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Blocked potential

How to use the European Green Deal and the fit for 55 as an opportunity to transform the building and transport sectors at the local level

It is necessary to take more ambitious actions at all levels of creating public policies in Poland. Plans implemented at the EU level can provide inspiration for this, while the European Green Deal and the Fit for 5z package contain solutions that translate into opportunities for transformation while addressing social problems at the local level. In the context of the war in Ukraine, taking ambitious measures will also translate into faster independence from the import and use of fossil fuels from Russia, and will guarantee resistance to future external shocks related to the availability and prices of energy resources.

Piotr Chrzanowski, Joanna Fabiszewska-Solares,
Wojciech Lewandowski, Karolina Marszał



ENERGY, CLIMATE AND ENVIRONMENT

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Authors:

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Wojciech Lewandowski,
Karolina Marszał



WiseEuropa – Warsaw Institute for Economic and European Studies

Ul. Królewska 2/26
00-065 Warsaw, Poland

www.wise-europa.eu

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Warsaw, 2022

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Executive Summary

- **The European Green Deal and the Fit for 55 offer opportunities to solve local challenges in the building and transport sectors, provided that the potential necessary for the implementation of actions envisaged in them is unlocked.** Consistent implementation of the zero-emission transformation allows to offset investment costs with long-term benefits resulting from the reduction of fossil fuel consumption. These activities also translate into strengthening local resilience to external shocks and serve to implement Poland's interests related to strategic security in the face of Russia's aggression against Ukraine and Russia's suspension of exports of fuels (oil, gas, coal) as a method of blackmail.
- **Among the challenges at the local level, a lasting solution to the problems of transport exclusion and energy poverty, which particularly affect medium-sized cities, is distinctly important. The implementation of the European Green Deal offers this opportunity.** Efforts to decarbonise the building and transport sectors will contribute to a lasting solution to the problems of the transportation blank spots and high energy bills. The role of local governments and central authorities is to implement solutions that will constitute a long-term improvement in meeting the needs of thermal and transport comfort for local communities. These measures should be based on zero-emission technologies, thanks to which it will be possible to permanently improve the reduction of emissions in the building and transport sectors and to solve problems related to poor air quality and smog.
- **The blocked potential for acknowledging the opportunities related to the European Green Deal (EGD) is currently the result of the simultaneous occurrence of interrelated blockades, or "barriers", at the central and local levels.** The most important are the ambition gap and the regulatory blockades at the national level, the lack of effective use of available financial resources, the lack of ambition and a comprehensive approach at the local level, and the underutilization of private investment potential. These blockades translate into ineffective and isolated activities that do not provide an adequate response to the scale of the challenges and their complexity.
- **Model investments of local governments in the building and transport sectors can be a good example of using the opportunities related to the EGD and the FF55 and comprehensively addressing the challenges at the local level.** These activities may be based on the scope of competences of local governments (they do not require "hiding behind" the central level) and available instruments for conducting public policies.
 - For the building sector, investments in **deep renovation of municipal and social buildings** can be a model one-stop-shop investment generating added value for local communities and stimulating the market.
 - For the transport sector, a model comprehensive investment that treats the transport needs of local communities holistically may be the **reconstruction of public transport in inaccessible areas based on zero-emission technologies.**



- **The introduction of the recommended changes will enable the acceleration of the transformation efforts, the involvement of private capital in financing the transformation, comprehensive addressing of social and environmental challenges and, as a result, it will translate into a higher quality of life - especially in medium-sized urban centres.** In order to fully unlock the potential of the European Green Deal at the local level, it is crucial to adopt a long-term low-carbon transformation strategy at the central level and to raise and clarify the level of sectoral ambitions during the necessary revision of strategic government documents and implementation of the National Recovery and Resilience Plan. A very important issue is the efficient use of available financial resources and more effective mobilization of private investment (both through a stable regulatory framework and skilfully constructed financing instruments). Local authorities are also encouraged to implement above the statutory minimum level of ambition and adopt a comprehensive approach to solving social challenges, while implementing investments using modern zero-emission technologies. Detailed sector recommendations complement these general observations.

1. Introduction

The European Green Deal was a new opening for the European Commission in the field of the climate policies and the adjustment of other EU economic policies to the 2050 climate neutrality goal and 2030 mid-term reduction goals. In December 2019, the European Commission presented several proposals concerning public policies in essentially all sectors covered by the EU's competences. Plans for the implementation of these proposals have been delayed by the spread of the COVID-19 pandemic in Europe, but the European Green Deal has become an important 'compass' for determining the direction of economic recovery after the coronavirus crisis. This is manifested in part by making the access to funds from the Next Generation EU (in particular the Instrument for Reconstruction and Increasing Resilience) conditional on their allocation to sustainable investments.

The goals of achieving climate neutrality by 2050 and reducing emissions by 55% (compared to 1990 values) by 2030 were also adopted in a legally binding form by the European Union in the European Climate Law regulation, which entered into force in July 2021. The adoption of this regulation marked a new stage in the EU climate policy, in which the implementation of reduction targets is no longer a matter of free interpretation of the Member States, but a legally binding obligation of the entire EU. It also means that from the stage of debate on planning and setting transformation goals, the burden of public policy has been shifted to the discussion on how to implement them. The Commission presented its vision in July 2021 in the Fit for 55 package of legislative proposals to amend existing regulations and introduce new instruments to comprehensively align EU policies with new binding reduction targets.

Diagram 1. The most important findings of the European Green Deal.



Source: WiseEuropa own compilation



The political and regulatory context of the EU climate policy, determined by the above-mentioned documents and instruments, translates into actions related to the green transformation at all levels - pan-European, national and local. The local level will be the level on which the success of many of the policies set out in the European Green Deal will directly depend on the success of which, at the same time, most of the available analysis focuses on the national level. Many activities at the local level directly depend on the effective transfer of funds from the EU level, through the national level to the local level, and from the central budget. Legal regulations at the state level, in turn, translate into competences and the ability to perform own tasks by local governments. Thus, both levels - local and national - are interrelated and interdependent, and an analysis focusing solely on one of them would be incomplete and unreliable.

Therefore, our aim was to analyse the impact of the European Green Deal on actions taken at the local level, taking into account the national context. To this end, we have defined the scope of our analysis covering the building and transport sectors and presented the opportunities related to the implementation of EU climate policies and green transformation at the local level. Then, we indicated the identified barriers that currently prevent these policies from unlocking their full potential. We have also pointed out the solutions that we believe will enable the most effective, efficient and sustainable solution to many local issues by taking actions that will be in line with the European Green Deal, and based on a suitably high level of ambition and best practice. Thanks to this, the recommendations that we formulated at the end are supported by a multi-stage and multi-dimensional analysis.

The work on this analysis coincided with the beginning of the invasion on Ukraine by Russia and Belarus. The war just across the eastern border of Poland sets a new context for the discussion on the role of the European Green Deal in setting the goals of public policies at the local level. In our opinion, its goals related to the decarbonisation of all sectors of the economy are useful in determining the trajectory of phasing out the use of fossil fuels that are currently imported to Poland (and the EU) from Russia/ Such opinion is also shared by the European Commission as stated in its REPowerEU communication of 08 March 2022¹. For this reason, any decarbonization effort is also a very important investment in resilience and strategic security - these measures will only be effective if implemented at all levels: pan-European, national and local. Thus, the reversal of the narrative around the European Green Deal in two sectors particularly relevant to the scope of the competence of local governments - transport and the building sector - is even more relevant today than before 24 February 2022.

1 European Commission, REPowerEU: Joint European Action for more affordable, secure and sustainable energy, 2022



2. Green opportunities – the European Green Deal as an opportunity to solve local challenges

The availability of many studies exposing the costs related to the decarbonisation of the Polish economy means that the European Green Deal is most often presented as a major challenge to be financially sustainable in the 2030 and 2050 perspective. This narrative is usually one-dimensional and omits many benefits related to the implementation of policies envisaged at the EU level and adapting national legislation to the regulatory requirements set out in the “Fit for 55” package and currently being negotiated by EU legislators. The cost calculations themselves often ignore the fact that investing in zero-emission technologies lowers the cost of their subsequent exploitation in relation to technologies based on the use of fossil fuels, as well as the lack of the need to import these raw materials - as noted in the introduction, the benefits of these activities will not be only economic but also strategic.

It is similar with many other aspects of the functioning of Polish society and the quality of life in cities, especially in the context of social problems such as transport exclusion and energy poverty. The European Green Deal, also in the political narrative, is often framed as a strategy that runs counter to the possibilities of solving these problems - there is often a lack of positive examples and success stories that would inspire others to take ambitious action. As a result, this one-sided optics translates into restraint in supporting and implementing goals formulated at the EU level - goals that are still sometimes described as insufficient to stop the tragic increase in the average temperature on the Earth above 1.5° C in relation to the pre-industrial era in accordance with the Paris Agreement. Direct effects of this restraint are more and more often felt at the local level by the occurrence of droughts, costly effects of sudden weather phenomena, heat waves, floods, but also by air pollution caused by smog.

For this reason, in our opinion, it is worth taking a two-dimensional approach to the European Green Deal and balancing its costs with the benefits that can be achieved through its implementation. For this purpose, it is best to refer to the approach proposed by the European Commission, which sees the European Green Deal primarily as a strategy for green growth based on the principles of a just transition that “leaves no one behind”. At the same time, the European Green Deal is expected to be an opportunity to stimulate investment in the design and development of modern zero-emission technologies. As already mentioned in the introduction, its implementation may lead to increased strategic security and resistance to external shocks. A number of additional initiatives, such as The New European Bauhaus, the Renovation Wave, the Farm-to-Fork strategy, the development of taxonomies and the development of the sustainable

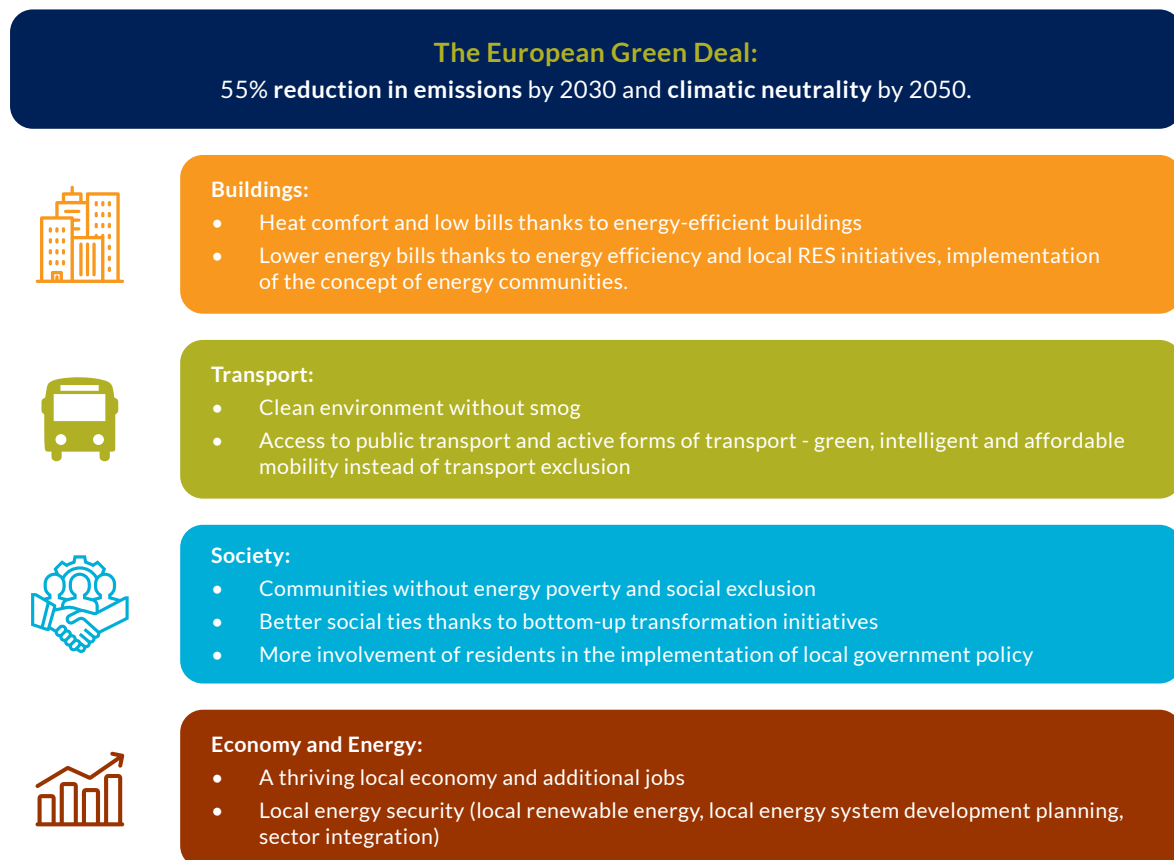


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finance sector are to ensure a multi-sectoral and comprehensive approach to achieving climate neutrality in 2050 by the entire economy. As a result, the functioning of societies in the EU at all levels and in all sectors is to be transformed.

