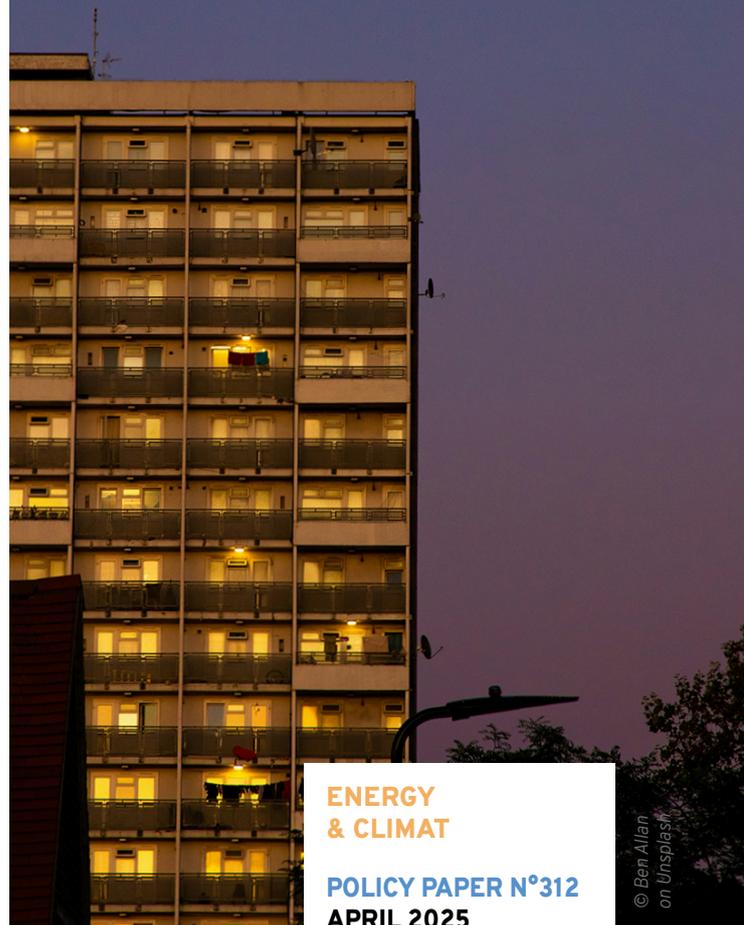


Building decarbonization and affordable housing: promoting local skills and accelerating the green deal

• Key messages :

- Building decarbonization policies are a pillar of the EU, showing that the energy transition in this sector can only succeed if it is supported by measures ensuring that housing is affordable for all.
- Achieving the renovation targets will require a complete overhaul of the financial support: investments and funding need to be significantly increased, made more transparent, better targeted, carefully planned (ensuring long-term visibility) and more broadly accessible.
- Although local governments are extremely diverse throughout Europe, they share common needs such as improved data collection, better monitoring and verification – achievable through wider access to innovative digital solutions-, adoption of whole-of-(local)-government and whole-of-society approaches, and stronger planning skills.
- Municipalities need to be empowered in all fields (political, technical, financial) and require support to develop “soft” skills, that is to say, negotiation, communication, project coordination, etc.
- Finally, to help governments navigate the proliferation of initiatives, many of which do not always match their needs, there is a clear need to simplify and reframe the available support mechanisms.



ENERGY
& CLIMAT

POLICY PAPER N°312
APRIL 2025

© Ben Allan
on Unsplash

Thibaud Voïta
Energy Advisor,
Co-Director of the
MSc Management of
Energy Transitions,
emlyon Business
School

Acknowledgement	3
List of Acronyms	4
Introduction	5
I. Context: Building Decarbonization and the Housing Crisis	6
Deciphering the European Policy Framework on Buildings	6
Can the Promotion of Building Decarbonization and Housing Affordability Go Together?	11
II. The Challenges: Limited Resources and Too Little Support	15
Limited Resources to Implement Decarbonization and Social Policies	15
The limited adequacy of the EU's answers	19
III. Skills and Policy Proposals to Reinforce Local Governments	21
A Combination of Hard and Soft Skills that Should be Reinforced in Priority	21
Additional Policy Proposals To Empower Local Governments	26
Conclusion: Addressing Energy, Climate and Social Policies at the Same Time	27
Annexe. List of the Main Relevant Initiatives Available at the EU Level	28

• Acknowledgement

This report was written by Thibaud Voïta (Jacques Delors Institute Energy Center), with support from Ms. Sarah Coupechoux (Foundation for Housing), who provided advices and contacts during the development of this work, wrote the paragraphs on *The Right to Decent Housing: Promoting Affordable and Social Housing, Fighting Energy Poverty* and *The new construction-deep renovation dilemma*, and reviewed the report.

The author also wishes to thank Ms. Insa Holste and Ms. Sarah O'Brien (European Climate Foundation), as well as the experts who were interviewed, participated in the event organized in the context of this report and/or provided comments to the draft version: Ms Anna Bajomi (FEANTSA), Mr Jacques Baudrier (City of Paris), Ms Doria Biondani (European Poverty Advisory Hub), Ms Francesca Canali (Mira Network), Mr Bogdan Chelariu (BankWatch), Ms Marine Cornelis (Next Energy Consumer), Mr Pierre Delotte (City of Paris), Ms H  l  ne Denise (Foundation for Housing), Ms Frankie Downie (C40), Ms Assya Dobrudjalieva (Habitat for Humanity Bulgaria), Mr Danyel Dubreuil (CLER), Ms Sorcha Edwards (Housing Europe), Ms Cl  mentine Gravier (URBACT), Mr Kurt Hofstetter (City of Vienna), Ms Anna Iafisco (Eurocities), Ms Veronika Iwanowski (City of Vienna), Mr Adrian Joyce (Efficient Buildings Europe), Ms Klervi Kerneis (Jacques Delors Institute), Ms Zsuzsanna Koritar (Habitat for Humanity Hungary), Mr Gerald K  ssl (Austrian Federation of Limited-Profit Housing Associations), Ms Muriel Le Boulanger (Agence Locale de l'  nergie et du Climat, Grand Paris Seine Ouest), Ms Sylvie Matelly (Jacques Delors Institute), Ms Tzveta Naniova (Bulgarian - Austrian Consulting Company), Pedro Narro (European Committee of the Regions), Mr Phuc-Vinh Nguyen (Jacques Delors Institute), Ms Emilia Postolache (Council of Europe Development Bank), Mr Paul Meunier du Houssoy (Grand Paris Climat), Ms B  atrice Roualt (F  d  ration des Agences Locales   nergie - Climat, FLAME), Mr Christian Schantl (City of Vienna), Ms Florence Tardieu (M  tropole Grand Lyon), Mr Dragomir Tzanev (EnEffect), Mr Vaclav Zdarek (European Investment Bank).

The views expressed in this publication are those of the authors and do not necessarily reflect theirs. The financial support from the European Climate Foundation is gratefully acknowledged.

• List of Acronyms

BIM: Building Information Modelling

BPIE: Building Performance Institute Europe

CEMR: Council of European Municipalities and Regions

CoR: Council of the Regions

EIAH: European Investment Advisory Hub

EIB: European Investment Bank

ELENA: European Local ENergy Assistance

EPBD: Energy Performance of Buildings Directive

EPAH: Energy Poverty Advisory Hub

EPC: Energy Performance Certificates

ERDF: European Regional Development Fund

FEANTSA: European Federation of National Organisations Working with the Homeless

FEEL: Frugal Cities through Energy Efficiency and Low-Tech Communities

ICC: Intelligent Cities Challenge

IWG5: Implementation Working Group on (Resource and) Energy Efficiency in Buildings

MEPS: Minimum Energy Performance Standards

NEB: New European Bauhaus (NEB)

OSS: One-Stop Shop

SCCALE: Sustainable Collective Citizen Action for a Local Europe

SRSP: Structural Reform Support Programme

TSI: Technical Support Instrument

• Introduction

Europe is at the forefront of global energy decarbonisation, and buildings are a key pillar of this transition. They account for about 40% of the EU's final energy consumption and 36% of energy-related emissions, with 75% of European buildings suffering from poor energy performance and needing to be renovated by 2030¹. The attention to building performance has grown in recent years, spurred by two major events: the COVID-19 crisis first, which led many European citizens to spend more time at home due to the lockdowns, and highlighted the poor ventilation of many European buildings. Second, the energy crisis, exacerbated by the Russian attack on Ukraine, led to a massive increase in energy prices with important consequences in terms of energy poverty. Currently, 8 to 16% of Europeans are considered energy poor².

European building decarbonization policies started early. In 2010, the EU adopted the Energy Performance of Buildings Directive (EPBD), revised in 2024, and complemented by the 2012 Energy Efficiency Directive (EED), revised in 2023. Reflecting the increasing recognition of the building sector's importance in the energy transition, the 2024 – 2029 European Commission has added the housing sector to the prerogatives of the Energy Commissioner. **This demonstrates that building renovation can no longer be considered without its social dimension anymore**, i.e. the promotion of affordable and/or social housing and the fight against energy poverty. Renovation is critical even when considering service buildings that play a social role, typically for schools or hospitals³. Renovation is now part of broader infrastructure upgrade projects, with considerations about heating systems and adaptation to extreme weather events such as heat waves. These developments create new challenges for local governments. They must adjust their skills, acquire new ones, and find the right renovation policies that benefit affordable housing.

This report aims to identify the skills that local governments need the most. It first assesses the main challenges that local governments need to address in their building policies, then it identifies specific hurdles and difficulties they are facing, and that require the acquisition of new skills, before identifying these. It concludes with a set of policy recommendations.

