a programme reserve to be distributed at a later stage during programme contract negotiations. At the present stage, it can be assumed that the **Operational Programme** analogous to **Infrastructure and Environment** for 2014-20 will have a budget of approximately **€25.1 billion**.

The first consultation meeting was held in the Silesian Voivodeship. During this meeting, it was said that the Silesian Voivodeship would be the largest beneficiary of **Just Transition** Funds (€2.07 billion). In addition to the Silesian Voivodeship, the following regions will benefit from Just Transition Funds: Łódź, Lesser Poland, Lower Silesia, Greater Poland, and Lublin Voivodeships.

The consultation on the Partnership Agreement is an important point for local government authorities because as much as €7 billion (i.e. about 25% of funds allocated for all regional programmes) will be allocated after the programme contract has been negotiated. If the head of a voivodeship presents investments that are well-argued and comply with cohesion policy objectives, the voivodeship has a chance to receive additional funds to implement projects.

3.5 The Recovery Fund and National Recovery Plan

The second most important source of financing for many local government climate activities will be the EU **Recovery Fund (called Next Generation EU)**. This instrument is the EU's response to the new threats and challenges caused by the COVID-19 pandemic. For this reason, the mechanism has been assigned two main goals:

- Recovery and restoring the resilience of EU economies to potential crises
- Preparation for unforeseen future circumstances

The main part of this fund is the **Recovery and Resilience Facility (RRF)**. The fund will also contain smaller programmes.

Because the Recovery Fund and the RRF were created at the EU level, a National Recovery Plan (NRP) was prepared to plot this Fund out in detail. This plan will be the basis for identifying areas and priorities to be financed. The text of the NRP prepared by the Ministry of Development Funds and Regional Policy was announced on 26 February 2021.

The total Recovery Fund budget exceeds €723.8 billion and will be awarded as non-repayable subsidies and low interest loans. The RRF will give Poland access to approximately €58.1 billion, including:

- €23.9 billion to be disbursed as subsidies
- €34.2 billion for loans

The period for expending under national programmes will last from 2021 to 2026.

Funds reserved under the RRF will generally be allocated to pro-development investments in five areas:

- Economic resilience and competitiveness (€4.1 billion)
- Energy and reducing energy consumption (€6.4 billion),
- Digital transition (€3 billion)
- Accessibility and quality of the healthcare system (€4.3 billion)
- Green and smart mobility (€6.1 billion)

Climate issues will play a key role in the NRP—one of the three specific objectives, Green transition of the economy and the development of green, smart mobility, relates directly to environmental issues.

The expected results of interventions to achieve the three specific objectives will include increasing the share of renewable energy in gross final energy consumption and reducing exposure to particulate matter air pollution (PM 2.5).

The key evidence of the role of climate issues in the NRP is that most funds will be allocated to two of the five proposed components: component B – **Green energy and reducing energy consumption** (€6.347 billion) and component E – **Green, smart mobility** (€6.074 billion). In total, these will account for 51.9% of the subsidy funds provided for in the NRP.

What activities in the NRP will be key to local governments?

Under Component B – **Green energy and reducing energy consumption**, specific objective A – Improving energy efficiency in the economy will be pursued. It will include:

- Introducing a new RES bonus for the purchase and installation of renewable energy sources in residential buildings; it will not be related to a thermal retrofitting investment, so it will also be available to buildings that have already been thermally retrofitted.
- Increased support for renovation and thermal retrofitting of municipal buildings.
- Increased support for investments implemented with support from the subsidy fund (renovation of municipal flats inhabited by people at risk of energy poverty), provided the heat source is replaced with a low-emission alternative.

Within the energy efficiency of residential buildings area, local governments will be able to apply for financing of investments for:

- Replacing inefficient sources for heating and domestic hot water
- Thermal retrofitting of residential buildings
- RES installations (mainly PV panels, solar thermal collectors)

Achieving the goal of **increasing the use of renewable energy sources** will allow for the possibility of using, among other things, subsidies under programmes launched by the NFEPM that support the development of the hydrogen economy; these programmes include **New Energy** and **Green Public Transport**. Although the **New Energy** programme targets businesses, municipal companies will be eligible when implementing projects in areas such as stable zero-emission energy sources (e.g. by implementing technologies that use biomass and waste or mobile biogas plants for energy purposes), energy-plus buildings (e.g. the use of solar energy system technologies integrated into a building),

smart energy cities (implementation of smart public transport), and production, transport, storage, and use of hydrogen (e.g. using and making accessible hydrogen for road transport).