Obviously, the implementation of these assumptions will depend on many factors and the final shape of the regulations implementing them in practice - in this context, particular elements of the regulatory package “Fit for 55”, whose task is to “operationalize” the objectives set out in the European Green Deal, play a special role. They are presented in more detail later in our study. However, it is worth emphasizing that the implementation of the above-mentioned assumptions in their final shape largely depends on actions taken from the “internal” perspective - at the national and local levels. For this reason, the internal level of ambitions will be decisive in achieving the benefits of the European Green Deal for all EU citizens, which will determine their quality of life. This will also translate into how the EU strategy (and the EU itself) is perceived at the local level by the communities. In the graphic below, we present the essential elements of the European Green Deal that will have the greatest impact on the quality of life at the local level.

Diagram 2. Benefits of the European Green Deal.



Source: WiseEuropa own compilation

Due to the key importance of the building and transport sectors to the decarbonisation efforts, in this paper we have decided to address the critical perception of the European Green Deal described above and identify areas and sectors where the current perspective can be changed. Our proposed change of the narrative around the European Green Deal is aimed at more clearly highlighting the opportunities related to its implementation and unblocking the potential that is

included in the various initiatives included in it to improve the quality of life in cities (especially medium-sized ones). Such a choice was dictated primarily by our diagnosis of the most important social problems at the local level, to which the European Green Deal can propose permanent and comprehensive solutions.

These problems concern the above-mentioned transport exclusion (affecting over 13 million people in Poland²) and energy poverty (depending on the adopted research methodology, it concerns anywhere from 3.86 million people living in 1.4 million households to 6.58 million people living in 2.3 million households³), caused by the insufficient technical condition of residential buildings in Poland and associated with the risk of increases in fuel prices needed to ensure thermal comfort. Additionally, medium-sized cities constitute a particularly sensitive category in Poland, as many of them (according to the estimates of the Polish Academy of Sciences this number is 137⁴) are at risk of losing their socio-economic functions and increasing development disproportions in relation to metropolises. One of the main reasons (apart from unfavourable demographic conditions) is the deteriorating quality of life, also caused by adverse environmental conditions. Transport exclusion and energy poverty are common phenomena in these cities.

For these reasons, we found that communicating how the initiatives included in the European Green Deal can solve these social problems, while at the same time being a long-term improvement of the environmental, climate and economic situation, is the most convincing way to present the opportunities related to the EU's flagship initiative.

The transport and building sectors are also the areas where local governments have the most direct competence to act. Organising public transport and conducting municipal housing policy are activities where local authorities can exert a significant influence on the functioning of local communities, both in terms of basic life activities and the prospects of running a business, finding employment, access to education and other public services. The congestion of individual transport and the low quality of solid fuels used for heating in many localities are the direct causes of smog. As a result, these two sectors determine, to a large extent, the level of quality of life for local communities, which was an additional argument for including them in a more detailed analysis.

We conducted this analysis taking into account the multi-level nature of the climate policy in the EU, which also translates into the transport and buildings sectors. The reduction and investment targets set at the EU level are reformulated and implemented at the national level. These targets from the national level set the context for action taken at the local level. The local government operates within a regulatory and financial reality determined at higher levels - primarily by national legislation. This significantly determines the scope of possibilities and the level of ambition for local authorities. At the same time, local governments are the level of power closest to citizens, so they best understand local needs and have the greatest impact on the implementation and perception of EU policies by residents of specific towns. For this reason, our analysis was not limited to the local level and activities undertaken by local governments, but also took into account issues arising directly from the determinants at the central level.

In our analysis, we adopted a method based on confronting our findings with central and local stakeholders as well as business representatives. As a result, together with those directly interested, we were able to identify barriers and gaps in the current approach, as well as

2 Klub Jagielloński, Publiczny transport zbiorowy w Polsce. Studium upadku, 2018 Jagiellonian Club, [own translation of title: Public collective transport in Poland. A fall study]

3 Central Statistical Office, Statistics on energy poverty until 2020 – compilation for the Ministry of Culture and National Heritage, 2021

4 Polish Academy of Sciences, Aktualizacja delimitacji miast średnich tracących funkcje społeczno-gospodarcze, 2019 [own translation of title: Updating the delimitation of medium-sized cities losing their socio-economic functions]



develop recommendations regarding the directions and ambitions of future activities. Our initial assumption was to find the interconnection between centrally defined goals, the methods adopted to achieve them and the availability of funds for decarbonisation activities. Therefore, to avoid isolating them, we focused on action at all levels (EU, central and local) and adopted an approach that takes into account the need to simultaneously look at objectives, methods (public policies, regulations) and measures (soft tools, funding programs), investment support etc.). The result was the identification and mapping of blockages currently preventing the use of the full potential offered by the European Green Deal for local building and transport activities, presenting ideas to change this situation and formulating recommendations for local and central authorities. These issues are developed in detail in the following sections of this paper.

3. Five “barriers”

Our analysis showed that in order to fully use the potential of the European Green Deal and the Fit for 55 package for the building and transport sectors at the local level, it will be necessary to remove the 5 identified “barriers”, preventing the achievement of potential benefits.

We have defined 5 “barriers”:

1. The current ambition gap at the national level and the resulting regulatory blockades;
2. Inefficient use of financing at the local level hindering the implementation of comprehensive investments;
3. Failure to set ambitious goals by the local governments and failure to use all available tools and financial mechanisms;
4. Deficiency in the implementation of comprehensive investments and activities at the local level;
5. Lack of synergy between activities in the public sphere and generating private investments.

3.1 The ambition gap and regulatory blockages at the national level

Polish strategic documents fit into the assumptions of the European Green Deal and the “Fit for 55” package, in terms of issues such as the development of electromobility or support for thermal modernization. However, the ambition gaps appear in a detailed analysis of documents which, in their key provisions, mostly deviate from the EU assumptions. Most of the discrepancies (or even the lack of provisions for some issues) concern the building sector, especially in terms of improving energy efficiency. It is crucial that **Poland had a long delay in submitting the long-term renovation strategy to the European Commission, while still no horizontal long-term strategy was developed that would allow setting out scenarios for achieving climate neutrality for the entire economy in the perspective of 2050** (national long-term strategies – nLTS), which should be delivered in early 2020⁵. The government also presented the Polish Energy Policy until 2040 (PEP 2040), a document approved in February 2021, which mainly focuses on the energy sector and is not a response to the European Green Deal.

In order to demonstrate the ambition gap in the buildings and transport sector, the following strategic documents were analysed in detail: PEP 2040, National Energy and Climate Plan for 2021-2030 (NECP), the National Recovery and Resilience Plan (project not yet formally approved by the European Commission), Long-term Renovation Strategy, Electromobility Development Plan, and Sustainable Transport Strategy.

⁵ European Commission, 2050 long-term strategy, https://ec.europa.eu/clima/eu-action/climate-strategies-targets/2050-long-term-strategy_en (retrieved 22.02.2022)



Table 1. The most important assumptions of Polish strategic documents in the building and transport sectors

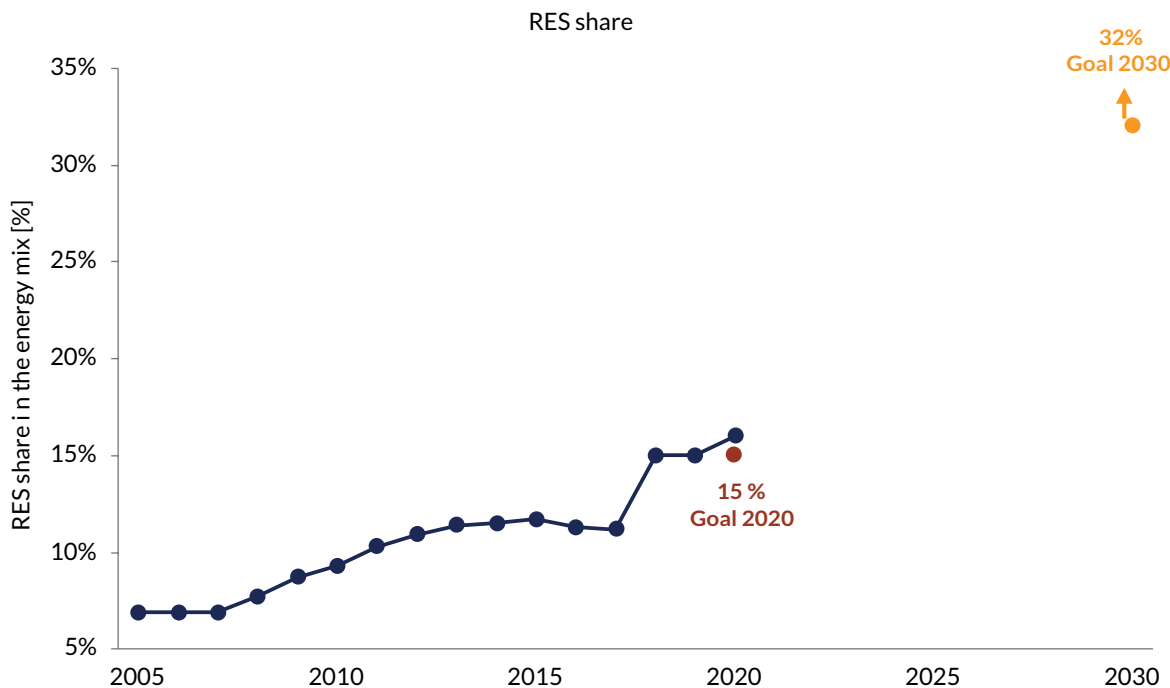
Dokument	Opis
Poland's Energy Policy until 2040	<ul style="list-style-type: none"> • Development of electromobility – 600,000 electric and hybrid vehicles by 2030 and approx. 60,000 charging stations. • Development of renewable sources in transport and heating – an increase in the share of renewable energy sources in transport by 14% and thermal engineering by 28%. • Move away from burning coal in households in cities by 2030, in rural areas by 2040. • Improving energy efficiency – no specific target for buildings (efficiency increase by 23% in all sectors of the economy). • Development of zero-emission public transport - in cities with more than 100,000 inhabitants, the obligation to purchase only electric or hydrogen buses from 2025, and from 2030 to achieve full zero emissions for the entire fleet of buses in public transport.
National energy and climate plan for 2021-2030	<ul style="list-style-type: none"> • Reduction of CO₂ emissions in non-ETS sectors by 7% by 2030 (compared to 2005) - including a reduction from 2030 of CO₂ emissions by 37.5% for new passenger cars and by 31% for new light commercial vehicles. • Increase in the share of renewable energy sources by 14% in transport by 2030 and in heating and cooling by 1.1 percentage points per year. • 23% increase in energy efficiency by 2030 in all sectors - no specific target for buildings. • Development of electromobility - 1 million electric vehicles by 2025.
National Recovery and Resilience Plan (<i>project not approved by the European Commission</i>)	<ul style="list-style-type: none"> • Investments supporting the replacement of heat sources and improvement of energy efficiency in buildings. • Investments for zero- and low-carbon collective transport (buses and trams). • Investments in the development of intermodal transport. • Investments supporting the development of renewable energy sources in buildings and transport.
Long-term Renovation Strategy	<ul style="list-style-type: none"> • Support for deep and long-term modernization of buildings. • Contains 3 renovation scenarios that set specific goals (i.e. quick and deep renovation scenario, recommended scenario, staged modernization scenario).
Electromobility Development Plan	<ul style="list-style-type: none"> • Support for the development of electromobility - reaching 1 million electric vehicles in 2025 and the share of at least 50% of electric vehicles in the fleet of public institutions. • The document does not contain detailed reduction targets, e.g. concerning the reduction of pollutant emissions from transport.
Sustainable Transport Strategy until 2030	<ul style="list-style-type: none"> • Support for the development of intermodal transport. • Development of rail and road infrastructure. • The document does not set long-term goals until 2050.