- 1 European Commission “In focus: Energy Efficiency In Buildings”, February 17th 2020, https://commission.europa.eu/news/focus-energy-efficiency-buildings-2020-02-17_en and “Energy Performance of Buildings Directive”, non dated, https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficient-buildings/energy-performance-buildings-directive_en
- 2 European Commission, Joint Research Centre, Maier, S. and Dreoni, I., Who is “energy poor” in the EU, European Commission, Sevilla, 2024, JRC138418, <https://publications.jrc.ec.europa.eu/repository/handle/JRC138418>
- 3 Afroditi Psatha “Putting people first: renovate to future-proof Europe’s schools”, European Commission, Sustainable Energy Week, May 2nd 2024, https://sustainable-energy-week.ec.europa.eu/news/putting-people-first-renovate-future-proof-europes-schools-2024-05-02_en

I • Context: Building Decarbonization and the Housing Crisis

I DECIPHERING THE EUROPEAN POLICY FRAMEWORK ON BUILDINGS

– Promoting Renovation, Low-Carbon New Buildings, and Looking for Finance

The EU has ambitious goals for its buildings. By 2030, the sector should reduce its emissions by at least 60% compared to 2015. By 2050, the building stock should be decarbonised and climate-neutral. Several EU regulations are targeting building decarbonization. These include, in addition to the Energy Performance of Buildings Directive (EPBD) and Energy Efficiency Directive (EED), the Emission Trading System for fuels used in buildings, and the Alternative Fuels in Infrastructure Regulation. The 2020 Renovation Wave strategy (part of the European Green Deal) aims to at least double the energy renovation rate of buildings by 2030 and reinforce deep renovation. It sets an action plan to accelerate building renovations, with regulatory, financial and enabling measures. The 2021 Delivering the European Green Deal Package (also called Fit for 55) added a Social Climate Fund that supports the most vulnerable population and small businesses in the overall energy transition process (beyond just buildings). The importance of building renovation was also stressed in the 2022 REPowerEU plan, as the improvement of energy performance is essential to reduce gas consumption in the building sector⁴. New initiatives also include the European Commission's 2025 **Task Force on Housing**, in charge of developing a **European Affordable Housing Plan**.

These objectives leave many policy questions without an answer. Among these are:

- **The tensions between construction and renovation.** The pace of new construction in Europe seems to be slowing down, but has been irregular over the past decades and has been highly dependent on the economic situation. Looking at the order books in the construction sector over the past 15 years, we can see a negative trend throughout the whole period, except for the years 2018 - 2019 and 2022 (as a rebound after a sudden drop during the Covid-19 pandemic period)⁵. The construction sector is materials and GHG-intensive and can hurt the environment in terms of land use. Some researchers are calling for a stronger focus on renovation, and exploring options to expand renovation and transformation to more buildings and to limit new land use (see paragraph below on *The new construction-deep renovation dilemma*)⁶.
- **The depth and objectives of the renovation works.** The EU does not provide a clear definition of “deep renovation”. The EU just specified the depth as 60% or more energy savings⁷. Meanwhile, the Building Performance Institute Europe (BPIE), a Brussels-based think tank, proposes the following: “Deep renovation is a process of capturing, in one or, when not possible, a few steps (maximum number to be defined), the full potential of a building to reduce its energy demand, based on its typology and climatic zone. It achieves the highest possible energy savings and leads to very high energy performance, with the remaining minimal

4 “Energy Performance of Buildings Directive”, not dated, *op. cit.*

5 Van Sante M. “Growth returns to Europe’s construction sector”, January 21st, 2025, ING Real Estate Corporate Sector Coverage, <https://think.ing.com/articles/returning-but-low-growth-expected-in-the-european-construction-sector/>

6 Guidoum R., Olivier M., Kraus S., *Artificialisation. Réussir le ZAN en réduisant le mal-logement : c’est possible !* Fondation Abbé Pierre, Fondation pour la Nature et l’Homme, report, March 2024, <https://www.fnh.org/zan-et-mal-logement/>

7 “Recommendations. Commission Recommendation (EU) 2019/786 of 8 May 2019, on building renovation”, *Official Journal of the European Union*, May 16th, 2019, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX%3A32019H0786>

energy needs fully covered by renewable energy. Deep renovation also delivers an optimal level of Indoor Environmental Quality to the building occupants (...)”⁸. A consensus is that “deep renovation” is opposed to “one-step” measures, such as replacing windows. However, the increase in energy performance of a building does not necessarily mean energy savings, due to various factors, including behavioural factors (sometimes called the rebound effect)⁹.

- **The financial resources** needed to achieve these goals in terms of finance, and the proper way to spend the money. The decarbonization of buildings in Europe requires investments to at least double¹⁰. Recent policies in Bulgaria and Italy would fully cover the renovation works, but resulted in disappointing results (see below, *Can additional financing accelerate the pace of renovation? Lessons from Bulgaria and Italy*). However, there are some important lessons to draw from these experiences in terms of transparency, long-term planning, targeting, etc.

These issues raise questions about the pace of building decarbonization, the sufficiency of the resources allocated, and the EU’s capacity to address its goals. The EU is not on track and must significantly accelerate the pace of deep renovations. The think tank BPIE estimated in the 3rd edition of its *Building Climate Tracker*, published in 2024, that its four main indicators of building decarbonization are 40% away from the climate neutrality path (see table 1)¹¹.

8 Sibileau H., *Deep Renovation: Shifting from Exception to Standard Practice in EU Policy*, BPIE, November 2021, https://www.bpie.eu/wp-content/uploads/2021/11/BPIE_Deep-Renovation-Briefing_Final.pdf

9 Caspani M. and Gunnarson E. *Behavioural Factors Influencing the Uptake of Energy Efficiency in Residential Buildings*, European Environment Agency, December 2022, https://cedelft.eu/wp-content/uploads/sites/2/2023/08/Behavioural_factors_influencing_the_uptake_of_energy_efficiency_in_residential_buildings.pdf

10 The European Commission estimates that EUR 300 billion should be invested every year in building efficiency and that at least EUR 165 billion should be added to the current investments. Meanwhile, the Institut Rousseau, a French think tank, assesses that these reach EUR 434, with EUR 142 billion that should be added. See “Financing for building renovations”, European Commission, https://energy.ec.europa.eu/topics/energy-efficiency/financing/financing-building-renovations_en and Desquinabo N., Ramos P. et al. « Investments in the Building Sector », in Kerlero de Rosbo, G. et al. *Road to Net Zero*, Institut Rousseau, January 2024, <https://institut-rousseau.fr/road-2-net-zero-en/> Finally, the Brueghel Institute estimates that EUR 150 billion per year are needed: Keliauskaitė, U., B. McWilliams, G. Sgaravatti and S. Tagliapietra (2024) ‘How to finance the European Union’s building decarbonisation plan’, Policy Brief 12/2024, Bruegel, <https://www.bruegel.org/policy-brief/how-finance-european-unions-building-decarbonisation-plan>

11 Amoroch J.A.P., Kochat J. and Milne C., *Transforming Buildings, Empowering Europe: A Pathway to Prosperity, Equity and Resilience. EU Buildings Climate Tracker, 3rd Edition*, BPIE, <https://www.bpie.eu/publication/eu-buildings-climate-tracker-3rd-edition/#>

TABLE 1. BPIE's Building Climate Tracker's indicators

Indicator	Achieved progress (2015 – 2022)	Required progress (2015 – 2022)
CO2 emissions from energy use in buildings for households and services	- 14.7%	- 27.9%
Final energy consumption in households and services	- 2.8%	- 6.5%
Share of renewable energy in the buildings' energy mix	+ 6.3 %	+ 18%
Cumulative investment in renovation	8 times the 2015 value	13.8 times the 2015 value

▲ Source: Amoroch J.A.P., Kochat J. and Milne C., *Transforming Buildings, Empowering Europe: A Pathway to Prosperity, Equity and Resilience. EU Buildings Climate Tracker, 3rd Edition*, op. cit.

– **The Right to Decent Housing: Promoting Affordable and Social Housing, Fighting Energy Poverty**

Decarbonization of European buildings needs to be considered in the context of the important housing crisis the continent is experiencing.

– **The Housing Crisis**

Europe is facing a major affordable housing crisis. In large cities, more and more people are expressing their indignation at the difficulties they face in finding good-quality, affordable housing¹².

In many countries, particularly where the market is under significant pressure, prices have increased for both rental and purchase. The EU saw a 48% increase in housing prices between 2010 and 2023¹³: in Portugal, prices increased by 81% in ten years. In Ireland, housing prices have skyrocketed and were 101% above the EU average in 2023. In Hungary, prices increased by 173% between 2015 and 2023¹⁴.

This dramatically affects households that devote an increasingly large share of their resources to housing, particularly in cities, where 10.6% of the urban population (considered poor or not) spends more than 40% of their income on housing. Some people cannot meet this financial burden and have difficulty paying their bills. In 2023, 9.3% of Europeans faced arrears on mortgage, rent or utility bills. In the face of the housing shortage, some household profiles are more affected by the housing crisis. Poor people spend an average of 38.2% of their income on housing, compared with 16.1% for the rest of the population. This is also the case for single-parent families, often women, who more often live in overcrowded housing (26.9% in 2023 compared to 16.8% for the rest of the population). Young people are also particu-

¹² “Thousands in Spain join nationwide march to protest against housing crisis”, *The Guardian*, April 5th, 2025, <https://www.theguardian.com/world/2025/apr/05/spain-protest-march-housing-crisis>

¹³ Eurostat, *Housing in Europe. 2024 Edition*, <https://ec.europa.eu/eurostat/web/interactive-publications/housing-2024#housing-cost>

¹⁴ “Rising housing costs in the EU: the facts (infographics)”, European Parliament, October 17th, 2024, <https://www.europarl.europa.eu/topics/en/article/20241014STO24542/rising-housing-costs-in-the-eu-the-facts-infographics>

larly affected and represent nearly 15% of those who had difficulty paying their rent in 2024. Finally, people with a migration background are more often victims of discrimination and also suffer more from the housing crisis¹⁵.