The objective of the **green transition of cities and functional areas**, for which a budget of over €460 million will be available, should be considered dedicated to local government authorities, including for:

- Developing strategic climate change adaptation documents (plans for achieving climate neutrality and climate change adaptation plans, including plans for greening urban spaces)
- Investments aiming to improve air quality in cities, in particular increasing the use of RES as an energy source in cities, including developing distributed and community energy
- Increasing the biologically active surface of functional areas and related areas and reducing soil sealing
- Nature-based urban investments with solutions for accompanying vegetation (street greenery, green parking lots, green stops, green walls, green roofs, rain gardens, urban retention reservoirs [city ponds], pocket parks, woonerfs, flower meadows)
- Investments in sustainable stormwater management systems with green or blue infrastructure and nature-based solutions
- Creating open multifunctional public spaces and eliminating heat islands, taking into account projects executed using a participatory approach
- Constructing traffic-calming and traffic-reducing measures on city centre streets
- Implementing energy-saving technologies for lighting roads and public spaces
- Developing zero-emission transport infrastructure (for walking, cycling) integrated with public transport
- Improving the energy efficiency of public buildings

Component E – **Green, smart mobility** will include the **zero-emission public transport** priority area. This €1.03 billion funding area will cover investments to purchase clean vehicles and equipment, including charging stations for public transport operators, and to support the construction and installation of public charging points for alternative fuels.

3.6 The LIFE programme

According to a regulation issued by the European Commission in June 2018, the **LIFE** programme will be continued in the 2021-2027 budget. Its goals will be:

- Contributing to the transition to a circular, clean, energy efficient, low-carbon, and climate-resilient economy, including through a clean energy transition
- Protecting and improving the quality of the environment
- Preventing the loss of and restoring biodiversity, thereby contributing to sustainable development²⁴

²⁴ <http://www.nfosigw.gov.pl/oferta-finansowania/srodki-zagraniczne/instrument-finansowy-life/aktualnosci/art,435,co-dalej-z-life-.html>

According to completed calls for proposals, the average project budget was approximately €3 million. In the current financial framework, projects with budgets of approximately €5 million will be more important and those less than €0.5 million will be of less interest to the European Commission. Note: the greater the European Commission co-financing, the greater the environmental impact the project must have.

The planned structure of the programme assumes that **LIFE** programme subsidies will cover up to **60% of eligible costs**. In addition, the NFEPWM will offer a subsidy of **35% of eligible costs** and the possibility of a loan for own contribution and to ensure project liquidity. Importantly, the loan for own contribution will be usable for eligible costs and for costs that are non-eligible but critical to project realisation.²⁵

3.7 The Interreg Central Europe Programme

Interreg Central Europe is a transnational cooperation programme part of the European Territorial Cooperation under the EU cohesion policy. When the **Interreg Central Europe 2021-2027** programme was being planned, four priorities and nine specific objectives were proposed. **Interreg Central Europe 2021-2027** will focus on implementing, among others, priority A, **greener Central Europe through cooperation**, by achieving the following objectives:

- Supporting energy transition towards a climate-neutral Central Europe
- Increasing resilience to climate change in Central Europe
- Developing a circular economy in Central Europe
- Environmental protection in Central Europe

In terms of counteracting climate change, the goal of **Green Urban Mobility in Central Europe** established under priority A, **Cooperating for a better connected central Europe**, will also be important.²⁶ Calls for applications under this programme are planned to commence in mid-2021.

3.8 The Interreg Baltic Sea Region Programme

Another programme under the European Territorial Cooperation is **Interreg Baltic Sea Region 2021-2027**. The programme priorities include **carbon-neutral societies**, which include the following specific objectives:

- **Circular economy:** A programme that supports activities facilitating the transition from linear to circular use of resources, which involves keeping products and materials in use for as long as possible without increasing environmental impact.
- **Energy transition:** A programme supporting the decarbonisation of energy systems to reduce greenhouse gas emissions and increase energy efficiency. The programme will also support activities to increase the share of renewable energy production from local sources.