Source: WiseEuropa own compilation



Polish strategies should be compatible with the EU policies and even more ambitious, corresponding to the characteristics of the building and transport sectors in Poland, i.e. taking into account the current state of affairs and related problems, inter alia, with the obsolete building stock, high-emission vehicles and poorly prepared infrastructure for alternative fuels. The identification of ambition gaps at the national level aims to remove regulatory blockages by introducing the necessary changes in the law, clarifying important issues for buildings and transport. The chart below presents the current trajectory of achieving the reduction targets in Poland in the context of 2030⁶.

Chart 1. Status of Poland's implementation of EU climate and energy goals, goals for 2020 and 2030.



⁶ The achievement of the goal related to the share of renewable energy in the energy mix was thanks to a change in the methodology adopted by the Central Statistical Office and including firewood in the category of solid biofuels - https://stat.gov.pl/download/gfx/portalinformacyjny/pl/defaultaktualnosci/5485/10/4/1/energia_ze_zrodel_odnawialnych_w_2020_r..pdf



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Source: WiseEuropa own compilation

Low-carbon transformation is not possible without removing significant regulatory blockades that are present at the national level. Despite the issue of incompatibility of strategic documents and their objectives with the latest arrangements resulting from the Fit for 55 package, both **in the building and transport sectors there are no clear guidelines and standards**, as well as the **lack of consistency** in legal provisions, e.g. for hybrid systems in heating buildings that would allow the maximum use of the available financial resources. Additionally, the **flexibility of the regulation's response to the changing political and economic situation** is insufficient, hence the provisions do not adequately meet the needs of potential recipients.



In the buildings sector, the main regulatory barriers are:

- **a gap in the scope of detailed guidelines for thermal modernization of existing, especially older buildings,**
- in the context of meeting ambitious goals in the entire sector, the current emphasis on smog elimination and heat source replacement (e.g. by mobilizing such projects under the “Clean Air” program offered by the NFOŚiGW - National Fund for Environmental Protection and Water Management), instead of **long-term improvement of the energy performance of buildings, is also an obstacle,**
- from the perspective of legislation, the issue of **legal definition** of terms such as deep thermal modernization, eco-consulting or the profession of municipal energy, which would allow precise use of these terms in official documents or support programs, remains unresolved.

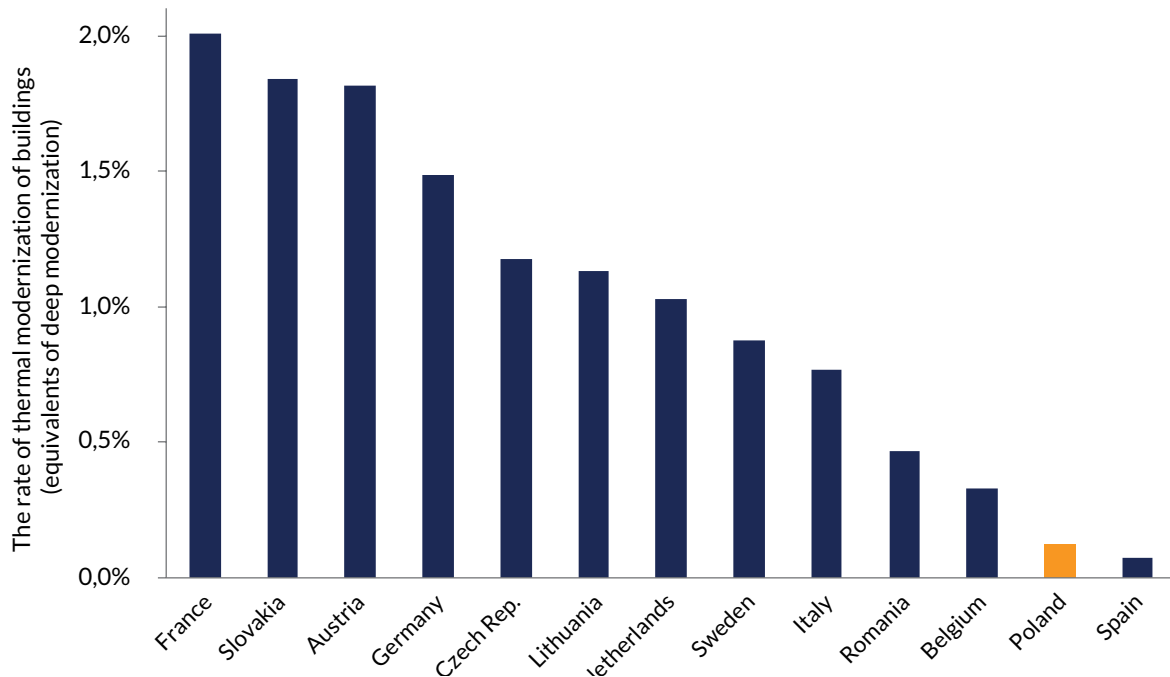
In the transport sector, the main complaint is the **lack of a comprehensive approach** to transformation - current activities are selective and focused on technological aspects, without reference to the strategic goals for sustainable transport and placing them in a broader context. It is advisable that the conducted investments should also **counteract transport exclusion at the local level**, for which it is necessary to update the act on collective transport, which would support inter-municipal relations.

BUILDINGS

The building stock in Poland is largely outdated and energy-consuming. Most of the facilities were built before the implementation of the first EU-wide energy demand standards. Poland should use this fact to its advantage and be more ambitious in setting goals and using innovative solutions, thus surpassing European plans. Meanwhile, as shown by Polish strategic documents, most of them treat the building sector superficially, focusing on shallow thermal modernization, smog elimination and replacement of heat sources, instead of supporting long-term improvement of energy efficiency. The current **lack of guidelines for the thermal modernization of older buildings definitely aggravates the problem of meeting the energy and climate goals by 2030** set out in the Fit for 55 package. However, this situation may be changed by one of the key documents that supports deep thermal modernization, i.e. the **Long-term Renovation Strategy**, recently approved by the government and the European Commission. One of the main elements of the Strategy is the assumption of an average annual rate of thermal modernization at the level of approx. 3.8% assuming that by 2050, 65% of buildings will achieve a primary energy consumption ratio of no more than 50 kWh/m² per year⁷.

⁷ Ministry of Development and Technology, Long-term Renovation Strategy, 2022

Chart 2. The rate of thermal modernization of buildings in selected EU-28 countries (% annually).



Source: Enerdata estimates (project Zebra 2020).

Poland is still lagging behind in terms of deep thermal modernization of buildings. It is true that for 2023 changes are planned in the technical conditions to be met by buildings and their location in relation to the Fit for 55 package⁸. The current conditions, which apply from 2021, for the maximum heat demand in the form of an indicator of the annual demand for non-renewable primary energy of buildings expressed in kWh/m² of the building area, refer to newly built facilities.

According to the regulations, newly constructed single-family buildings should have a maximum demand of 70 kWh/m², and multi-family buildings - 75 kWh/m². **While new buildings in Poland have a demand similar to that required in the EU, the technical conditions do not define this indicator for older buildings that are being modernized.** For example, in 2020, the average energy efficiency of buildings for heating purposes⁹ in Poland was 263.4 kWh/m², suggesting that the vast majority of the building stock is outdated, ineffective, mostly using solid fuels for heating purposes and far from the standard for newly built buildings.

The analysed Polish strategic documents have significant gaps in the building sector. **The only compatibility has been demonstrated for the goal of increasing the share of renewable energy in heating and cooling by 1.1 points per year.** Interestingly, both PEP 2040 and NECP do not contain a specific target for increasing energy efficiency in buildings and only provide a general target of increasing energy efficiency by 23% by 2030 in all sectors of the economy. Moreover, the regulations currently in force do not fully present the effects of activities related to thermal modernization and the replacement of heat sources in buildings without seeking potential synergies or conflicts. Our analysis shows that at the central level there is a lack of reflection and a long-term vision (as evidenced by the lack of any approved strategic document with a perspective until 2050), which means that actions are taken in the short term, and “soft” actions are equated with “hard” solutions.

⁸ According to information provided by a representative of the central administration during a workshop organized by WiseEuropa.

⁹ WiseEuropa's own calculations based on CSO data on the energy efficiency of residential buildings.

A serious drawback of Polish strategic documents is the discrepancy between Poland's and EU's reduction targets for CO₂ emissions in non-ETS sectors until 2030.

Table 2. Comparison of EU and national targets - showing ambition gaps in the buildings sector.

Goals for buildings	EU	Poland
Reduction of CO ₂ emissions in non-ETS sectors, including buildings	by 17.8% in non-ETS sectors by 2030	by 7% in non-ETS sectors by 2030
Increasing energy efficiency in buildings	by 36 - 39% by 2030	none ¹
Increasing the share of renewable energy in buildings	by 49% by 2030	none ²
Increasing the share of renewable energy in heating and cooling	by 1.1 percentage points per year	by 1.1 percentage points per year ³
Pace of renovation	renovation of at least 3% per year of the total floor area of all public buildings by 2030	renovation of 3.6% of all buildings annually in 2021-2030 ⁴
<p><u>Explanations:</u></p> <p>¹ National documents do not provide a specific target for buildings, only a general target of increasing energy efficiency by 23% by 2030 in all sectors.</p> <p>² No specific objective for buildings. As part of PEP 2040, the goal of achieving at least 23% of renewable energy in gross final consumption has been set in all sectors of the economy.</p> <p>³ PEP 2040 also sets an increase in the share of renewable energy sources by 28% in heating by 2030.</p> <p>⁴ Based on the Long Term Renovation Strategy.</p>		