Some of these households are forced to live in poor-quality housing, and 19.2 million people were severely deprived of housing in 2020. A few years ago, the European Foundation for the Improvement of Living and Working Conditions (Eurofound) estimated that the total annual cost of keeping people in inadequate housing was around 194 billion euros and that the renovations needed to permanently solve the problem would be repaid within 18 months through savings made through reduced healthcare costs and improved social conditions¹⁶. With the rise in energy prices, households are finding it increasingly difficult to maintain an adequate temperature in their homes, and 10.6% of Europeans will be in a situation of energy poverty in 2023¹⁷.

These factors show the importance of developing and preserving affordable housing and social housing in Europe. This will require the development of an efficient public housing supply and a private housing supply that remains affordable after renovation. To this end, states and local authorities must guarantee social safeguards and introduce incentive measures for landlords. The wave of renovation must be an opportunity to develop housing that is of good quality and affordable, including for the poorest households, to meet environmental, health and social challenges.

– Social Housing: The Example of Vienna

Social housing is often seen as a European specificity, and sometimes as the “cure” for the housing crisis¹⁸, though the social housing stock varies widely from one country to another¹⁹. Social housing can be at the forefront of decarbonization. For instance, the social housing stock of **Paris** enjoys a good energy performance, with recent renovation works that led to a reduction of EUR 200 to 450 euros of heating fees per household and per year²⁰. **Vienna** stands as a European role model in that field, though it may be difficult to be replicated by other cities. Approximately 500,000 people (half of the city) live in subsidised homes, with 200,000 cooperative flats built with municipal subsidies, another 220,000 municipal units, and an additional 4,000 under construction. Social housing is part of the history of the city, with the iconic Karl-Marx Hof, a 1,250-apartment complex of more than one kilometre long occupying a 1560,000 m² surface (the equivalent of 22 football pitches) and built between 1927 and 1930. In addition to its social role, the Karl-Marx Hof became famous for hosting the last opponents to the fascist dictatorship in 1933, who resisted the assault for three days²¹. Nowadays, the Viennese social housing stock is being connected to district heating to switch off fossil-fuel-based heating

¹⁵ Eurostat, *Housing in Europe. 2024 Edition, op. cit.*

¹⁶ Ibid.

¹⁷ The definition of an “adequate home temperature” is a matter of discussions. The World Health Organization estimated in 1987 that minimum temperature in general and in Winter should be around 18°C: World Health Organization. *Health impact of low indoor temperatures*. Copenhagen: World Health Organization; Regional Office for Europe, 1987.

¹⁸ Peggs A. “Public Housing Is the Only Cure for Europe’s Housing Crisis”, *Jacobin*, April 3rd, 2025, <https://jacobin.com/2025/04/public-housing-crisis-europe-neoliberalism>

¹⁹ See the Housing Europe Observatory, *The State of Housing in Europe 2023*, Housing Europe, 2024, <https://www.stateofhousing.eu/#p=1>

²⁰ “Consommations réelles d’énergie des logements parisiens. Volet 1: par social et opération plan climat”, Atelier Parisien d’Urbanisme (APUR), April 17, 2024, <https://www.apur.org/fr/nos-travaux/consommations-reelles-energie-logements-parisiens-volet-1-parc-social-operations-plan-climat>.

²¹ “Karl-Mark-Hof public housing”, Visiting Vienna, not dated, <https://www.visitingvienna.com/culture/karl-marx-hof/>

systems. In addition, the renovation works are conducted every 40 years, and allow on average a 2/3 decrease in the energy bill. The works in the buildings are mostly covered by the reinvestment of the rent of the tenants, except for the heating system switch, 75% of which is covered by the national government²².

– The Role of Local Governments in the Building and Housing Sectors

In this context, local governments are often seen as key actors to address these issues and support the achievement of the European targets, given their knowledge and proximity to the population within their jurisdictions. However, their situation and responsibilities vary from one country to another, and they have strong limitations.

The term “local governments” covers different realities in Europe. The EU is composed of federations (Austria, Belgium, and Germany) and countries having a more centralised power tradition (unitary states such as the Eastern European countries). Some countries have a complex territorial organisation with different government layers, like France (with the region and *département* levels that add up to the cities), Germany (with 16 Länder benefiting from substantial autonomy) or Italy (20 regions). Other countries have a much simpler organisation: Greece, Ireland and Portugal’s organisation consists mostly of a national government and one layer of local governments, with additional administrative divisions that do not enjoy much autonomy (and two autonomous regions in Portugal). In terms of the number of municipalities, France ranks as one of the top countries, with nearly 35,000 local administrative units (LAU, locally known as *communes*), including approximately 40 cities with 100,000+ inhabitants²³, and more than 11,000 LAU in Germany (*Städte*), including 83 with 100,000+ inhabitants²⁴.

The ability of local governments to act on the building sector can be restrained by their limited competencies, especially in terms of finance. European local governments cannot levy an energy tax, which is generally a prerogative of the national government (contrary for instance to countries such as the United States or Canada). This makes them dependent on money transfers from the national government and creates a challenge in terms of building renovation²⁵. For instance, the role of local governments in Malta is “primarily administrative and their involvement in energy and climate policy design is marginal”²⁶. On the contrary, Spanish cities are the governments responsible in terms of building sustainability²⁷. Local governments are also limited in terms of important infrastructure works that are key to decarbonization, such as district heating and cooling, which allow the phase-out of gas heating, which are mostly decided and financed at the national level²⁸.

²² Interviews.

²³ See the « Division of Powers » portal from the European Committee of the Regions, <https://www.stateofhousing.eu/#p=1> INSEE, *Tableau de l'économie française. Edition 2016*, March 2016, <https://www.insee.fr/fr/statistiques/1906659?sommaire=1906743>

²⁴ “Division of Powers” portal from the European Committee of the Regions, *op. cit.*, and DESTATIS, „Städte (Alle Gemeinden mit Stadtrecht) nach Fläche, Bevölkerung und Bevölkerungsdichte am 31.12.2023“, 2023, <https://www.destatis.de/DE/Themen/Laender-Regionen/Regionales/Gemeindeverzeichnis/Administrativ/05-staedte.html>

²⁵ Kastelein, R. Role of local governments in EU member states’ climate policy and legislation. *npj Clim. Action* 3, 92 (2024). <https://doi.org/10.1038/s44168-024-00177-3>

²⁶ Government of Malta *Malta’s 2030 National Energy and Climate Plan*, 2019, https://energy.ec.europa.eu/system/files/2020-01/mt_final_necp_main_en_0.pdf, quoted in Kastelein, R. Role of local governments in EU member states’ climate policy and legislation, *op. cit.*

²⁷ Spanish Ministry for the Ecological Transition and the Demographic Challenge (MITECO). National Climate Change Adaptation Plan 2021-2030. <https://climate-laws.org/documents/national-climate-change-adaptation-plan-2021-2030-883e> (2020), quoted in Kastelein, R. Role of local governments in EU member states’ climate policy and legislation, *op. cit.*

²⁸ Bruel R. “A local perspective on the Dutch gas phase-out. Amersfoort”, October 2nd, 2024, presentation made at the European Climate Foundation Building Strategy Days.

I CAN THE PROMOTION OF BUILDING DECARBONIZATION AND HOUSING AFFORDABILITY GO TOGETHER?

– Combining Building Decarbonization and Housing Affordability

As part of their mandates, local governments and, more specifically, municipalities often play an important role in terms of education, promotion, and raising awareness in the sustainability field. They are close to their citizens and know how to reach and mobilise local communities. One of their key and extremely challenging tasks nowadays is to address building decarbonization and housing affordability targets.

Energy poverty has gained growing attention in Europe over the past years, and energy efficiency is often promoted to address it. European countries have different definitions of energy poverty. The European Commission specifies that “energy poverty occurs when a household must reduce its energy consumption to a degree that negatively impacts the inhabitants’ health and wellbeing”²⁹. Research has demonstrated that energy poverty is usually related to “poorer general health, poorer mental health, poorer respiratory health, more and worse controlled chronic conditions, higher mortality, higher use of health services and higher exposure to health risks”. In addition, it tends to affect more vulnerable groups³⁰. Table 2 shows that in 2023, nearly 7% of the European population had trouble paying their utility bills, and more than 10% were unable to keep their home sufficiently warm during the colder months, with figures jumping respectively to nearly 18% and more than 20% of the Bulgarian population. The two countries with the highest rate of population suffering from energy poverty are Bulgaria and Greece (30% of the population), while only 5% of the people living in Western and Northern Europe are exposed to it³¹. Building renovation can reduce energy consumption but also improve ventilation, leading to health co-benefits. The European Commission has established several tools to fight against energy poverty, establishing an Energy Poverty Observatory (2016), as well as a Commission on Energy Poverty and Vulnerable Consumers Coordination Group, a Social Climate Fund (2023) and a Recommendation on Energy Poverty (2023). The fight against energy poverty is also included in the EED and EPBD³².

29 “Energy Poverty” page, European Commission, https://energy.ec.europa.eu/topics/markets-and-consumers/energy-consumers-and-prosumers/energy-poverty_en

30 Ballesteros-Arjona V., Oliveras L., Bolivar Munos *et al.* “What are the effects of energy poverty and interventions to ameliorate it on people’s health and well-being? : A scoping review with an equity lens”, *Energy Research & Social Science*, Volume 87, May 2022, <https://doi.org/10.1016/j.erss.2021.102456>

31 European Commission, Joint Research Centre, Maier, S. and Dreoni, I., *Who is “energy poor” in the EU*, European Commission, Sevilla, 2024, JRC138418.