²⁵http://nfosigw.gov.pl/gfx/nfosigw/userfiles/files/life/szkolenia/2021.02.04_life_i_biznes/2021_01_28_life_i_biznes_r.doma_gala_wprowadzenie_do_life.pdf

²⁶ https://www.ewt.gov.pl/media/96077/Sprawozdanie_srodowiskowe.pdf

- Smart green transport: A programme supporting the smooth flow of people and goods while saving resources by increasing efficiency and integrating a variety of transport models.²⁷

The **water-smart societies** priorities assume the following goals:²⁸

- Sustainable waters: A programme supporting measures to improve the state of the region's waters and to more sustainably manage them.
- Blue economy: A programme supporting sustainable activities benefitting the air, marine waters, and marine resources.

The call for applications to the **Interreg Baltic Sea Region 2021-2027** programme is planned to open at the end of 2021.

3.9 The European City Facility

One instrument of a different nature is the **European City Facility (EUCF)**. This is an initiative designed to support local governments in developing investment concepts that contribute to the implementation of activities specified in local Climate and Energy Action Plans. It aims to mobilise sustainable energy investments in European cities and municipalities.²⁹

Under the EUCF, local governments can obtain financial support in the amount of €60,000 and expert assistance while working on the selected concept, including analysis or study activities (e.g. preparing feasibility studies or market, stakeholder, legal, economic, risk, and financial analyses) as well as coordination and organisational activities.

The following are the EUCF initiative's main objectives:

- Provide cities with practical, technical, and financial knowledge inspired by European leading practices to stimulate public and private investment.
- Increase officials' competencies in developing new projects and provide them with tools and opportunities for networking and knowledge transfer.
- Facilitate access, especially for small and medium-sized municipalities, to private and EU funding, including the European Structural and Investment Fund, the **Horizon 2020** programme, and the services of the European Investment Bank.
- Effectively use the knowledge of EUCF beneficiaries to reach more than 10,000 cities and communities and to encourage further activities in European cities.

This instrument constitutes a valuable support for local governments planning an investment process; however, **the subsidy itself cannot directly finance investments**—it can only cover the costs of mobilising resources and accessing services that lead to the development of an investment concept.

The second round of applications to the EUCF will last until 31 May 2021. Compared to the first round, more than twice as many applicants will receive a subsidy. The changes introduced in 2021 also apply

²⁷ <https://www.interreg-baltic.eu/post2020.html>

²⁸ https://www.ewt.gov.pl/media/97078/programy_2021_2027.pdf

²⁹ <http://www.pnec.org.pl/pl/3-aktualnoci-kat/770-drugi-nabor-do-eucf-i-webinarium-informacyjne>

to entities eligible to apply. More information on: www.eucityfacility.eu and <http://www.pnec.org.pl/pl/eucf>

4 Appendix 1: Best practices

4.1 Electromobility and public transport using RES: the example of Ostrów Wielkopolski

Miejski Zakład Komunikacji (MZK, Municipal Public Transport Company) in Ostrów Wielkopolski uses 56 vehicles, 10 of which are electric buses. As emphasised by Janusz Marczak, the president of MZK, the first years of their operation have provided the company and the city with positive experiences, which have resulted in the decision to purchase another eight brand-new, low-floor buses and four two-bay chargers.

The positive aspects of electric vehicles are also appreciated by passengers. They are functional and comfortable, while having a low failure rate and lower operating costs. Their advantages can also be observed in the environmental impact of urban transport. The president of MZK calculates that a year of operating 10 electric buses travelling nearly 770,000 km constitutes a saving of 291,000 litres of diesel fuel. Therefore, the environmental benefit of the investment is enormous. It also provides the company an annual savings of over PLN 530,000 per year.

The buses owned so far have been purchased using **Greater Poland Regional Operational Programme** funds for 2014-2020. The subsidy covered approximately 75% of the project costs. For the purchase of subsequent items, MZK has applied to a special programme of the National Fund for Environmental Protection and Water Management aiming to reduce air pollutant emissions by reducing the use of carbon-emitting fuels in public transport.

Importantly, to run its electric buses, MZK uses energy generated by **Ostrowski Zakład Ciepłowniczy S.A. (OZC, Ostrów Wielkopolski Heating Plant)**; MZK buys electricity that OZC produces in a combined heat and power process. This is green energy because OZC uses ecological fuels and energy-saving technologies. This company has a gas co-generation source and boilers for burning biomass (straw, wood briquettes), which allow for the combined generation of electricity and heat. Combined heat and power generation is one of the most effective methods for saving energy and reducing CO₂ emissions while generating electricity and heat. Ostrowski Zakład Ciepłowniczy S.A. financed the investments in the new technologies needed for this cooperation from a joint project with MZK that was more than 71% funded by the **Greater Poland Regional Operational Programme** for 2014-2020.