Source: WiseEuropa own compilation

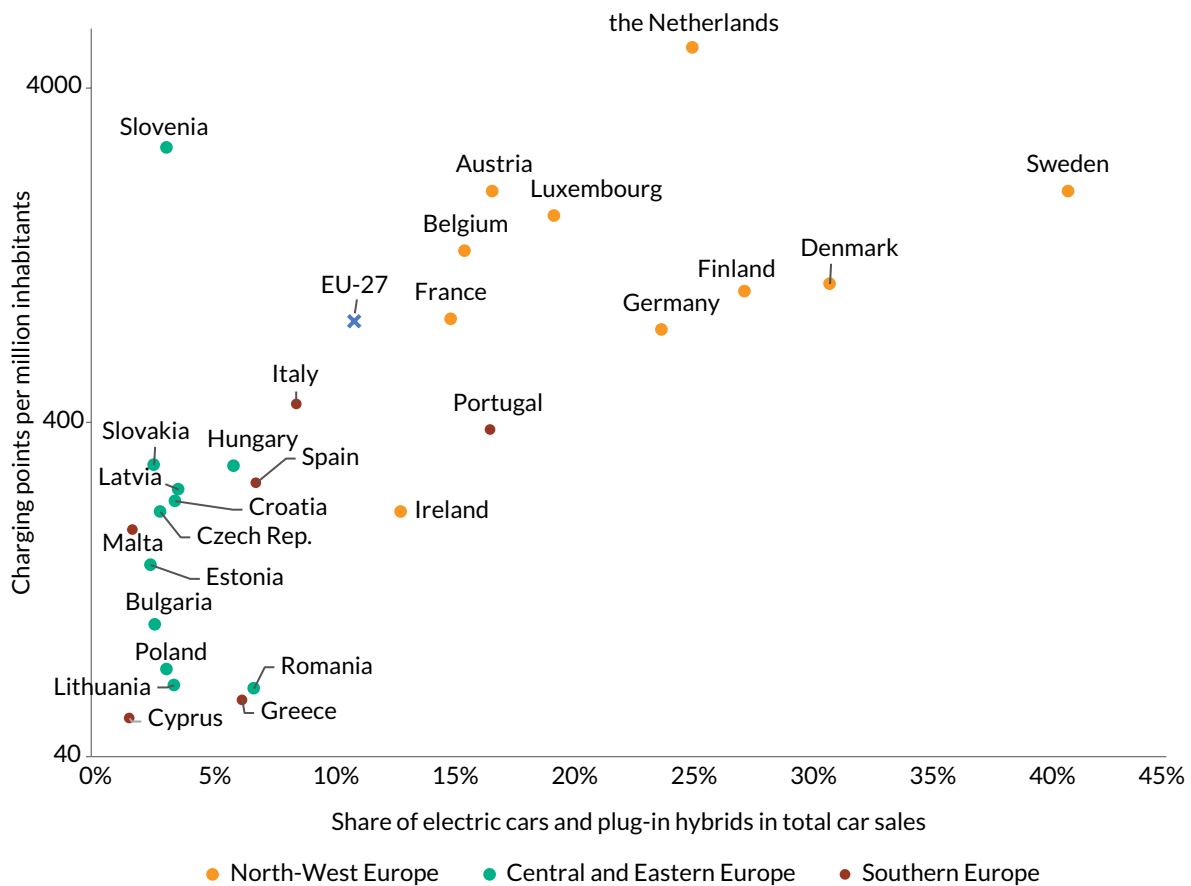
TRANSPORT

Polish strategic documents generally declare support for the development of low-carbon and sustainable transport. As the analysed documents show, the **Polish vision for the transport sector focuses mainly on technological aspects**, e.g. on ensuring a specific number of electric cars (according to PEP 2040 and the Electromobility Development Plan, reaching 1 million electric vehicles by 2025, while the Sustainable Transport Strategy assumes an increase in the fleet of electric and hybrid cars to 600,000 in 2030), or an increase in the share of renewable energy in transport, without taking into account more complex aspects related to its sustainable development. **The lack of a comprehensive approach to transformation in the transport sector** is particularly visible in the issues of transport exclusion, long-term planning of infrastructure development for alternative fuels, or ensuring widely accessible public transport. The current actions of the

government are unfortunately selective and focused more on technological transformation rather than on satisfying citizens' transport needs through the development of public services in this area.

In Poland, the act that is directly related to the development of electromobility is the Act on Electromobility and Alternative Fuels. In December 2021, this document was amended¹⁰, introducing additional powers and obligations for local government units. In particular, changes took place in matters related to the establishment of Low Emission Zones (LEZ), allowing them to be created even in small municipalities, at the same time indicating that it is up to the municipality's decision whether it will allow vehicles that meet a specific EURO standard to enter the zone. Another aspect raised in the Act is the requirements for the number of electric vehicles in the fleet of public administration and public transport vehicles. Unfortunately, actions are being implemented selectively and with delays, which puts Poland behind the other Member States in terms of the development of electromobility, both in terms of infrastructure and number of electric vehicles.

Chart 3. Development of the infrastructure for electric vehicle charging and the share of electric cars and plug-in hybrids in the EU-27 markets in 2021.



Source: WiseEuropa own compilation

10 Ministry of Climate and Environment, Amendment to the Act on Electromobility and Alternative Fuels with the signature of the President, <https://www.gov.pl/web/klimat/nowelizacja-ustawy-o-elektromobilnosci-i-paliwach-alternatywnych-z-podpisem-prezydenta-rp> (retrieved: 24.03.2022)



Poland still belongs to the small group of EU countries that have not introduced fiscal solutions discouraging the purchase of high-emission vehicles. In most EU countries, taxation on the use of cars depends on their emissions, fuel consumption or meeting specific environmental standards. It is true that in Poland there have been repeated proposals for reforming the rules of calculating excise duty, which would discourage the importation of old combustion vehicles to the country (especially from Western Europe, from where old vehicles, exchanged for new units, may end up on the Polish market), however, this discussion did not translate into real legislative changes.¹¹

In addition to the above-mentioned gaps, key national strategies for the transport sector fail to meet the specific reduction targets of the EGD and the Fit for 55 package. Compared to the EU reduction target for CO₂ emissions in transport of 55% for new passenger cars and 50% for new vans by 2030, **Polish commitments are much less ambitious and correspondingly lower by 17.5% (for new passenger cars) and 19% (for new vans).** The Sustainable Transport Strategy until 2030, which should provide a holistic approach, focuses mainly on rail and road transport without providing a long-term vision for 2050. In the case of the share of renewable energy sources in transport, Poland confirms the EU targets, i.e. to increase the share of renewable energy sources by 14% by 2030. Also, the recently presented draft amendment to the act on biocomponents and solid fuels¹² will meet the latest requirements set out in the RED II Directive, especially in terms of introducing tools for the wider use of advanced biocomponents and electricity in transport.

Compared to the building sector, the goals for transport in Polish strategic documents seem to be similar to those in the EU, especially in terms of the renewable energy or the development of electromobility. However, in order to unlock the potential resulting from the European Green Deal, it will be necessary to adapt a number of documents that will provide support for comprehensive investments taking into account both technological, infrastructural and social issues.

Table 3. Comparison of EU and national targets - showing ambition gaps in transport.

Goals for transport	EU	Poland
Reduction of CO ₂ emissions in non-ETS sectors, including transport	by 17.8% in non-ETS sectors by 2030	by 7% in non-ETS sectors by 2030
Reduction of CO ₂ emissions in transport	by 55% for new passenger cars and 50% for new vans by 2030.	By 37.5% for new passenger cars and 31% for new vans by 2030
Increasing the share of renewable energy sources in transport	by 14% by 2030 ¹	by 14% by 2030

11 WiseEuropa, Wsteczny bieg. Społeczno – gospodarcze skutki importu używanych samochodów do Polski, 2021 [Own translation of title: Reversing gears. Socio-economic effects of the import of used cars to Poland].

12 Chancellery of the Council of Ministers, Draft act amending the act on biocomponents and liquid biofuels and some other acts, <https://www.gov.pl/web/premier/projekt-ustawy-o-zmianie-ustawy-o-biokomponentach-i-biopaliwach-cieklych-oraz-niektorych-innych-ustaw4> (retrieved: 28.04.2022)



Infrastructure for charging cars powered by alternative fuel	charging stations: every 60 km for electric charging and every 150 km for hydrogen refuelling	a total of 60,000 electric vehicle charging stations by 2030
<i>Explanations:</i> ¹ The amendment to the RED II Directive as part of Fit for 55 assumes replacing this target with a reduction of GHG in transport fuels by 13%		

Source: WiseEuropa own compilation

SUMMARY

Summing up, despite the fact that **Polish strategic documents** support EU activities, **they are not sufficiently compatible with the European Green Deal and the “Fit for 55” package**. Differences appear when comparing more detailed guidelines, which in many cases differ significantly from those in the EU. **The building and transport sectors definitely require a more ambitious and comprehensive approach** in order to take advantage of all the opportunities related to their transformation. The necessary actions will require the adaptation of many Polish documents to the latest guidelines along with setting specific goals at the central and local level, thus mobilizing model comprehensive investments in buildings and transport.

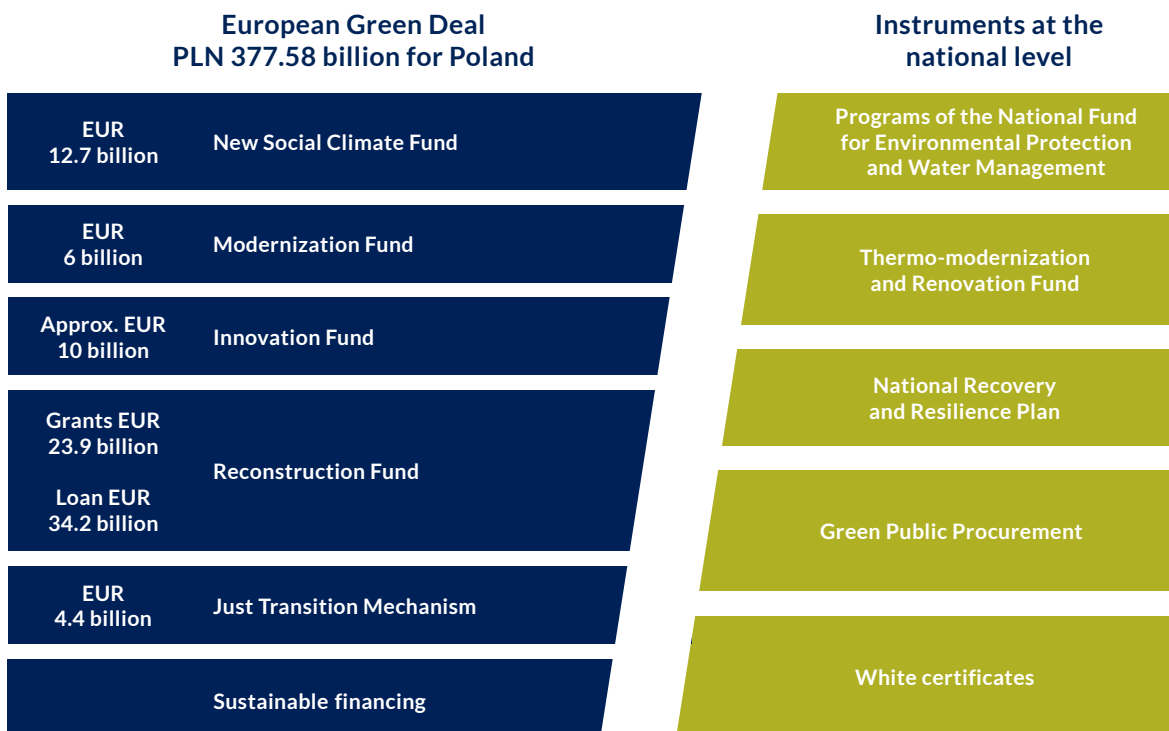
3.2 Access to finance and its effective use

The European Green Deal is associated not only with the need to increase its climate ambitions, but also an opportunity for Poland to use the European funding sources in excess of PLN 377.58 billion in total. These resources have contributed to establishing such funds as:

- the planned **New Social Climate Fund**, aimed at mitigating the costs of transformation, under which Poland may receive EUR 12.7 billion;
- **Modernization Fund** for the improvement of energy efficiency and modernization of power systems, under which Poland will receive approx. EUR 6 billion and the Innovation Fund with approx. EUR 10 billion for Poland;
- **Reconstruction Fund**, from which Poland may receive EUR 23.9 billion in the form of subsidies and over EUR 34.2 billion in loans (including 37% of allocations for green investments);
- The **Just Transition Mechanism**, including the Just Transition Fund, of which approximately EUR 4.4 billion has been allocated to Poland, and a loan facility for the public sector created jointly with the European Investment Bank;
- **Sustainable financing**, e.g. green bonds - 68% of the collected funds from the current government green bond issues were allocated to investments in sustainable transport¹³.

¹³ Own compilation of the Ministry of Finance, the Institute of Environmental Protection of the National Research Institute and the National Centre for Emissions Management - <https://www.gov.pl/attachment/cde856be-fc90-40e8-8837-cc18a551402d>.

Diagram 3. Funding opportunities under the European Green Deal and available instruments at the national level.