32 “Energy Poverty” page, European Commission, *op. cit.*

TABLE 2. Energy Spending and poverty in selected European Countries' residential sector

Country	Residential sector's share of total energy consumption (2022)	Share of residential energy consumption used for space heating (2022)	Share of the population having arrears on their utility bills (2023)	Share of the population unable to keep their home adequately warm during cold periods of the year (2023)
Austria	26.78%	68.8%	5.5%	3.9%
Bulgaria	21.69%	46.0%	17.8%	20.7%
Denmark	30.90%	57.3%	4.7%	6.9%
EU27	21.47%	63.4%	6.9%	10.6%
France	28.06%	67.2%	7.5%	12.1%
Germany	30.03%	66.1%	5.4%	8.2%
Hungary	32.39%	71.9%	7.3%	7.2%
Italy	27.12%	67.2%	4.1%	9.5%
Poland	29.17%	62.7%	4%	4.7%

▲ Source: *Factsheets*, EU Building Stock Observatory, European Commission, no date, <https://building-stock-observatory.energy.ec.europa.eu/factsheets/>

While energy poverty is traditionally seen from a cold perspective (i.e. difficulties in heating a household), it should also be considered as an incapacity to address heat waves that are occurring more often and becoming more intense due to climate change, and causing more and more casualties and victims. Heat waves are now responsible for about 48,000 additional deaths per year in Europe³³, and it is estimated that in Europe only, they could generate 2.3 million additional deaths between 2015 and 2099³⁴. A poorly insulated home can further increase the effect of a heatwave. There is no recent data on this issue, but in 2012, nearly 19% of European households were already struggling to keep their homes cool in Summer. Most of the people suffering from Summer energy poverty are probably already enduring Winter energy poverty. Some cities are accelerating the efforts to tackle this issue, using solutions such as green roofs, water-based cooling solutions, or biomaterials to renovate houses, and efficient cooling systems. Examples include the Renaissance project in **Zaragoza** in Spain, which implemented bioclimatic designs in the eco-district Valdespartera. **Athens** has appointed a Chief Heat Officer³⁵. **The city of Vienna** is also working on this issue with a broad range of measures dedicated to the social housing stock, from new equipment (air conditioning in rooftop flats and blinds) to façade greening, use of the common rooms in the building as cooler areas, etc³⁶. At the city level, Vienna published a Heat Action Plan with 28 “heat-related ad-hoc measures and measures taken at relatively short notice to prepare for hot spells during the summer months, for instance, the development of cooling zones or

³³ European Commission: Directorate-General for Energy and Cornelis, M., *Framing summer energy poverty – Insights and recommendations for a resilient future – Final report*, Publications Office of the European Union, 2025, <https://data.europa.eu/doi/10.2833/3135617>

³⁴ Masselot et al. “Estimating future heat-related and cold-related mortality under climate change, demographic and adaptation scenarios in 854 European cities”, *Nature Medicine*, January 2025, <https://doi.org/10.1038/s41591-024-03452-2>

³⁵ *Ibid.*

³⁶ Personal interviews.

“recreating islands” in different neighbourhoods, including shops or venues where anyone can come to cool down without having to buy anything³⁷. The City of Vienna is also studying new solutions that would take advantage of air flowing from the forest to be used as a natural cooling system³⁸.

– When decarbonization goes against home affordability

The good news is that building renovation can, in theory, help fight against energy poverty. However, it can also backfire and exclude the poorest, creating another challenge for local governments.

Though building renovation helps address energy poverty, it can eventually hurt house prices, resulting in a phenomenon called under the name of “**renoviction**”, a contraction of “renovation” and “eviction”. The European Federation of National Organisations Working with the Homeless (FEANTSA) defines it as a “deliberate or indirect eviction due to the sudden and disproportionate increase in rents caused by housing renovation”. Renoviction can occur in the long run, with a green gentrification phenomenon³⁹. The FEANTSA refers to data from the Joint Research Center (JRC), which estimates that the price of residential assets will increase as a result of renovations: landlords may be tempted to increase their rent by 3 to 5% to have a return on investments needed for the renovation⁴⁰. “Renoviction” is difficult to measure, and can take different shapes: at the single dwelling level, they can be deliberated (the landlord renovates their goods to get rid of their tenants) or not.

At the neighbourhood level, a series of renovictions can feed the “**green/climate/environmental gentrification**” phenomenon, defined as “strategies of restoring degraded urban environments, creating greenspace, or deploying climate-adaptive green infrastructure improve an area’s attractiveness while resulting in increased property values, housing prices, and physical displacement of working-class residents and racialised groups and cultures-ultimately serving as a gentrifying force”⁴¹. Here renovation of several buildings will contribute to a rise in real estate in the area, kicking out the poorest and most vulnerable population, and creating inequalities. Typically, **Barcelona** experienced green gentrification as a side-effect of its Urban Mobility Plan (2013 – 2018), which established “Superblocks” or areas designed to limit traffic, increase green spaces and prioritize pedestrians, resulting in growing concerns about real estate development and speculations, as well as an increase in tourism and short-term rentals⁴².

Finally, a sensitive issue for local governments is to address vacant housing units and secondary homes, which may increase as an indirect result of building requirements. Vacant housing units and secondary homes are spreading in many big cities: typically, it is estimated that just over 20% of **Milanese housing units** are vacant⁴³.

³⁷ Vienna City Administration, *Vienna Heat Action Plan. For a cool Vienna*, 2022 <https://www.wien.gv.at/english/environment/klip/heat-action-plan.html>

³⁸ Personal interviews.

³⁹ FEANTSA, “Renoviction in Europe”, *FEANTSA Briefing*, 2022, https://www.feantsa.org/public/user/Resources/reports/2022/2_Briefing_-_Renovictions_in_Europe.pdf

⁴⁰ Zancanella P., Bertoldi P. Boza-Kiss B., “Energy Efficiency, the value of buildings and the payment default risk”, *JRC Science for Policy Report*, 2018, <https://euase.net/eu-commissions-joint-research-centre-report-energy-efficiency-the-value-of-buildings-and-the-payment-default-risk/>

⁴¹ Anguelovski, I., Connolly, J.J.T., Cole, H. et al. Green gentrification in European and North American cities. *Nat Commun* 13, 3816 (2022). <https://doi.org/10.1038/s41467-022-31572-1>

⁴² Example taken from Creasy A. and Maxwell K. “Addressing Green Gentrification: Actions and Recommendations for Global Cities”, *Journal of City Climate Policy and Economy*, 2024 2:3, 359-371, <https://doi.org/10.3138/jccpe-2023-0014>

⁴³ “Milan”, European Housing Coop, not dated, <https://housingcoop.eu/resources/cities-across-europe/milan>

In **Paris**, around 300,000 housing units remain vacant for most of the year, a figure that rises by approximately 7,000 units per year. Meanwhile, there are approx. 350,000 rental units (social housing excluded), with a decrease of 8,000 units per year. At the current trend, vacant units could outgrow rental units in the coming years⁴⁴. These vacant housing or secondary houses are less likely to be renovated, though the law in some countries is now requiring short term rental houses to be renovated like any other⁴⁵. However, renovation requirements can also indirectly increase the number of vacant dwellings: landlords may not have the resources to conduct the renovation of a dwelling with poor energy performance, making the goods difficult to rent or sell on the market. As a result, it may stay vacant for some time.

– The new construction-deep renovation dilemma

In a report published in 2024 that aims to help local authorities better mobilise the levers of land-use sobriety by integrating a social dimension, the Fondation pour la Nature et l’Homme (Foundation for Nature and Men) and the Fondation pour le Logement (Foundation for Housing) are formulating a series of proposals, including:

- **Creating housing by renovating instead of building new buildings:** solutions for making better use of existing buildings by reducing the vacancy of housing and offices for municipalities that wish to revitalise their town/village centre; For example, in France, local authorities can:
 - Offer support mechanisms for carrying out work (engineering assistance, subsidies, in addition to assistance from the National Housing Agency - ANAH),
 - Provide legal assistance,
 - Offer benefits for social rental agreements, or even
 - Refer hesitant owners who have had a bad rental experience to insurance for unpaid rent. They can also adopt more coercive measures, for example, using the housing tax on vacant housing, and expropriation procedures or work orders in cases of unfit housing (danger or insalubrity orders).

This situation requires the reinforcement of policies to support the renovation and sometimes the reconfiguration of housing, and also aiming at the revitalisation of old urban centres.

- **Increasing the financial and human resources for the territorial engineering** of local authorities. Increase renovation aid by minimising the amount that modest homeowners have to pay for the work.
- **Using taxation on vacant housing and second homes to create a new supply of quality housing.**

⁴⁴ Data provided by the City of Paris during an interview.

⁴⁵ “Loi du 19 novembre 2024 visant à renforcer les outils de régulation des meublés de tourisme à l’échelle locale”, *Vie Publique*, November 20th, 2024, <https://www.vie-publique.fr/loi/292100-loi-du-19-novembre-2024-airbnb-desequilibres-du-marche-locatif-le-meur>

- **Enabling all municipalities in tense areas to introduce rent controls to avoid price increases after renovation.**
- **Strengthening support for the renovation and construction of social housing** by making it possible to reserve hectares for the production of social housing as part of the distribution of artificialisation quotas⁴⁶.

II • The Challenges: Limited Resources and Too Little Support

The promotion of decarbonized and affordable housing is a very challenging task. Limited resources, lack of data and other types of hurdles are making the work of local governments more difficult.