The president of MZK also points to several important issues that he would like to share with other local government officials.

- In his opinion, a rational policy for locating charging stations is extremely important: depots, terminals, transit stops, major stops.
- Inter-city cooperation on recharging batteries if long-distance routes are served also has great benefits.
- The first years of experience allow him to recommend a sensible purchasing policy. Large, one-off purchases in the future will require the simultaneous replacement or regeneration of multiple traction batteries.
- When increasing the number of electric buses in the fleet, the unsubsidised purchase of an electric bus is a huge financial expenditure.

- The use of such vehicles, in his opinion, also requires appropriate awareness of the need to adapt timetables to the required recharging breaks. At the same time, with well-organised timetables, even extra-urban lines can be operated without a problem.
- As shown by MZK's experiences in Ostrów, transport totalling 260 km per day can be achieved without trouble (if batteries are charged with the required frequency). One electric bus at MZK Ostrów Wielkopolski averages over 70,000 km.

4.2 Comprehensive thermal retrofitting of public buildings following the public-private partnership (PPP) formula: Karczew municipality

Karczew municipality in the poviát of Otwock carried out thermal retrofitting of 10 public buildings under the public-private partnership (PPP) formula. The project objective was to significantly reduce the costs of heat and electricity consumption while maintaining the technical efficiency of installed devices and to introduce energy management features in facilities.

What prompted the municipality authorities to engage in activities under the PPP formula, which is not very popular in this area? Władysław Łokietek, mayor of Karczew at the time, provides the following explanation: "Primarily, there was a lack of funds in the municipality's budget for the thermal retrofitting of public buildings, which were in poor technical and visual condition. A long-term absence of retrofitting resulted in high maintenance costs. Fuel purchases and lighting and water bills imposed a heavy burden on municipality." He also mentions the high emissions of the building heating system as an equally important aspect. The operation of old boiler houses, an inefficient lighting system, and the lack of a control system all had negative environmental impacts.

What was the scope of the project? The works involved 10 public buildings. Their energy retrofitting involved, among other things, constructing a remote energy monitoring and management system, systems for controlling the temperature and thermal comfort in rooms, retrofitting lighting, replacing certain heat sources, and thermal retrofitting works.

A competitive dialogue was used to select a partner, and negotiations with two potential contractors lasted 9 months. Ultimately, a contract with a private investor was signed for 15 years including the project's maintenance and care period. The contractor bore the cost of construction works and implementing an integrated energy, gas, and water management system, and continues to provide the technical maintenance of the buildings. To the project, the municipality contributed funds associated with energy audits of buildings to be thermally retrofitted, project documentation for three facilities, and funds obtained from the National Fund for Environmental Protection and Water Management for thermal retrofitting tasks. These constituted about 15% of the investment value. The partner's remuneration comes entirely from the profits generated by the savings in the maintenance and heating costs of the retrofitted buildings. It is worth emphasising that remuneration is calculated based on annual energy efficiency audits.

What benefits of the adopted solution do the municipal authorities mention?

- Achieved the guaranteed savings in total energy consumption: 56% for heating energy and over 20% for electricity. The work carried out significantly reduced the emissions

of harmful substances and particulate matter to the environment and atmospheric emissions of CO₂.

- The city's financial contribution is low, while the private partner's remuneration is closely tied to the level of savings obtained.
- The implementation of advanced technologies via a PPP to improve energy efficiency has boosted the municipality's image as a modern local government.

What recommendations can be passed on to other local governments based on the experience of the Karczew municipality?

- It is strongly recommended to make the private partner's remuneration dependent on the effectiveness of the investment, the scale of the energy savings achieved, and its effectiveness in managing the resulting system.
- Applying the PPP formula to similar investments significantly reduces the burden on the local government budget and reduces the own contribution required. At the same time, special care must be taken to ensure transparency in the private partner selection procedure.
- It is important to transfer most of the risks related to the implementation and maintenance of the investment to the private partner.

4.3 Biomass heat power station: using RES to improve an urban district heating system: the example of Lębork

The municipally owned **Miejskie Przedsiębiorstwo Energetyki Ciepłej in Lębork (MPEC Lębork, Lębork Municipal Heating Company)** put an ecological heat and power plant into commission in June 2016.