Source: WiseEuropa own compilation

In addition to the available European funding options, a number of instruments exist at the national level and individual entities can use them to finance some of the low-carbon projects. These include programs of the National Fund for Environmental Protection and Water Management (NFOŚiGW) such as Clean Air, My Electricity, Green Public Transport or My Electric Car. In addition, the project of the National Recovery and Resilience Plan provides for the allocation of funds for investments supporting, for example, the development of infrastructure for electromobility, as well as thermal modernization and replacement of heat sources. In addition, selected entities can take advantage of Green Public Procurement (including the purchase of low energy consumption products) or White Certificates issued by the President of the ERO for activities aimed at improving energy efficiency. Banks also fit into the panorama of financing at the national level. One example may be the thermo-modernization bonus under the Thermo-modernization and Renovation Fund, operated by Bank Gospodarstwa Krajowego, or the offer of 'green' loans for financing transformation activities.

The optimal use of available financial resources under the existing instruments at the national level depends primarily on the appropriate architecture of criteria in support programs, which are of key importance for their scope of impact and the depth of the changes made. The **multitude of programs** financing investments in building sector makes potential beneficiaries confused about the eligibility for individual instruments, but on the other hand, they identify the need to include **various groups of recipients** in the offer. In addition, the problem is often the **lack of standards and unclear guidelines** contained in the regulations of a given program, which would allow the maximum use of available funds.

Another barrier related to unlocking the financial potential is **insufficient funds** dedicated to thermal modernization and the development of sustainable public transport. Climate-efficient



solutions in these sectors require the provision of substantial, transparent and predictable financial resources that would be available throughout the investment period. Currently, an additional inhibiting factor is the **low public awareness** of financing possibilities - the current promotional or information activities do not translate directly into the real interest of potential beneficiaries and the increase in the number of applications both for programs related to financing energy efficiency in buildings or the development of sustainable transport.

Access to financial resources often requires the formal presentation of relevant strategic documents at the local level. Some municipalities **do not have the required strategies, and the plans require updating and coherence** (this issue concerns, among others, Low-carbon Economy Plans, as well as assumptions for heat, electricity and gas fuel supply plans).

3.3 Timid approach at the local level

Preparation of documents in the field of energy planning and environmental protection is one of the municipality's own tasks. One of the mandatory documents that constitute a tool for the proper development of energy infrastructure are the **assumptions for the heat, electricity and gas fuels supply plan**, the scope of which has been specified in the Energy Law Act¹⁴. According to the available information, in 2018 less than 22% of municipalities in Poland had an updated document. The audit of the Supreme Audit Office¹⁵ revealed a number of shortcomings in the implementation of this document in local governments, additionally indicating that some of them could have been improperly prepared. The documents do not have the information fully required by law, do not reflect the real needs of the municipality in terms of the balance of energy demand, the availability of infrastructure and local fuel resources or energy efficiency improvement measures that can be applied in the municipality. Another problem that concerns all energy planning documents (assumptions for the heat, electricity and gas fuel supply plan, low-carbon economy plans, low-carbon reduction programs, etc.) is the lack of mutual consistency between these documents and their individual goals. This lack of coherence translates into an isolated approach to individual areas, which prevents the correct and dynamic development of the local energy sector.

It is difficult to find a mandatory strategic document for local governments related to the sustainable transport development. Local governments prepare documents on the development of public transport, but they are mainly prepared by medium-sized and large cities where this form of transport exists. An example of a document that should be regularly prepared by cities with a population of over 50,000 residents are **analyses of costs and benefits related to the use of zero-emission buses in the provision of public transport services**, the development and scope of which results from the provisions of the Act on Electromobility and Alternative Fuels¹⁶. However, it is difficult to find a document that meets the needs of sustainable transport development in smaller cities. A breakthrough in the development of this type of documents in cities of all sizes was the **Strategies for the Development of Electromobility**, the creation of which was financed by the National Fund for Environmental Protection and Water Management (over 200 documents of

14 The Energy Law Act of 10 April 1997 (Journal of Laws 1997, No. 54, item 348, as amended)

15 Supreme Audit Office, Local energy security, 2019

16 Act on Electromobility and Alternative Fuels (Journal of Laws 2018 item 317 as amended)



this type were co-financed)¹⁷. However, the preparation of the above-mentioned documents from the transport sector is not a mandatory task for local governments, therefore the development of sustainable transport encounters barriers at the strategic level.

In both the buildings and transport sectors, policies are implemented in line with public administration requirements and, while often presenting national targets, do not show how to translate them into local conditions and how to implement the actions to be taken to meet or exceed these targets. In addition, these documents do not have a predetermined detailed structure and methodology of development, which results in subcontracting the compilation of documents and “fragmentation” of the approach to these issues at the local level. The quality of the document is therefore often dependent on the time, experience and remuneration of the persons preparing the document, but also on the awareness and commitment of local authorities. This translates into uneven development of initiatives at the local level and the emergence of numerous disproportions at the stage of their implementation.

Currently, the main motivation to create local strategic documents results from an unpleasant obligation rather than from an active approach to the possibility of long-term planning and risk minimization, which will have a direct impact on the development of local government. **Low mobilization of activities and the lack of use of the available planning tools may be the result of the lack of financial incentives for municipal employees, their excessive workload, as well as the shortage of qualified people**, for example municipal energy specialists, who would provide advice to residents and authorities of a given municipality. It often results from the “absence” of topics related to activities in these areas in the public debate at the local level and election postulates, despite the expectations and a clear impact on the situation of local communities.

3.4 Lack of a comprehensive approach at the local level

The **preparation of coherent strategic documents that outline the directions of development** is necessary for the proper progress of municipalities and ensuring their energy security. Many documents are produced at different times and are often prepared by external companies. Accumulation of work on documents and their wide thematic range (demand for energy carriers, low-carbon economy plans, environmental protection programs, development strategies) cause frequent blurring of the municipality’s development goals, which means that all local government activities are often carried out in isolation from the implementation of individual policies.

Taking initiatives without setting clear goals in advance, defining actions that must be taken and the methods of their implementation, means that municipalities are not able to create a coherent and complementary development strategy. An additional aspect is the development of rules for monitoring the progress in achieving the set goals, which local governments avoid and which in the longer term will allow for possible evaluation and updating of the adopted assumptions and directions of development.

¹⁷ NFOŚiGW (National Fund for Environmental Protection and Water Management), <https://www.gov.pl/web/nfosigw/nfosigw-wspiera-powstanie-kolejnych-szesciu-lokalnych-strategii-rozwoju-elektromobilnosci>

One of the factors contributing to the lack of a comprehensive approach may be unclear guidelines for local governments on the practical and operational implementation and development of strategic documents at the local level, in particular on the topics covered by the European Green Deal and the Fit for 55 package. Consequently, the challenges in the building and transport sectors need to be addressed in a comprehensive way that goes beyond the minimum ambition.

3.5 Multiplier effect of public investment

The European Green Deal and “Fit for 55” are an opportunity for synergy between activities in the public sphere and generated private investments. According to the analyses of the OECD¹⁸ and the International Monetary Fund¹⁹ public investments (including state-owned companies²⁰) are necessary to activate private investors, while in terms of economic and social benefits, it is necessary that private investments dominate the structure of financing transformation. Through such activities, the distribution of transformation costs is more even, and at the same time, it is possible to use access to a larger scale of funds. Central and local authorities have a variety of public policy tools at their disposal - regulation, financing, risk-sharing mechanisms, instruments using carbon pricing - but it is crucial to recognise the potential of private funding and skilfully “use” it.

In this respect, the main barrier in Poland is currently the **lack of a systemic scheme of involvement of business and local government representatives**, including their active participation in shaping policies in such a way that, while pursuing ambitious climate goals, the regulatory environment positively interacts with sectoral needs and creates an appropriate investment framework. In the present shape, both business and local governments do not have a large impact on activities at the central level - they can only use “soft” instruments. At the same time, the government at the central level decides on the use of public funds, often assuming their exclusivity in financing transformation, often without making more ambitious attempts to mobilize private funds (e.g. through the use of feedback mechanisms). Our interlocutors pointed to another limitation for the positive multiplier effect of public investment in the form of **additional mechanisms supporting a just transition**. Criteria in public procurement (e.g. realistic criteria for electromobility in subcontractors) and **more flexible rules for public transport infrastructure also play an important role**. The latter recommendation is in line with OECD analyses showing that such measures are essential to meet investment needs in this sector²¹.

Private sector representatives also pointed to the role of the strategic framework for the transformation process determined at the central level and influencing the perception of the stability of this process by private investors. From their perspective, adopting a long-term perspective and determining the path to reach strategically set goals plays a key role in making the right investment decisions and adjusting their pace to changing regulatory requirements. It also requires a stable and predictable legal framework that will facilitate, not hinder, investment in green transformation technologies. Therefore, the often indicated limitation for the mobilization

18 OECD, The Government Role in Mobilising Investment and Innovation in Renewable Energy, 2017

19 IMF, Building Back Better: How Big Are Green Spending Multipliers, 2021

20 OECD, State-Owned Enterprises and the Low-Carbon Transition – Environment Working Paper No. 129, 2018

21 OECD, Environment Working Paper No. 56 - Mobilising Private Investment in Sustainable Transport: The Case of Land-Based Passenger Transport Infrastructure, 2013



of private funds by public investments was the instability of regulations - one example was the support system for renewable energy sources and individual prosumers or the rules of subsidies for the purchase of electric cars. For the above reasons, both the lack of an adopted long-term strategy and the generally perceived instability of the Polish legal system negatively affect the readiness of private investors to allocate funds for transformation in conditions of uncertainty as to its direction, pace and conditions.

4. Model use of opportunities

Model comprehensive investments in the building and transport sector should cover a wide range of activities and lead to accelerated decarbonisation in these two sectors of the economy and may be an opportunity to exploit the potential of the European Green Deal, as well as to create positive examples and success stories. These activities should be carried out in a coherent manner, covering both “soft” and “hard” activities with a view to achieving long-term goals. At the same time, it should be remembered that the implementation of any investments will not be possible without removing the previously mentioned blockages or gaps (see chapter 3).

4.1 Deep renovation of social and communal buildings

The building stock in Poland, which consists of 14 million buildings, is largely obsolete, which is also strongly associated with its high energy consumption. Due to the specific nature of the building sector, the implementation of any deep and comprehensive activities will be associated with many challenges at the local government level. According to data from the Polish Central Statistical Office²², in 2020 approximately 35% of all households still used coal-fired energy for heating purposes, and only 40% from district heat. It is true that a gradual improvement in energy efficiency is observed (especially due to the increase in the percentage of new buildings that should meet the latest EU standards), however, this pace is not sufficient to achieve the goals of the Fit for 55 package. According to the Long-Term Renovation Strategy, after 2020 still 30% of multi-family residential buildings will have to undergo thermal modernization²³. **This means that, as a first step, comprehensive model investments should focus on bringing older buildings up to appropriate standards.**

Another important issue is energy poverty, which, according to various estimates, may affect from 9 to 32% of households²⁴. These considerable differences in assessment result from the adopted research methodology and many indicators that describe the scale of this complicated phenomenon. According to GUS (Central Statistics Office) data²⁵, energy poverty affects from 3.86 million people living in 1.4 million households to 6.58 million people living in 2.3 million households. Therefore, all planned investments and activities at the local level should also take into account social issues and not expose poor and economically excluded farms to additional costs related to the transformation.