I LIMITED RESOURCES TO IMPLEMENT DECARBONIZATION AND SOCIAL POLICIES

– Technical limitations

Building decarbonization is a complex task that involves many different activities and the mastery of many tools and techniques. Some technologies widely used to improve the energy performance of a building include improved insulation and the adoption of low-carbon heating systems such as heat pumps or district heating and cooling (DHC). Various policy tools are used to regulate and measure the performance of the buildings, such as Minimum Energy Performance Standards (MEPS), building passports or new digital technologies (see below). In addition to these, the Energy Performance of Buildings Directive (EPBD) recommends the adoption of solar energy, building Automation and Control Systems, or smart readiness indicators, as well as the adaptation of buildings to the needs generated by the electrification of the energy systems, e.g. with electric vehicles charging stations⁴⁷.

– Data and Local Knowledge

Obtaining the right data about the housing stock is another key issue to identify the buildings that should be renovated in priority, to target the most vulnerable population, and to better frame social policies. In general, large local governments, such as big municipalities, have access to financial and human resources but lack the granular knowledge on local housing needed for policy interventions. Meanwhile, small municipalities usually have better knowledge of their territories but lack the resources to promote the appropriate policies. The lack of data is highly problematic and has impacts in terms of targets, campaigning, as well as monitoring, evaluation and verification.

– Doing as much as possible with too little: the finance issue.

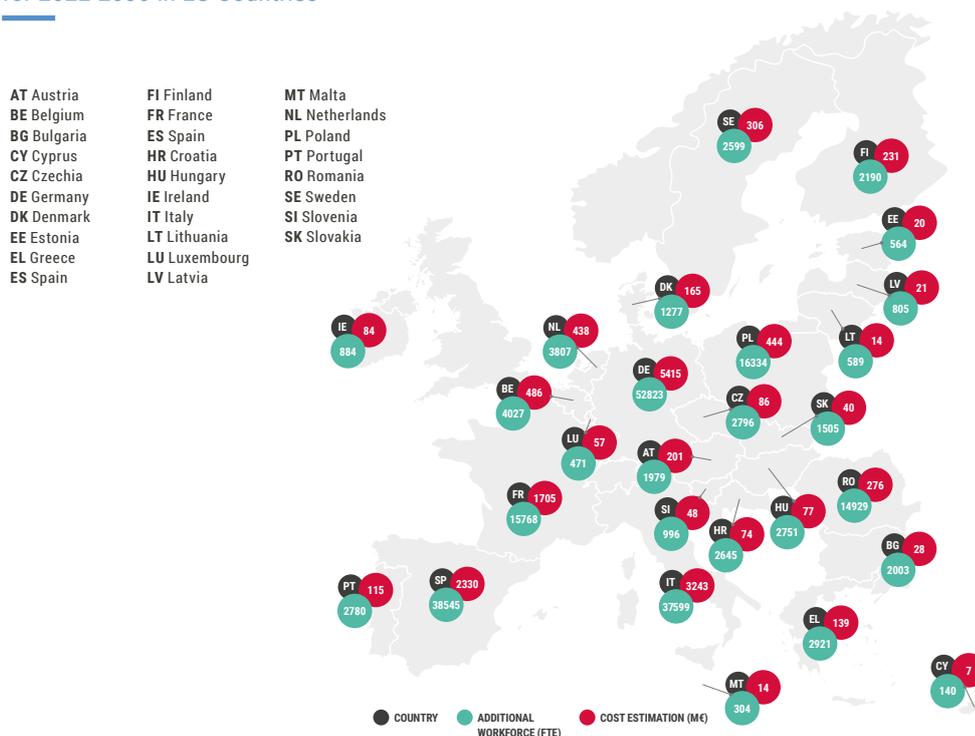
The lack of financial and human resources comes up as another important hurdle. As mentioned above, EUR 142 to 165 billion are lacking to achieve Europe's energy goals. It actually manifests in two different ways: a lack of resources within local governments that generate staff shortages, and a lack of funds to finance projects.

⁴⁶ Guidoum R., Olivier M., Kraus S., *Artificialisation. Réussir le ZAN en réduisant le mal-logement : c'est possible ! op. cit.*

⁴⁷ "Directive (EU) 2024/1275 of the European Parliament and of the Council of 24 April 2024 on the energy performance of buildings (recast)", *Eurlex*, April 24th, 2024, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L_202401275&pk_keyword=Energy&pk_content=Directive

Many municipalities are underfunded and understaffed, which means they cannot allocate enough personnel to monitor compliance, support renovation projects, or develop required infrastructure like solar installations and energy-efficient heating systems. To quote the think tank BPIE: “Many local authorities face serious challenges in terms of administration, funding and technical capacity. In smaller CEE public budgets in combination with the lingering consequences of the Covid-19 pandemic, invasion of Ukraine and the subsequent energy crisis, make renovations difficult”⁴⁸. According to the European Investment Bank Municipality Survey, financial constraints are more stringent in less developed regions, as 32% of the municipalities suffer from budgetary constraints, against 21% in transition regions and 16% in the developed ones⁴⁹. In 2022, the city network Energie Cities assessed the financial needs per country, as seen below in Figure 1. They also assessed the number of additional staff needed in Polish cities, as shown in Figure 2. They conclude that 214,000 new local job positions are required to decarbonise the EU-built environment with a total cost of EUR 16 billion per year⁵⁰. Other human-resource issues mentioned during some interviews include the lack of proper training, and the attraction of some cities that can distract skilled staff from some municipalities with fewer resources.

FIGURE 1. Average additional costs and labour force for municipalities per year for 2022-2030 in EU Countries



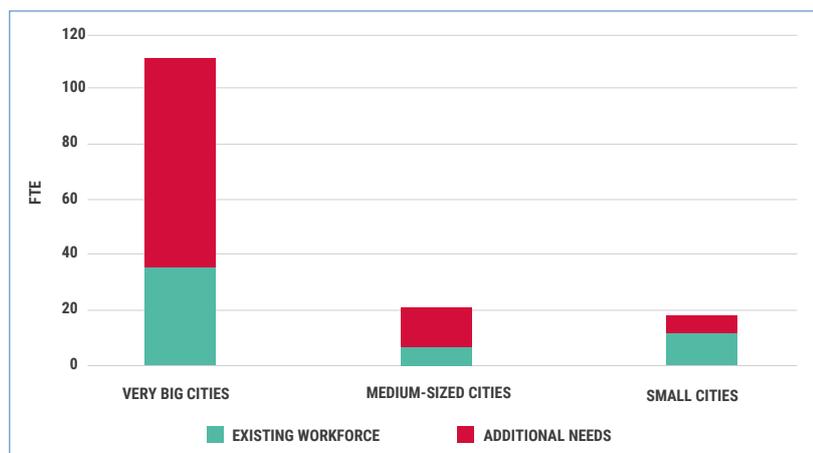
▲ Source: Ancelle Amélie, Bourgeois Mélanie, Joubert Julien (2022) *Human Capacity in Local Governments: The Bottleneck of the Building Stock Transition*, op. cit.

⁴⁸ BPIE, *Enabling local authorities to lead the decarbonization of existing buildings*, Renocally, April 29th, 2024, <https://www.bpie.eu/wp-content/uploads/2024/04/Guidebook-final-Local-authorities-leading-the-decarbonisation-of-existing-buildings.pdf>

⁴⁹ T. Bending, J. Delanote, I. Dos Santos, *The state of local infrastructure in Europe EIB Municipalities Survey, 2022 – 2023*, EIB, 2023, <https://www.eib.org/en/publications/20230043-eib-municipalities-survey-2022>

⁵⁰ Ancelle Amélie, Bourgeois Mélanie, Joubert Julien (2022) *Human Capacity in Local Governments: The Bottleneck of the Building Stock Transition*, Energie Cities, April, https://energy-cities.eu/wp-content/uploads/2022/05/EnergieCities21_PolicyPaper_CapacityNeeds_EN_FINAL-2.pdf

FIGURE 2. Average existing and required workforce working on building decarbonization in Polish municipalities according to their size



▲ Source: Ancelle Amélie, Bourgeois Mélanie, Joubert Julien (2022) *Human Capacity in Local Governments: The Bottleneck of the Building Stock Transition*, op. cit.

– **Can additional financing accelerate the pace of renovation?
Lessons from Bulgaria and Italy**

Another financial issue is not about the availability of money but rather the ability of governments to spend it efficiently, transparently and equitably. Several European programmes, funded by the EU or national money, have made renovation possible for many households, but with disappointing results.

Bulgaria has received more than EUR 1 billion in support from the EU to conduct ambitious renovation projects from the Resilience and Recovery Facility (RRF)⁵¹. The support for renovation was divided into two phases: during the first one, renovation works would be 100% covered, while in phase two would decrease to 80%. It should be noted that, as a result of the country’s history, Bulgaria has many multifamily buildings, with a majority of the population their housing units. This makes the renovation of a whole building complicated, as it involves many owners. The generous financial support did not produce the expected results. During the first phase, though the support was offered to all, it mostly benefited households that had the resources to pay for a renovation, leaving many vulnerable populations behind. Finally, the process did not allow banks to learn about the loaning process for the renovation. The second phase did not work as planned either, as it is said that local governments encouraged homeowners to wait for the next European support plan, which would cover 100% of the renovation cost (instead of 80%)⁵². In addition, dubious transactions happened during previous plans. When working on a 2015-launched program where 2,000 properties were rehabilitated, auditors discovered “fraudulent practices, cartelization of contractors, low control

51 “Bulgaria’s recovery and resilience plan”, *European Commission*, not dated, https://commission.europa.eu/business-economy-euro/economic-recovery/recovery-and-resilience-facility/country-pages/bulgarias-recovery-and-resilience-plan_en

52 Interviews with various actors of the sector.

and poor quality of the activities carried out in some cities”⁵³. Some investigations are ongoing for suspected corruption involving EU funds in renovation work⁵⁴.