The heat and power plant fired with biomass from local wood industry waste is designed to improve the quality and ensure the continuity of hot water and electricity supply to residents, while reducing the emission of harmful particles, gases, and other substances responsible for the formation of smog. Another important factor leading to investments being initiated was the desire to protect against energy poverty and fluctuations in coal prices.

The heat power station uses high efficiency organic rankine cycle (EC ORC) technology. It uses thermal oil as a medium by which a plate heat exchanger heats silicone oil, which evaporates to drive a turbine, setting a generator in motion. This allows heat and electricity to be co-generated at significantly lower temperatures than in previously used systems. Another benefit is the significantly lower energy loss. The project started in 2012, and was implemented under the Swiss-Polish Cooperation Programme (**Swiss Contribution**) thanks to support from Switzerland, which incurred 85% of the investment costs (CHF 9.89 million). Biomass was selected as the energy source because there is a large area of forests and farmland near Lębork, and the well-developed wood industry is a potential supplier of large amounts of wood waste and production residues. The energy potential of biomass generated in the wood industry, carpentry workshops, and energy plantations around Lębork is estimated at 530,000 GJ/year. The heat and power plant's demand is about 200,000 GJ/year.

The main purpose of constructing an EC ORC was to supply the city's inhabitants with domestic hot water generated in a green and economical manner. The new CHP plant has allowed the old heating

plant to significantly cut coal combustion, reducing emissions of sulphur dioxide, carbon monoxide, and particulate matter, which were negatively affecting the health of residents. Between 2014 and 2020, the consumption of fine coal decreased from over 16,000 tonnes to 8,000 tonnes per year. At the same time, the amount of particulate matter emitted was reduced to less than a third. As compared to coal technologies, sulphur oxide emissions have also been reduced many times over.

The funds previously used to buy coal are allocated to, for example, purchasing biomass from local suppliers, stimulating the economy and creating jobs. As the Lębork authorities emphasise, the reduction in CO₂ emissions has also saved nearly PLN 2.3 million in fees related to environmental exploitation.

The EC ORC project in Lębork consisted of several elements: the building of the heat and power plant itself, a 1,000 m² roofed biomass storage hall, a biomass unloading and storage facility, storage yards, and a biomass chipper. The project savings have also financed a connection of the District Educational Centre to the district heating network.

The full production capacity of EC ORC is 5.68 MW of thermal power and 1.4 MW of electric power produced in full cogeneration. In the summer, the facility fully covers the heat demand of approximately 4.5 MW and also provides approximately 1.25 MW of electric power. The system is 82% efficient in generating heat and electricity, meeting the definition of a high efficiency system from the act on co-generation. The EC ORC is grid-independent in terms of electricity demand and sells its surplus electricity to the grid.

Mariusz Hejnar, director of the Miejskie Przedsiębiorstwo Energetyki Ciepłej in Lębork, states the use of biomass has freed energy prices from the impact of events on the coal market. The impact of any potential increase in costs resulting from the need to switch to renewable energy has also been limited.

How can the benefits the municipality has achieved by introducing a renewable energy source into its energy mix be summed up?

- In first place, the director of MPEC (Municipal Heat Supply Company) in Lębork mentions the improved quality of the environment, as the project reduced CO₂ emissions by approximately 25,000 tonnes in the first year after commissioning.
- Electricity bills have also been lowered, which provides security against energy poverty.
- Using onsite renewable energy resources to generate energy has also created more jobs and generated revenue for 10 local suppliers.

What recommendations do municipal officials propose for other local governments?

- Using local, green energy resources is not only beneficial, but it is also a prerequisite for generating a real, positive ecological outcome. This is because net emissions will drop by using biomass only if local industry has sufficient fuel resources as waste.
- Similar actions should be preceded by an analysis of the availability of fuel in the facility's immediate vicinity.