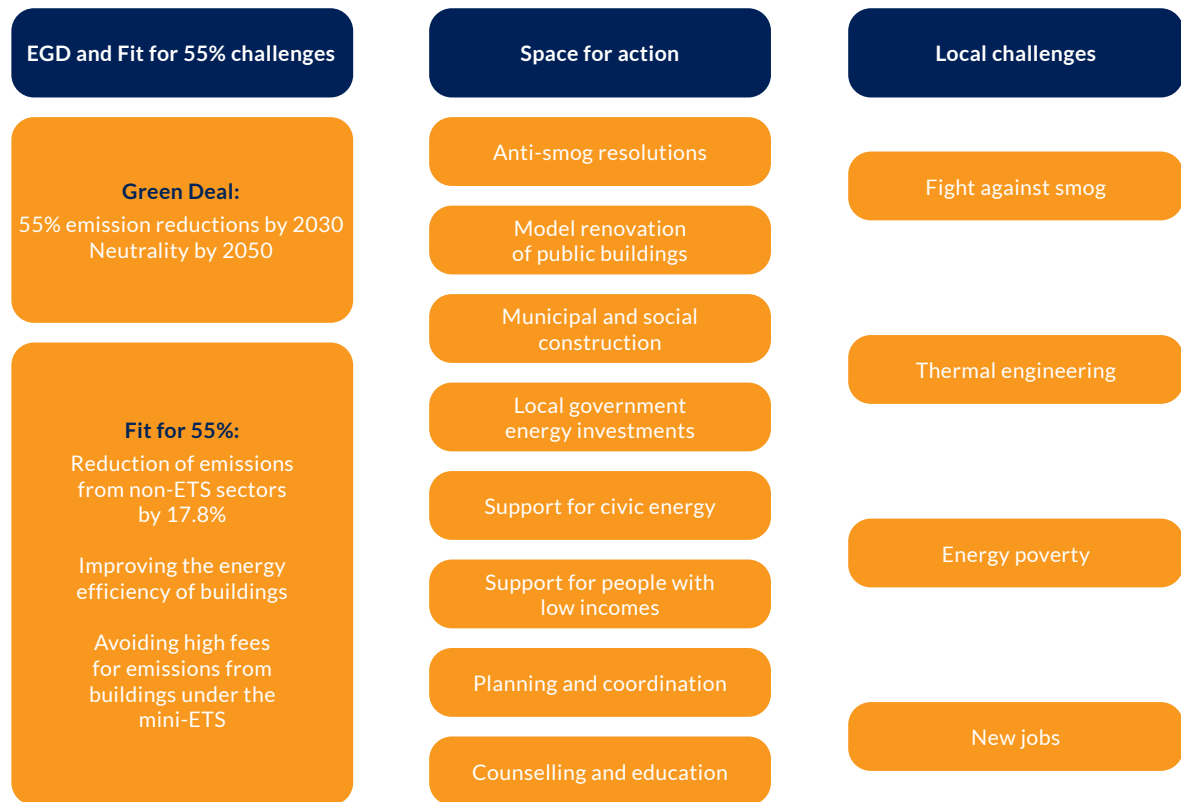
22 GUS (CSO), Szacunki danych o zużyciu energii w gospodarstwach domowych w 2020 roku, 2021 [Own translation of title: Estimates of data on energy consumption in households in 2020].

23 Ministry of Climate and Environment, Długoterminowa Strategia Renowacji Budynków, 2022 [Own translation of title: Long-term Building Renovation Strategy].

24 CAKE, Polska Net-Zero 2050. Podręcznik Transformacji Energetycznej dla samorządów, 2022 [Own translation of title: Poland Net-Zero 2050. Energy Transition Manual for Local Governments]

25 GUS (CSO), Statistical data on energy poverty until 2020 - study for the Ministry of Culture and National Heritage, 2021

Diagram 4. Space for action and challenges at the local government level in the building sector in connection with the EGD and the Fit for 55 package



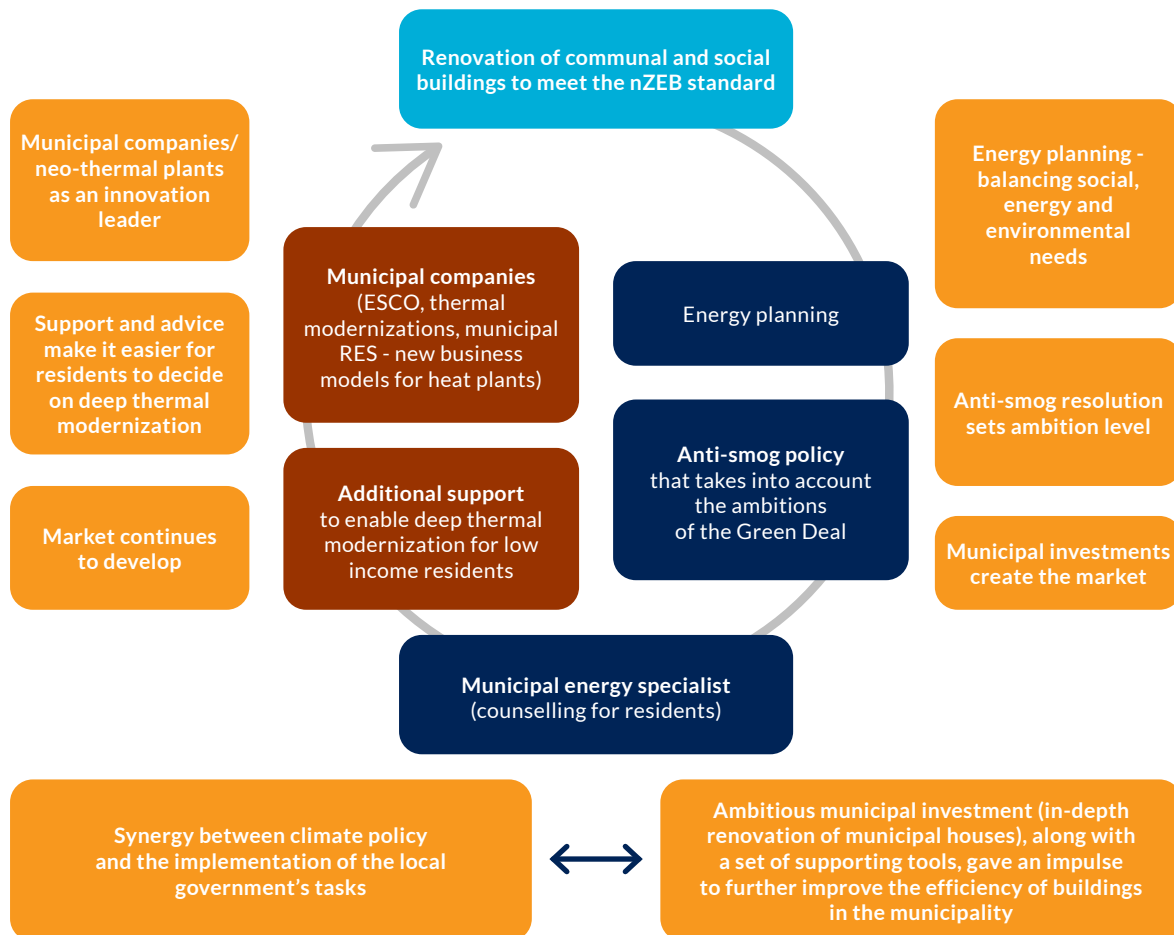
Source: WiseEuropa own compilation

The understated level of ambition does not only occur at the central level, but is also visible at the local level. Due to the large stock of municipal buildings and public administration facilities, **it is municipalities that will have to indicate new directions of activities in the field of transformation in the building sector, thus spreading good practices and setting an example for the inhabitants.** Local governments already have a lot of space to act, and with the introduction of the European Green Deal and the Fit for 55 package, they will be forced to increase the pace of action. This will entail the obligation of local governments and enterprises to take into account all local challenges. In addition to the obligation to carry out deep renovation of buildings, municipalities should also support civic energy and eco-guidance, while avoiding the increase in energy poverty and providing new jobs. The implementation of comprehensive model investments, despite the fact that it will involve a considerable financial outlay and additional activities, will also bring many socio-economic and environmental benefits. Therefore, LGUs should be more ambitious and take responsibility for coordinating activities and the entities involved, trying to obtain the most effective financing.

A key element of local government's comprehensive investments in construction is the **deep renovation of municipal and social buildings to meet the nZEB standard** (nearly zero-energy). These investments should be implemented holistically, however, energy efficiency should be improved first, followed by replacing energy carriers, so as to avoid oversizing the installation, ensuring social and economic benefits (lower energy bills) and environmental benefits (reduction of pollutant emissions). These investments should not focus only on activities outside the building (e.g. insulation), but also on more ambitious activities inside (e.g. replacement of light sources with

energy-saving ones, heat recovery, or replacement of old electrical devices with new ones with a better energy efficiency class). Renovation of municipal buildings should also take into account the issues of renewable energy installations (plus and zero-energy buildings) or the provision of home electric vehicle charging stations. Such investments could be made with public or private funds or a combination of both.

Diagram 5. A model comprehensive local government investment in the building sector



Source: WiseEuropa own compilation

In addition, local governments should **expand access to the heating network using new business models, municipal companies, public-private partnerships or the ESCO formula**. It is true that the percentage of houses using district heat invariably increases by 0.5% each year due to the expansion of the network²⁶, however, it is assumed that **at the end of 2030 as many as 58% of households will not be connected to the heating network**. Therefore, it is necessary to work out a financing model as soon as possible, which will allow for faster expansion of the network, thus reducing emissions of pollutants or the risk of increasing energy poverty.

In order to implement "hard" actions it is necessary to ensure an appropriate action strategy. From the point of view of increasing energy efficiency, local governments will have to carry out

²⁶ Bank Pekao, Wpływ pakietu Fit for 55 na polską gospodarkę, 2021 [Own translation of title: Impact of the Fit for 55 package on the Polish economy]

appropriate **energy planning** with the participation of specialists and experts, energy companies operating in the municipalities and local communities. It is necessary to link this element with the appropriate incorporation of these documents into the existing and emerging spatial development plans. This approach will allow for better management of energy consumption both in public institutions (offices, schools, hospitals, etc.) and in municipal buildings. At this point, the need to provide appropriate advice in the form of a **municipal energy specialist** should also be emphasized. It is an adviser who will help residents choose the most effective and profitable solutions tailored to their needs, helping reduce the maintenance costs of households. A very important task of the municipality is also the **ecological education** of the inhabitants along with the possibility of financing the replacement of heating devices or thermal modernization.

Municipalities and other public institutions will be responsible for the exemplary implementation of comprehensive investments in buildings, which, in addition to the above-mentioned obligations, will have to create **low-carbon economy plans**. These documents should be prepared in a manner consistent with the national and EU climate and energy policy, together with a detailed analysis of the current situation in the municipality (e.g. through an inventory of air pollution, strategies for mitigation and adaptation to climate change, social research and educational campaigns). Well-carried out planning will allow to determine the costs of the necessary investments, it will prioritize actions appropriately and will allow to obtain the necessary financial resources for their implementation.