On the other side of the continent, **Italy** launched in 2020 its 110% “Superbonus” plan as part of the economic recovery plan after the Covid-19 shock. It provides a coverage of 110% for renovation expenditures. The programme has been widely criticized and generated several issues – with a EUR 215 billion expenditure over 4 years (beyond the original EUR 35 billion planned for 15 years), it added to the budgetary constraints of the country, created EUR 15 billion of stranded credits that companies failed to claim on time, and also generated grid bottlenecks and a construction bubble. Cases of fraud of up to EUR 16 billion have also been reported⁵⁵. Finally, some data show that the programme was accessed mostly by lower-to-middle class, leaving the poorest behind⁵⁶. These encouraged the government to reduce it from 110% to 90% in 2023, and then to 70% in 2024 before closing it. However, the programme did bring some benefits that should not be overlooked: by May 2024, it had encouraged the renovation of almost 500,000 residential homes, with an energy consumption reduction estimated to be at 5% of the total national housing stock. In addition, it accelerated the adoption of residential photovoltaic solar panels (+24% in 2022 and +35% in 2023) and home energy storage capacity (from 94 MWh in 2020 to 32M1MWh in 2021, i.e. 18% of the European market). Finally, the “Superbonus” seems to have contributed to short-term economic growth (boosting the country’s economic recovery after the Covid-19 crisis) and created 410,000 jobs⁵⁷.

– Local Governance Issues and Difficulties to Target the Most Vulnerable Population

In addition, local governance can also create hurdles. These include low awareness or interest of policymakers, different departments that pursue divergent strategies, a lack of clear responsibility, a lack of knowledge of incentives and drivers for investments, excessive reliance on the building owners to take the initiative, and a lack of data on energy performance⁵⁸. Local authorities often find it challenging to communicate new requirements to property owners and developers⁵⁹. Interviewees

⁵³ “Chaos in Bulgarian building stock renovation: Countless questions, no answers”, *Economic BG*, March 5th, 2025,

⁵⁴ “Bulgaria: School director caught in the act while receiving a bribe”, The independent public prosecution office of the EU, February 21st, 2025, <https://www.eppo.europa.eu/en/media/news/bulgaria-school-director-caught-act-while-receiving-bribe>

⁵⁵ There is already abundant literature on the Superbonus. See Codogno L. “Italy’s Superbonus 110%: Messing up with demand stimulus and the need to reinvent fiscal policy”, LUISS Institute for European Analysis and Policy, Working Paper 12/2024, July 15, 2024, <https://leap.luiss.it/wp-content/uploads/2024/07/WP12.24-Italys-Superbonus-110.pdf>, Tang C. “How Italy’s Superbonus Tax Credit Fueled Growth but Overloaded the Grid”, *Corinex*, October 15th, 2024, <https://www.corinex.com/articles/italy-superbonus-tax-credit-growth-grid-debt> and “Italy overturns ‘superbonus’ scheme for housing renovation”, *Euractiv*, February 23rd, 2023, <https://www.euractiv.com/section/eet/news/italy-overturns-superbonus-scheme-for-housing-renovation/> and “Italian police uncover billion-euro tax credit scam”, *Swissinfo.ch*, May 16th, 2024, <https://www.swissinfo.ch/eng/italian-police-uncover-billion-euro-tax-credit-scam/77707138>

⁵⁶ “Superbonus, i dati sui redditi: in quali tasche sono finiti i soldi”, *Today*, February 26th, 2023, <https://www.today.it/economia/superbonus-beneficiari.html>

⁵⁷ Tang C. “How Italy’s Superbonus Tax Credit Fueled Growth but Overloaded the Grid”, *op. cit.*

⁵⁸ *Governance Change for Energy Efficiency in Buildings. A Policy Brief form the Policy Learning Platform on Low-Carbon Economy*, Interreg Europe, December 2021, <https://www.interregeurope.eu/sites/default/files/2021-12/Policy%20brief%20on%20governance%20change%20for%20energy%20efficiency%20in%20buildings.pdf>

⁵⁹ *Governance Change for Energy Efficiency in Buildings. A Policy Brief form the Policy Learning Platform on Low-Carbon Economy*, Interreg Europe, *op. cit.*

also mention administrative burdens, difficulties in obtaining permits, and a lack of knowledge of the different private actors. Robust “one-stop shops” (OSS) for energy renovations are recommended by the EPBD, but are still lacking in many regions, leaving residents without sufficient guidance on compliance and financing options⁶⁰.

A result of governance issues is that the programmes ignore the most vulnerable part of the population. The people who could afford the renovation of their houses without financial support are usually the ones with better access to information about the support available, and the skills or resources to obtain it. This seems to be the case in Italy and in Bulgaria (see above, *Can additional financing accelerate the pace of renovation? Lessons from Bulgaria and Italy*). As some experts recently wrote, “equal access to funding support [...] in practice means better-off, better-informed people – who need the money the least – get the lion’s share of it and the most vulnerable are left-out. That’s a surefire way to undermine support for EU legislation”⁶¹.

I THE LIMITED ADEQUACY OF THE EU’S ANSWERS

– Examining the relationship between Brussels and Local Governments

The support provided by the EU to local governments is de facto limited by the institutional reality of Europe. The European Commission has no competence on housing. However, it appointed the first-ever Energy and Housing Commissioner with the task “to support Member States in addressing the root causes of housing supply issues and to unlock public and private investment for affordable and sustainable housing”⁶². To complement his work, a new **Task Force on Housing** was established in February 2025. It is attached to the Directorate-General for Energy and “will develop and implement a **European Affordable Housing Plan** and related policy initiatives”. It will coordinate the work of the different DGs and of the European Parliament, the Member States, the EIB, the Committee of the Regions, and the Economic and Social Committee, to “set out effective EU policies to address the structural drivers of the housing crisis, and in particular to unlock public and private investments for affordable and sustainable housing, and thereby also address important housing-related aspects such as homelessness”⁶³. The European Parliament also established a temporary committee on the housing crisis.

At the Member States level, national governments, most of the time, play the role of intermediaries between European institutions and local governments. Some organizations, such as the Committee of the Regions (CoR) or coalitions such as the Council of European Municipalities and Regions (CEMR), the Covenant of Mayors, EuroCities, Energy Cities, C40 or ICLEI ensure that local governments’ voices are heard in Brussels, but their role remains extremely limited if compared to national governments. In terms of finance, European and national funds are normally chan-

⁶⁰ As mentioned in Seán Kelly (rapporteur) (2021) “Report on the implementation of the Energy Performance of Buildings Directive”, *Report A9-0321/2021*, European Parliament, Committee on Industry, Research and Energy, November 15, https://www.europarl.europa.eu/doceo/document/A-9-2021-0321_EN.html

⁶¹ Bajomi A., Riley B., Simpson C., “The people behind the buildings: Why we must get it right in the EPBD”, *Euractiv*, May 12th, 2023, <https://www.euractiv.com/section/eet/opinion/the-people-behind-the-buildings-why-we-must-get-it-right-in-the-epbd/>

⁶² “Dan Jørgensen Commissioner (2024 - 2029), Energy and Housing”, *European Commission*, https://commission.europa.eu/about/organisation/college-commissioners/dan-jorgensen_en

⁶³ “New Housing Task Force set up to ensure all Europeans have access to affordable and sustainable houses”, *European Commission, Daily News*, February 3rd, 2025, https://ec.europa.eu/commission/presscorner/detail/en/mex_25_399

nelled through a national-level agency or a Ministry. Political issues may influence the money transfer: ruling parties at the national level tend to favour the mayors from the same party. The same can go at the subnational level: the ruling party at a regional level may also be more generous to cities ruled by the same party⁶⁴. In **Hungary**, cities run by the opposition suffered in 2022 from the energy crisis, but also from the revenue stripping by the Fidesz, the party ruling the national government. Fidesz refused to authorise loan restructuring in opposition municipalities such as Budapest or Miskolc, despite the banks' agreement, leading to local budget deficits, and some suspect that this decision was politically motivated⁶⁵.

However, some programs are directly delivered at the local level, but these remain limited compared to the needs. The European Investment Bank (EIB) also developed a facility, European Local Energy Assistance (ELENA). Established in 2009, the programme has since awarded more than EUR 330 million. It “provides technical assistance grants for the design and implementation of energy efficiency, building-integrated renewable energy investments and innovative urban transport”⁶⁶. Many local actors appreciate the ELENA programme, but believe it should be scaled up⁶⁷. Local governments can also benefit from other initiatives that provide different types of support, such as Interregion Europe, Horizon Europe, or UrbAct (see [annexe](#)). However, applying to such projects requires important resources, with uncertain results (chances of success are estimated to be around 15 to 50% by representatives of a European capital city). In addition, these European projects do not necessarily align with the national political agenda. Finally, they only last 3 to 4 years, which often means they can only be executed by staff under temporary contracts. As they leave after the end of the assignment, their expertise and experience are lost to the local government⁶⁸.

The diversity of local situations remains another challenge for policy interventions. As mentioned above, European countries have different governance and institutions. Local governments are diverse in terms of responsibilities, sizes and revenues. There is also a notable gap with the Eastern European countries who joined the EU more recently as they have several distinct characteristics that set them apart from other member states, e.g. a strong central state, where decentralization can be perceived as a threat to the central state, and also a majority of building ownership in big multi-family buildings. The tools provided to local governments need to be adapted to this diversity, and the objectives need to take into account the different resources and capacities.