5 Appendix 2: Financing sources available in regions

	Rational management and protection of the earth's surface and waste of the	Climate adaptation and protection of waters against pollution and change	Atmospheric protection	Energy efficiency
Lower Silesia	<ul style="list-style-type: none"> • NFEPWM programme: Rational waste management <ul style="list-style-type: none"> Part 1) Selective collection and prevention of generation of waste Part 2) Waste management installations • NFEPWM programme: Protection of the earth's surface <ul style="list-style-type: none"> Part 1) Reclamation of degraded areas • NFEPWM programme: Reducing nuisances resulting from mineral extraction • PFEPWM programmes: Waste management and protection of the earth's surface 	<ul style="list-style-type: none"> • NFEPWM programme: Water and sewage management in agglomerations <ul style="list-style-type: none"> Part 1) Sewage management under the National Programme of Municipal Sewage Treatment • NFEPWM programme: Adaptation to climate change and limiting the effects of environmental threats 	<ul style="list-style-type: none"> • NFEPWM programme: Green public transport (Phase I) • PFEPWM programmes: Atmospheric protection 	<ul style="list-style-type: none"> • Regional Operational Programme: measure 3.3 – Energy efficiency in public and residential buildings
Lublin	<ul style="list-style-type: none"> • NFEPWM programme: Rational waste management <ul style="list-style-type: none"> Part 1) Selective collection and prevention of generation of waste Part 2) Waste management installations • NFEPWM programme: Protection of the earth's surface <ul style="list-style-type: none"> Part 1) Reclamation of degraded areas • NFEPWM programme: Reducing nuisances resulting from mineral extraction 	<ul style="list-style-type: none"> • NFEPWM programme: Water and sewage management in agglomerations: <ul style="list-style-type: none"> Part 1) Sewage management under the National Programme of Municipal Sewage Treatment • NFEPWM programme: Adaptation to climate change and limiting the effects of environmental threats 	<ul style="list-style-type: none"> • NFEPWM programme: Green public transport (Phase I) 	

	Rational waste management and protection of the earth's surface	Climate change and protection of waters against pollution	Atmospheric protection	Energy efficiency
Subcarpathia	<ul style="list-style-type: none"> NFEPWM programme: Rational waste management <ul style="list-style-type: none"> Part 1) Selective collection and prevention of generation of waste Part 2) Waste management installations NFEPWM programme: Protection of the earth's surface <ul style="list-style-type: none"> Part 1) Reclamation of degraded areas NFEPWM programme: Reducing nuisances resulting from mineral extraction 	<ul style="list-style-type: none"> NFEPWM programme: Water and sewage management in agglomerations <ul style="list-style-type: none"> Part 1) Sewage management under the National Programme of Municipal Sewage Treatment NFEPWM programme: Adaptation to climate change and limiting the effects of environmental threats 	<ul style="list-style-type: none"> NFEPWM programme: Green public transport (Phase I) 	
Pomerania	<ul style="list-style-type: none"> NFEPWM programme: Rational waste management <ul style="list-style-type: none"> Part 1) Selective collection and prevention of generation of waste Part 2) Waste management installations NFEPWM programme: Protection of the earth's surface <ul style="list-style-type: none"> Part 1) Reclamation of degraded areas 	<ul style="list-style-type: none"> NFEPWM programme: Water and sewage management in agglomerations <ul style="list-style-type: none"> Part 1) Sewage management under the National Programme of Municipal Sewage Treatment NFEPWM programme: Adaptation to climate change and limiting the effects of environmental threats 	<ul style="list-style-type: none"> NFEPWM programme: Green public transport (Phase I) 	

	Rational waste management and protection of the earth's surface	Climate change adaptation and protection of waters against pollution	Atmospheric protection	Energy efficiency
Silesia	<ul style="list-style-type: none"> NFEPWM programme: Rational Waste Management <ul style="list-style-type: none"> Part 1) Selective collection and prevention of generation of waste Part 2) Waste management installations NFEPWM programme: Protection of the earth's surface <ul style="list-style-type: none"> Part 1) Reclamation of degraded areas NFEPWM programme: Reducing nuisances resulting from mineral extraction PFEPWM programmes: Waste management and protection of the earth's surface 	<ul style="list-style-type: none"> NFEPWM programme: Water and sewage management in agglomerations <ul style="list-style-type: none"> Part 1) Sewage management under the National Programme of Municipal Sewage Treatment NFEPWM programme: Adaptation to climate change and limiting the effects of environmental threats 	<ul style="list-style-type: none"> NFEPWM programme: Green public transport (Phase I) PFEPWM programmes: Atmospheric protection Regional Operational Programme: sub-measure 4.6.1 – Clean air 	<ul style="list-style-type: none"> Operational Programme Infrastructure and Environment: measure 1.7.1 – Supporting energy efficiency in residential buildings in the Silesian Voivodeship



On behalf of:



Federal Ministry
for the Environment, Nature Conservation
and Nuclear Safety



European
Climate Initiative
EUKI

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