4.2 Reconstruction of (zero-emission) public transport

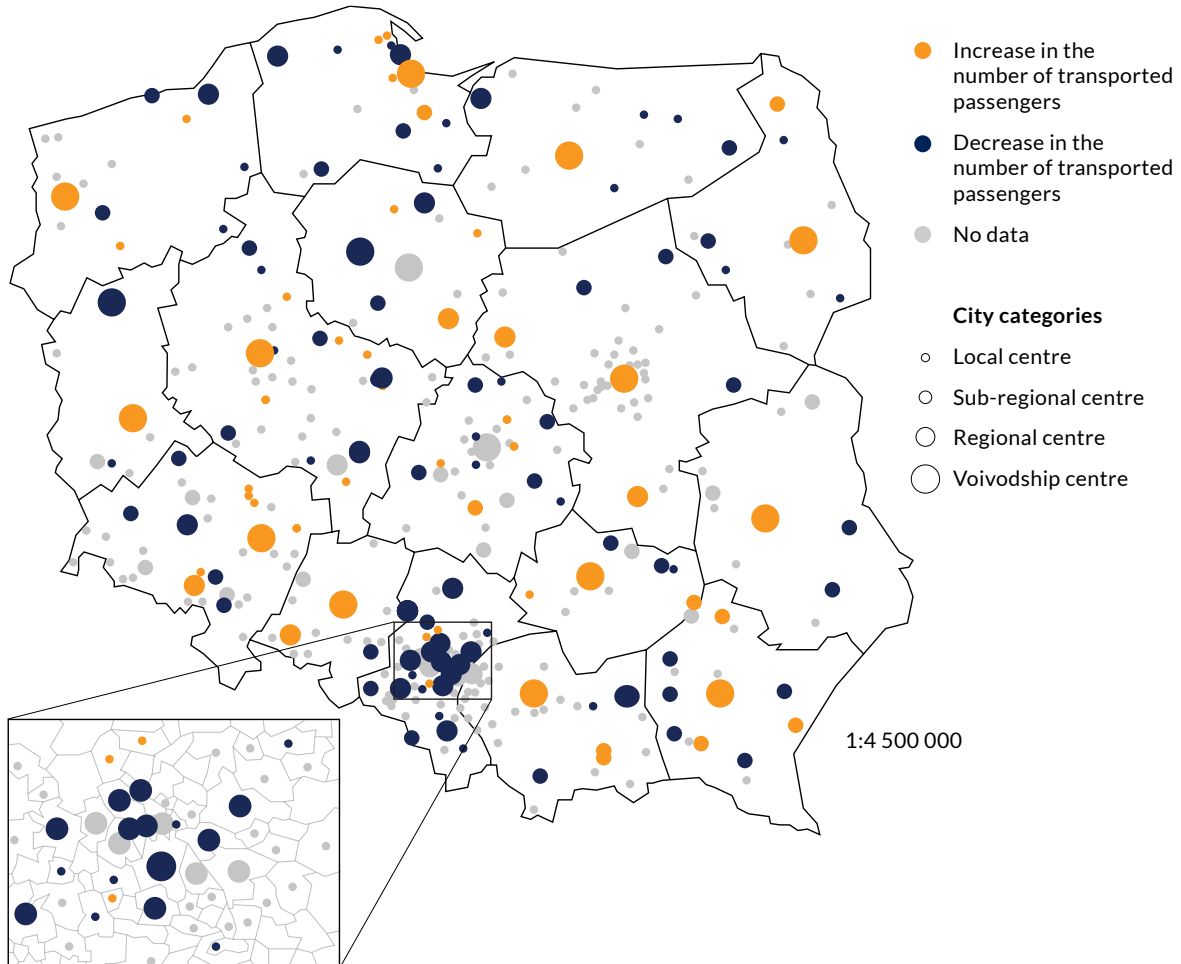
The transport sector is the second area that will require increased efforts at the local government level. Compared to other sectors of the economy, transport in Poland is the only area of the economy in which GHG emissions increased in 2005-2019, by as much as 85% (interestingly, in the European Union itself, emissions from transport did not change significantly). At the same time, it should be noted that this increase was mainly dominated by emissions from road transport, and more specifically from passenger cars. All this meant that in 2019 Poland was ranked 16th in the EU in terms of greenhouse gas emissions from road transport per capita, the level of which was 1.7 tCO₂e per capita²⁷. **In terms of a public transport and its accessibility, each year there are more 'blank spots', i.e. areas affected by transport exclusion.** It is in smaller urban centres that the attractiveness of public transport invariably decreases (mainly due to its inferior accessibility in towns outside the route of the line and due to insufficient frequency of running the line), causing the number of transported passengers to decline. This negative trend significantly affects the financial situation of transport companies, which, as part of their attempts to save financial liquidity, close bus or rail connections in peripheral areas. In addition, the lack of inter-city relations between central cities and smaller municipalities intensifies this effect.

Therefore, the transformation in this sector should undoubtedly include not only the technological aspect, but also the way of thinking about meeting the transport needs of local

²⁷ WiseEuropa, Wsteczny bieg. Społeczno – gospodarcze skutki importu używanych samochodów do Polski, 2021 [Own translation of title: Reversing gears. Socio-economic effects of the import of used cars to Poland].

communities. This will allow for a change in preferences and a departure from high-emission and resource-consuming solutions in terms of creating, rebuilding and developing zero-emission public transport.

Diagram 6. Changes in the number of passengers transported in 2011-2016 as part of collective public transport



Source: Institute for Urban and Regional Development, *Transport and urban mobility. Report on the state of Polish cities, 2019*

In order to unlock the full potential of the European Green Deal, it is necessary to introduce regulatory changes and implement comprehensive investments by local governments that will support the reconstruction of zero-emission public transport. However, the implementation of any investment will not be possible without adequate financing and planning that takes into account all possible challenges at the local level. In local transport policy, local governments should particularly focus on restoring zero-emission collective transport, taking into account environmental, technological and social issues. Therefore, the challenge will be transformation, which must reduce emissions of pollutants from transport, with simultaneous technological changes, which will entail additional financial outlays and possible risk of negative social phenomena (e.g. deepening of transport exclusion caused by costly technological changes or inaccessible mobility in terms of prices).

Diagram 7. Space for action and challenges in transport at the local government level in connection with the EGD and the Fit for 55 package



Source: WiseEuropa own compilation

Reconstruction of the public transport should be carried out in a comprehensive and consistent manner. It is important to understand that a diversified transport network should be created. Such network should be based on many forms of mobility, i.e. bus, rail or non-motorized transport (e.g. cycling, walking). Local governments should create their transport policies based on the latest commitments resulting from the European Green Deal and the Fit for 55 package, and conduct educational campaigns promoting sustainable collective transport. In addition, additional measures aimed at digitization in transport should be implemented, supporting the further development of intelligent transport systems.

Although the number of new bus lines and zero-emission buses in major Polish cities is increasing, the number of **suburban and peripheral bus connections is constantly decreasing**²⁸. Hence, an important aspect of the development of public transport is the restoration of local and regional bus connections, which so far have been gradually closed due to their deficit operation. Although a program has been established at the central level to restore local bus connections, funding from the Bus Transport Development Fund is far from sufficient. The funds allocated in 2019 and 2020 for the elimination of the transport exclusion in local transport have not been fully used, because local governments still have not been able to finance such projects (the rate of government funding was originally assumed to be PLN 1/km, and then it was increased to PLN 3/km

²⁸ Institute for the Development of Cities and Regions, Transport i mobilność miejska. Raport o stanie polskich miast, 2019 [Own translation of title: Transport and Urban Mobility. Report in the condition of Polish cities]



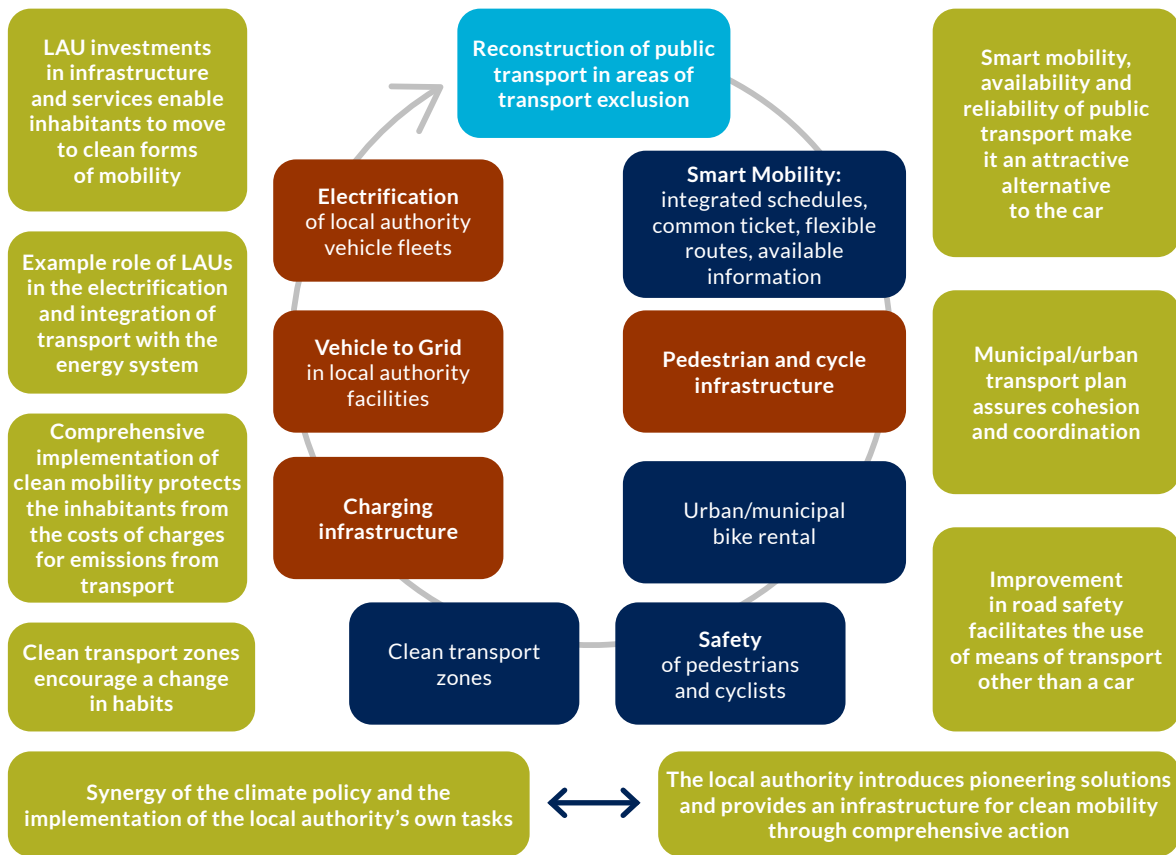
during the pandemic). Importantly, the public transport co-financing programs at the national and EU level allocate the budget for urban and rail transport, while intercity bus transport remains neglected in state aid schemes. Thus, in the case of investments for **bus-based collective transport**, two factors will be important:

- **replacement of internal combustion vehicles in the rolling stock with electric or hydrogen buses along with the implementation of the necessary charging infrastructure** depending on the available funding and the funds collected by municipalities for this purpose,
- **expansion and reconstruction of affordable bus lines in excluded areas**, which will provide an economical alternative to high-emission individual transport and will allow for integration with other forms of transport (e.g. railways, thanks to multimodal stations).

Another key element is **supporting the infrastructure for the so-called micromobility**, i.e. walking, cycling or electric scooters. High-quality infrastructure is one of the most important factors stimulating the growth of interest in this form of mobility. Municipalities should also consider extending city bike and scooter rental systems and propose new and innovative solutions (e.g. electric cargo bikes, collision-free transfer stations with a micromobility parking lot). It should also be emphasized here that the key element of the investment will also be support for **digitization in transport**, Intelligent Transport Systems (ITS) and solutions such as Mobility as a Service (MaaS), introducing e.g. traffic management and control systems, safety monitoring systems, integrated electronic ticket systems or dynamic passenger information systems.

Additional measures not necessarily directly influencing the development of public transport, but certainly indirectly supporting collective transport and limiting individual transport, are **Low Emission Zones (LEZ)**, for the implementation of which municipalities are responsible. Most importantly, before proposing such an area, local governments are required to prepare a plan for the development of public transport within the zones and a plan to create parking spaces for vehicles that will be subject to entry restrictions. Thus, the creation of these zones will involve an additional financial outlay, which should be taken into account in the initial planning and determination of the LEZ. Local government units should also take into account the comments of residents and provide appropriate public consultations, ensuring transparency in the creation of LEZ.

Diagram 8. A model comprehensive local government investment in the transport sector



Source: WiseEuropa own compilation

Local governments should stimulate these activities and the development of local markets for the use of low-carbon technologies by meeting the needs of local communities, but also stimulating the market with activities related to the implementation of their own tasks. In this context, an important role will be played by the **electrification of the fleet of vehicles** used by the local government services and the creation of model solutions in the field of **charging infrastructure in public utility buildings**. These activities will translate into creating a demand for such services and investments at the local level, which will also allow the development of similar initiatives in the private sector. At the same time, the local government can stimulate innovative technologies and an approach that can help connecting the transport sector with the energy system (e.g. through the use of **vehicle-to-grid technology** in local government buildings). Such a solution will translate into an increased trust in the new technologies and will positively influence gathering experience useful in terms of their scalability in the next stage.