– Too many tools, leaving some gaps

Many initiatives have been established over the past years to address local government capacity, as featured in the Annexe. As a result, a wide spectrum of support is available. The proliferation of initiatives generates additional regulatory knowledge issues for local governments. A solution is to create “one-stop shops” that play the role of platforms where local governments can search for specific support and be directed towards the service they need. However, one-stop shops are also proliferating. These tools leave some gaps: the EIB and other documents listed here show

⁶⁴ Interviews.

⁶⁵ “Hungary’s opposition municipalities say they feel the heat of ruling party revenge”, *Euractiv*, January 5th, 2022, https://www.euractiv.com/section/politics/short_news/hungarys-opposition-municipalities-say-they-feel-the-heat-of-ruling-party-revenge/

⁶⁶ “ELENA – European Local Energy Assistance”, EIB, not dated, <https://www.eib.org/en/products/advisory-services/elena/index>

⁶⁷ Interviews.

⁶⁸ Interview.

that local governments are still finding it challenging to access specific support and benefit from capacity building or training to improve their skills.

Some gaps that we identified include:

- **A lack of focus on the energy efficiency implications in terms of poverty alleviation.** The questions of energy poverty and efficiency still seem to be mostly considered from a silo perspective. It should be noted that this area of work is poised to become a priority for the next Commission⁶⁹.
- **The difficulties for some governments in accessing training.** Smaller municipalities often do not have access to dedicated technical assistance programs tailored to their needs, leaving them at a disadvantage compared to larger cities with more resources.
- **Lack of support in terms of monitoring skills.** Few mechanisms exist to systematically evaluate the long-term impact of funded projects.

III • Skills and Policy Proposals to Reinforce Local Governments

I A COMBINATION OF HARD AND SOFT SKILLS THAT SHOULD BE REINFORCED IN PRIORITY

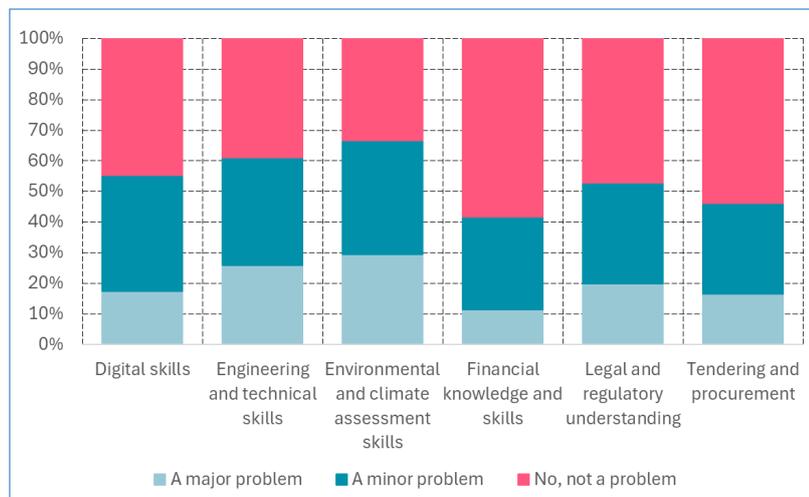
Therefore, local governments have important needs in terms of skills. The EIB conducts a *Municipality Survey* every two years, in which its staff conducts a series of interviews with city hall representatives from all around Europe. The results of the 2024 edition, featured in the [figure 3 below](#), highlight the perception of municipalities in terms of skill needs, and show that municipalities assess their skill needs in priority in:

- Digital skills,
- Engineering and technical skills,
- Environmental and climate skills, and
- Legal and regulatory understanding⁷⁰.

⁶⁹ The topic of affordable housing and energy poverty generated some exchanges during the hearing of the Commissioner-Designate Jorgensen, “Hearing of Commissioner-Designate Jorgensen”, News, European Parliament, November 5th 2024, <https://www.europarl.europa.eu/news/en/press-room/20241029IPR25035/hearing-of-commissioner-designate-dan-jorgensen>. See also “The EU’s Plan to Make Housing More Affordable”, *Politico*, October 3rd 2024, <https://www.politico.eu/article/eu-plan-affordable-housing-social-ursula-von-der-leyen-commission-investment-construction/>

⁷⁰ *The State of local infrastructure investment in Europe – EIB Municipalities Survey 2024 – 2025*, EIB, April, 8th 2025, DOI: 10.2867/3529559

FIGURE 3. Skill Gaps Delaying Public Investment
(% municipalities reporting gaps in technical capacity)



▲ Source: EIB Municipalities Survey 2024.

Based on this analysis, on interviews and various reports mentioned in this paper, we assess the skills that are most needed by local governments to pursue, in parallel, the decarbonization of buildings and promote affordable housing. The list is slightly different from the one established by the EIB, for several reasons: it comes from an overall analysis of the housing situation in Europe, and not from a self-assessment of municipalities. In addition, it includes a broader set of skills, encompassing soft skills.

– Hard Skills: Planning and Taking Advantage of the Policy and Tech Opportunities

- Better planning

The need for more effective planning emerges as a critical skill area. This implies that local governments should, among other measures:

- **A long-term vision**, with goals set beyond the political terms, as well as realistic, achievable and measurable policies that are aligned with the national and European objectives,
- **A whole-of-government approach**, breaking down silos between different departments and agencies. For instance, building decarbonization policies need to be considered from a social (affordable housing, social housing, fight against energy poverty) and energy transitions, though the City Hall departments in charge of these issues can be separated.
- **A whole-of-society approach**, engaging with different stakeholders and communities in their planning, to ensure that the policies and their benefits are understood and accepted, and also to promote a sense of ownership. Outreach to energy communities and other grassroots movements is essential, and they can provide crucial support to local governments.

The EU encourages and has financially supported the creation of local energy agencies across Europe to promote the energy transition within a specific territory, play

the role of knowledge centre and facilitate clean energy investments. There are more than 300 such organisations in Europe, with 3,800 staff. Most of them are concentrated in Western Europe, with 67 agencies in Germany, 64 in France and 38 in Spain (i.e. more than half of the agencies in three countries), but only 2 in countries like Hungary, Poland or Slovakia⁷¹. These agencies have a crucial role to play in policy planning and should be reinforced to address these points.

The city of **Leuven**, in Belgium, aims to lower the city's CO2 emissions by 67% by 2030 and to achieve carbon neutrality by 2050. It has established Leuven 2030, an NGO with innovative governance involving all types of actors: local authorities, businesses, civil society, etc. Citizens can take an active part in the debate and decisions, through tools such as citizen juries and a General Assembly where they are represented. Public awareness is also raised by a communication team and an agency that conducts information campaigns on the internet, with a well-documented website⁷² and peer-to-peer events. Leuven 2030 also launched the L.E.U.V.EN. (Lower Energy Use Via Extraordinary Network) programme that focuses on building renovation and social housing, with partnerships that aim to promote renovation works benefiting the most vulnerable groups⁷³. In January 2024, Leuven's Mayor, Mr. Mohammed Ridouani, became president of the Energy Cities alliance.

- Data, MRV and Digital Tools

Local governments' capacities in data collection and Monitoring, Reporting, and Verification (MRV) should also be enhanced. This includes developing stronger data collection skills and improving monitoring processes. The European Centre for the Development of Vocational Training (CEDEFOP) lists several technical skills needed by municipalities to drive the shift towards "smart and green cities": "designing, developing and constructing the infrastructure necessary to introduce smart and green solutions; managing the infrastructure; delivering smart and green services in an urban setting; monitoring, follow-up and evaluation; and building and maintaining citizens engagement and active participation". It also recognises the difficulties these local governments are expected to face in attracting and recruiting the right people, both within the government teams and as external contractors⁷⁴. This can have an impact on the level of technologies adopted: for instance, the Building Information Modelling (BIM), which creates a digital twin of a targeted building to test the impact of the renovation work. Despite important promises, this technology has not caught up yet in most countries⁷⁵. The Edge, an office building completed in 2014 and located in **Amsterdam**, innovatively uses BIM technologies with automated energy performance visualisation, building usage monitoring and post-processing for energy analysis⁷⁶.

71 European Commission, ManagEnergy, "Energy agencies" webpage, https://managenergy.ec.europa.eu/managenergy-energy-agencies_en

72 <https://www.leuven2030.be/>

73 "Leuven 230: A transition that leaves no one behind", the Covenant of Mayors, Case Study, 2022, <https://build-up.ec.europa.eu/en/resources-and-tools/publications/medieval-city-leuven-towards-energy-transition>

74 CEDEFOP (2022) "Cities in transition. How vocational education and training can help cities become smarter and greener", *Policy Brief*, https://www.cedefop.europa.eu/files/9172_en.pdf

75 Interviews, Charef R., Emmit S., Alaka H.A.: "Building Information Modelling adoption in the European Union: An overview", *Journal of Building Engineering*, April 2019, DOI:10.1016/j.jobe.2019.100777 and "Les spécialistes du BIM, ce processus de modélisation des projets, n'ont pas encore envahi le secteur du bâtiment", *Le Monde*, December 2nd, 2024, https://www.lemonde.fr/emploi/article/2024/12/02/c-est-un-metier-les-specialistes-du-bim-n-ont-pas-encore-envahi-le-monde-de-la-construction_6424692_1698637.html

76 Jalia A., Bakker R., Ramage M. "The Edge, Amsterdam. Showcasing an exemplary IoT building", University of Cambridge, not dated, https://www.cdbb.cam.ac.uk/system/files/documents/TheEdge_Paper_LOW1.pdf

Data collection and MRV can be reinforced by new digital technologies, local governments need better access to these. These include georeferencing applications, calculations of solar potential, and estimates of energy production, consumption, and emissions using Urban Energy Models (UBEMs) and Digital Building Logbook (DBL)⁷⁷. In **Barcelona**, different local institutions partnered in 2017 to set up the Metropolitan Observatory of Housing in Barcelona (O-HB). The O-HB works on housing demand surveys, analysis of rental supply and demand, residential vulnerability, and publishes annual reports. The initiative provides detailed data on the local housing and the inhabitants of the city⁷⁸.