5. Recommendations

In connection with the observations presented above, we formulated the following recommendations for conducting public policy at the national and local level in the context of transformation in the building and transport sector.

1. Long-term low-carbon transformation strategy

The Council of Ministers should adopt a long-term low-carbon transformation strategy as soon as possible (in line with the requirements of the EU Regulation 2018/1999, the deadline for developing such a strategy for the 2050 deadline was 1 January, 2020). The current delay in its adoption results in an uncertainty about its sustainability activities, the direction of public policy, and their inconsistency and fragmentation. During the meetings held as part of our project, many respondents pointed out the lack of a strategic decision on the pace of the transformation and its individual stages as one of the main reasons for insufficiently ambitious actions taken in the area of sectoral policies at the national level. Adopting a long-term low-carbon transformation strategy is therefore a necessary action to accelerate, organise and systematize activities related to Poland's low-carbon transformation and the implementation of the European Green Deal policies.

2. Bridging the ambition gap - revision of the NECP and PEP 2040, implementation of the KPO (National Recovery and Resilience Plan)

The lack of a strategic signpost translates into an ambition gap in the area of objectives, both horizontal and sectoral. This ambition gap significantly delays taking actions that will have a lasting effect and translate into the implementation of the provisions of the European Green Deal. In this context, the upcoming revision of the NECP and PEP 2040 should provide an opportunity to "bridge" this gap and significantly increase the level of national ambitions. As we indicated in the introduction, it would also be justified from the point of view of Poland's resilience, strategic and energy security. In the buildings and transport sector, this most often translates into the need to define goals more precisely and adapt them to the methodology used by the European Commission at the EU level. A good opportunity to apply this more ambitious approach will be the implementation of the National Recovery and Resilience Plan (assuming its unblocking and launch), in which the level of ambition was initially moderate in relation to other EU countries. Taking into account the length of the investment cycle and the need to increase the level of investment in the economy in the near future, it will be very important to avoid the phenomenon of stranded assets - determining an adequate level of ambition will be crucial for this goal.

3. Effective use of available funds

A more efficient use of the available financial resources is crucial for the better progress with the European Green Deal and initiatives at the national and local level will require. There are



a number of challenges in this area that translate into the untapped potential of available funding sources and the perception of the costs and benefits of a low-carbon transition. An area requiring a priority approach is mobilization of private resources through a stable and predictable regulatory framework and the use of public investment as a means of stimulating the market rather than the sole source of funds. Moreover, as indicated by our interlocutors, problems related to the rule of law and disputes between the Polish government and the European Commission are creating additional barriers to access to public funds that are allocated for the transformation. Our interlocutors also emphasized the current complexity and overlapping of many different programs aimed at supporting the same activities, selectivity in the selection of financed technologies and poor use of existing mechanisms in a way that accelerates the transformation (green public procurement, green public-private partnerships, poorly developed green bond market). The recommended approach should assume simplification of aid mechanisms, more frequent combining of returnable and non-returnable support to stimulate private investment and supporting a significant “reduction effect”, leaving freedom as to the technologies leading to emission reduction. At the same time, it should be clearly stipulated that in order to use the available resources efficiently, it is important to avoid indirect solutions based on the use of natural gas and direct resources to target solutions or those requiring a low level of additional investment in order to achieve zero emissions (e.g. deep thermal modernization towards net-zero-carbon-ready buildings).

4. Statutory requirements as a minimum level of ambition and greater prioritization of actions

A recommendation for the local level resulting from our project is to change the approach of local authorities to the goals set at the national level. These goals should be regarded as a minimum benchmark for identifying the necessary actions and supporting transition at the local level. Due to the gap between the EU and national levels, meeting the indicative “cut-off points” at the local level will not explicitly mean being on the right trajectory for a successful transition and climate neutrality. A higher level of ambition will also allow a better response to the upcoming social challenges. Therefore, local governments are encouraged to take a more ambitious approach and set themselves more far-reaching goals (than those set at the national level). This will enable identification of areas where local authorities can implement effective measures for sustainable improvement, which will also translate into benefits in the medium term and anticipate the (expected) increase in national ambition, eliminating the need to modify the approach. This aspect was often raised by our interlocutors, at the national and local level, but also by business representatives.

5. Comprehensive thinking

Another area indicated by the participants of our workshops was the silo approach and selectivity in taking actions. For example, the replacement of a heat source in single-family housing is often not correlated with the (deep) thermal modernization of the entire building and a sustained improvement in emission reduction. In the area of transport, an access to public transport is often equated with the technical condition of vehicles, and not with the role of stable and regular connections requiring a broader thinking about the type of investment and regulatory instruments available. Therefore, it is necessary to supplement the activities in one area (replacement of coal-fired furnaces, replacement of rolling stock) with other elements that together make up

a comprehensive look at the complex problems of transport exclusion and energy poverty. The approach we propose in section 4 of this paper can inspire sustained improvement and carry out the transformation in a more consistent way.

6. Sector recommendations:

Several recommendations regarding sectoral activities in the building and transport sector came up during the interviews conducted throughout the project.

a. Buildings

- **Strong support for deep renovations using all available instruments and funding resources.**
Promoting the comprehensive thermal modernization of buildings that's aim is the greatest possible savings in energy consumption and preparation of a favourable investment financing mechanism. Deep thermal modernization is associated with higher financial outlays, which should result in an increase in the intensity of support for such activities, bringing measurable economic and environmental effects. A significant improvement in energy efficiency can be an effective tool to combat energy poverty.
- **Organisation of the investment process in accordance with the principles of the circular economy and the support of the use of secondary materials**
In Poland, there are no regulations that explicitly mention the necessity to use recycled materials in construction. It is therefore essential to introduce ambitious waste management regulations and targets that would create a new market segment for demolition and re-use of demolition and construction waste and improve the skills of construction workers.
- **Flexible support for the use of renewable energy technologies in buildings**
The possibility of co-financing given types of RES installation depends on the co-financing conditions specified in the program, which impose possible solutions on the investor in advance. Making the financial support more flexible and dependent on the possible reduction effect for a given investment would allow investors to choose the most economically and environmentally profitable solutions tailored to the investor's needs and technical capabilities.
- **Support for intelligent building management**
Intelligent energy management in buildings based on the flexibility of the energy source, the use of buildings and energy consumption profiles can contribute to significant energy savings. However, the systems are very expensive, which often constitutes a barrier to their implementation - as part of the implemented thermo-modernisation, such systems should be an obligatory element of modernized buildings, in particular public buildings.
- **Adaptation of technical and regulatory standards to the requirements of EU law (compliance with taxonomy, definition of deep thermal modernization)**
Achieving the climate goals will not be possible without changes in national strategies and regulations defining the principles of thermo-modernization of buildings. Therefore, priority should be given to actions at every level aimed at reducing energy

losses, reducing its consumption, reducing pollutant emissions and improving the quality of life of the inhabitants. However, these measures must be consistent with the regulations adopted at the EU level, in particular with the taxonomy, to ensure access to finance.

- **Transparency and stability of the legal framework for collective prosumers**
extremely important for the development of renewable energy sources.. An unstable and unprofitable support and billing system for energy produced in home installations will inhibit the development of renewable energy sources. It is especially important in the case of rising energy prices depleting the budgets of households, businesses and local governments.

b. Transport

- **Support for rail transport (rolling stock replacement, intelligent infrastructure modernization, intermodal and supra-regional transport) and zero-emission intercity bus transport**

In Poland, there are major problems with the organisation of regional collective transport. The railway seems to be a great solution, as it can compete with passenger cars. However, its development and attractiveness for Poles is determined by the access to this means of transport, adapting timetables to the needs of residents, as well as modern and comfortable infrastructure. It is also important to enable access to railways not only for the inhabitants of the towns through which the railway passes, but also for the inhabitants of neighbouring towns. In order to make this possible, it is necessary to synchronize the timetables of the railway and city and suburban transport to enable convenient transfers for users. In addition to organisational aspects, the technological aspect is also important - public transport should have the lowest possible impact on the environment and should be carried out by zero-emission vehicles.

- **Development of alternative fuels infrastructure by appropriate change of legal requirements regarding new and substitute investments**

A revolution in the transport sector is inevitable. The implementation of the provisions of the European Green Deal will require a significant commitment of financial resources on the part of local government units and entrepreneurs. It is important to adapt national policies in such a way as to introduce changes with the least impact on them. Important to be implemented will be realistic goals for the development of alternative fuels and requirements for the participation of, for example, electric cars and buses in the fleet of vehicles used. Implementation of the green public procurement and measures to reduce the carbon footprint of the economy could also be helpful.



6. Summary

Summing up our findings, it should be emphasized that the analysis carried out as part of the project showed the need to take a more ambitious actions at all levels of creating public policies in Poland. Plans implemented at the EU level can provide inspiration for this, and the European Green Deal and the “Fit for 55” package contain solutions that translate into opportunities for transformation while addressing social problems at the local level. Taking advantage of these opportunities will directly depend on the adopted level of ambition, efficiency in using the available funds and unblocking the potential related to the implementation of the adopted assumptions and investments. In the context of the war in Ukraine, taking ambitious measures will also translate into faster independence from the import and use of fossil fuels from Russia, and will guarantee resistance to future external shocks related to the availability and prices of energy resources.

These benefits will be more readily available if the perceptions of the European Green Deal and the Fit for 55 package also change, both at the local and national levels. As we have argued above, one-sided interpretations of these initiatives at the EU level as risks and costs translate into blocking the realisation of the potential related to the implementation of changes and stimulation of local markets. These blockages in the transport and buildings sector convert into ineffective and selective action to tackle social problems such as transport exclusion and energy poverty. The priority in taking remedial action should be initiatives in particularly affected municipalities, such as medium-sized cities.

Among the blockades currently hindering the use of the European Green Deal and the “Fit for 55” package potential for solving these problems, there are primarily 5 areas: 1) the gap between the level of ambition at the national level and the occurrence of regulatory blockades, 2) the ineffective use of available financial resources translating into higher perceived transformation costs, 3) failure to use all available instruments for creating public policy at the local level, 4) lack of a comprehensive approach to problem solving, and 5) lack of synergy between public and private investments.

In our paper, we propose an approach based on the implementation of model comprehensive investments at the local government level. In the building sector, our proposals refer to comprehensive investment and regulatory measures related to the thermal modernization of municipal buildings. In the transport sector, we propose the reconstruction of public transport connections combined with activities focusing on determining the spheres of clean transport, supporting individual micromobility and electromobility. Our proposals include both “hard” and “soft” measures to take into account the different ways in which local authorities influence the needs of local communities and the development of local markets.

Furthermore, we have formulated 5 cross-sectional recommendations relating to activities at the central and local levels. At the central level, we suggest adopting a long-term low-carbon transformation strategy until 2050 to organise and structure activities in the area of transformation of the entire economy. We also recommend raising the national reduction targets to the level set at the EU level when revising strategic government documents. In addition, we indicate ways of more effective use of the available financial resources for transformation. At the local



level, we recommend adopting a higher level of ambition (going beyond the minimum statutory level) and adopting a comprehensive approach to the implementation of activities in the area of transformation of the building and transport sectors. We also presented sector recommendations focusing on specific issues related to each of the areas analysed by us.

The result of our analysis is based on consultations carried out at the central and local levels and with the participation of representatives of the private sector. As part of the consultations, we engaged a large representative group of members of the central administration, local government and business. All opinions used are anonymised and represent the perspective of those directly involved in the work related to the transformation of the building and transport sectors. Thus, this approach was an added value to the self-conducted analyses of documents and statistical data. It also allowed us to confront our assumptions and perspectives, and to strengthen or revise our arguments as needed. However, this paper is the result of the authors' independent processing of all conclusions based on these consultations and was not authorised by the participants of the consultations.



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Other publications:

"Domestic Landscape of Climate Finance . Why systemic approach to climate finance matters?",
Bukowski M., Wetmańska Z., Śniegocki A., Röser F., Fekete H., Emmrich J., Cochran I., Hainaut H.

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