Finally, mobilising people who are in contact with the different segments of the population can also help deepen local knowledge. In **Barcelona** again, home care workers were trained to support the outreach to poor households, explaining what energy poverty is, and presenting programmes they can benefit from. Similarly, under the “Action Habitat” programme, **France’s** postmen have been mobilised to support the identification of buildings with the worst energy performance⁷⁹.

- Technical Energy Skills

Local governments also need better technical knowledge on energy efficiency. They can be expected to answer some of the expert debates related to building renovation, e.g. should renovation measures be implemented step by step, or all at once? Are heat pumps a solution when a house is not properly insulated? Is district heating the best solution everywhere in Europe?

To achieve the renovation goals, local governments need to master some engineering knowledge, on issues such as sustainable materials, heat pumps, digitalisation, district heating and cooling, digital tools, etc. Specifically, local governments need data on:

- General characteristics of the local building stock,
- Energy characteristics of the local building stock,
- Overview of deep renovation of buildings,
- Overview of the worst-performing segments of the local building stocks, rented properties and energy poverty,
- Capacities of construction, energy efficiency, and the renewable energy sector,
- Actual energy savings and broader benefits of the renovation of buildings,
 - Evidence-based estimate of expected energy savings and of reduction of costs for health systems from building renovation,
 - Policies and measures for the mobilisation of investments into the renovation of buildings⁸⁰.

Some cities are already providing training to improve the technical skills of their local staff: for instance, **Utrecht (Netherlands)** is increasing its staff capacity from 6 to 31 full-time equivalent staff (by 2030). This will allow the city to reach its goals of decarbonising 40,000 houses by 2030 and 120,000 by 2050⁸¹.

⁷⁷ *Ibid.*

⁷⁸ <https://www.ohb.cat/en/>

⁷⁹ “Améliorez votre bilan énergétique avec un diagnostic énergie sur mesure”, La Poste, <https://www.laposte.fr/entreprise-collectivites/diagnostic-renovation-energetique>

⁸⁰ Adapted from López-Mesa L., Beltrán-Velamazán C., Gómez-Gil M., Monzón-Chavarrías M., Espinosa-Fernández A. “New Approaches to Generate Data to Measure the Progress of Decarbonization of the Building Stock in Europe and Spain”, in López-Mesa L. and Oregi X. (eds), *Assessing Progress in Decarbonizing Spain’s Building Stock*, Springer, 2024, pp. 317 – 346.

⁸¹ “Local staff for the energy and climate transition: what is needed and how do we get there?”, Covenant of Mayors, Europe, July 19th, 2023, <https://eu-mayors.ec.europa.eu/en/Local-staff-for-the-energy-and-climate-transition>

- Taking Advantage of Low-Tech Solutions

New digital solutions may not be available for municipalities with limited human and/or financial resources, but low-tech and energy-sufficiency solutions exist and should complement local governments' skills. A European project is dedicated to this issue: the **Frugal Cities through Energy Efficiency and Low-Tech Communities (FEEL, part of Interreg Europe)**. FEEL works with 8 cities to “apply the principles of frugality in schemes to renovate older housing, enhance biodiversity, improve services & engage their communities”⁸². The initiative promotes projects or solutions such as tiny houses, low-tech cycling tours or sufficiency. Among its recent achievements, **the city of Rybnik (Poland)** conducted the deep modernisation of a historic building, improving its energy performance, and creating social housing, including for vulnerable populations such as elderly women living alone and reducing utility costs to address energy poverty⁸³. The city of Vienna includes shared services and rooms in its social housing stock, therefore reducing the number of square meters per household and mutualising the usage of appliances such as laundry machines⁸⁴. Local governments can also implement and promote campaigns to promote low-cost energy sufficiency or efficiency measures. However, these should be properly targeted: some experts mention some campaigns in Western Europe inviting households suffering from energy poverty to lower their heat to save money. These types of campaigns can stigmatise populations that are already vulnerable⁸⁵.

- Skills to navigate Europe’s regulatory framework and programme opportunities

Several interviews brought up the difficulties of understanding the EU regulations and accessing the tools. For instance, on finance, one person spoke about the “spaghetti of subsidies” available that they struggle to access. There are several actions possible to address this issue:

- Provide local governments with training that will reinforce their skills, to improve the:
 - **Regulatory knowledge** of the European governance and institutions,
 - **Identification of the relevant tools and support** at their disposal, with clear information on the requirements and calendar of the applications,
 - **Application-filling.**
 - Facilitate the acquisition of the skills listed above with tailored *one-stop shops* that are accessible by all,
 - In parallel and as much as possible, simplify the processes at the European level to make it more easily accessible to local governments.
- **Hard Skills Need to be Complemented with Soft Skills to Promote Renovation Policies that Benefit Everyone**

Beyond the hard skills needed for understanding the technical aspects of renovation policies, affordable housing, and measures to combat energy poverty, local governments also require the following soft skills including for the following:

⁸² <https://www.interregeurope.eu/feel>

⁸³ “Cohousing apartment for women 60+ I- lonely residents of Rybnik in Poland”, Good Practices, September 27th, 2024, <https://www.interregeurope.eu/good-practices/cohousing-apartment-for-women-60-lonely-residents-of-rybnik-in-poland>

⁸⁴ Interview.

⁸⁵ Interview.

- **Negotiation skills**, allowing local governments to better discuss budget allocation with the upper levels of governments, and also support their work with different stakeholders at the city level.
- **Programme coordination skills**, supporting the efforts of local governments in bringing all stakeholders together, supervising the work and improving programme implementation.
- **Skills to frame compelling narratives**, to better mainstream social policies in the energy transition, and to convince different stakeholders of the benefits of renovation.

I ADDITIONAL POLICY PROPOSALS TO EMPOWER LOCAL GOVERNMENTS

Programmes implemented by the European Commission should promote the skills listed above. But reinforcing the local government capacities will not be enough, and this effort should be complemented by other measures, such as the ones suggested below, that shall, in return, ease the acquisition of the required skills for local governments.

– Put Further Emphasis on Adaptation

Climate change is increasing the heat waves in Europe and adaptation policies should be ramped up: local governments should be better trained to address energy poverty in extreme weather situations (heatwave, floods, etc.): i.e. identify the most vulnerable people, be able to implement emergency measures and design policies to better adapt the city's infrastructures and measures. The challenge is huge, as it requires a completely new set of skills. In addition, our current knowledge of adaptation solutions remains limited. Good practices, typically like the ones set in the City of Vienna, should be studied and shared; different local government departments should be encouraged to work together to promote tailored adaptation solutions to their jurisdictions.

– Promote the Involvement of Wider Communities

Local governments should be encouraged by the national governments and European institutions to work with grassroots movements, vulnerable communities, youth, energy communities, private sector companies, national actors, etc. Actors in the construction field should be encouraged to keep their knowledge and skills up-to-date when it comes to housing regulations.

– Reinforce the EIB and Broaden ELENA

EIB's ELENA programme has been praised in many interviews. In general, local governments need to have direct access to European finance programmes (i.e. without having to go through the national government). However, these programmes should be scaled up to address the renovation challenge. National governments and the Commission should further support ELENA, or similar programmes:

– Encourage Multi-Disciplinary Approaches

Training and more generally support should be provided to different departments, in order to break the different silos. For instance, one of the limitations of the local agencies established in the context of the ManagEnergy programme is that they do not cover other sectors than energy and climate; therefore, housing is excluded from their mandate. The adoption of whole-of-government approaches remains

essential, decarbonization policies should never be designed or implemented without social consideration. Some European cities are already taking action to better coordinate the activities of their various departments: these include hiring a dedicated city strategist in **Assen (Netherlands)** and **Valencia (Spain)**, the establishment of interdisciplinary departments in **Amsterdam (Netherlands)** and **Munich (Germany)**, and the creation in 2010 of an “extraordinary task force” in **Florence (Italy)**⁸⁶.

– **Develop Innovative Approaches to Acquire New Skills, Promote Peer-to-Peer**

Adopting new skills can be done in an interactive, non-formal way: e.g. by learning from other local governments through peer-to-peer or other types of exchanges. The Commission and Member States should ensure that all municipalities have access to these opportunities.

– **Foster the role of one-stop shops**

Given the complexity of the EU regulation, the technical details of renovation and other complex-related topics, one-stop shops have to play an important role in skill acquisition. They also provide an opportunity to establish direct contact with local governments. However, these should be easily available, provide clear training and advice, and be accessible to broader communities than simply local governments. And OSS should be designed in a way that does not contribute to the proliferation of initiatives.

Conclusion • Addressing Energy, Climate and Social Policies at the Same Time

During his mandate, the newly appointed Energy and Housing Commissioner is going to have to address a multifaceted crisis: the climate crisis, with extreme weather events (including heatwaves) that are increasing the pressure on our habitats; the energy crisis, with the need to accelerate the decarbonization of our heating systems; and the housing crisis, with a growing number of European citizens that are struggling to find a home. The combination of these challenges shows that decarbonization and social measures need to complement each other. The Renovation Wave should take into consideration house affordability, otherwise, it is bound to fail: it will then accelerate the “green gentrification”, increasing inequalities and making it even more difficult for the poorest to renovate their homes.

Local governments have a crucial role to play in these policies, but they should be given enough resources to conduct these challenging tasks. As mentioned in this report, the list of skills they need is long... and they also need further financial resources, and sometimes more political support. However, their empowerment, and also the success of the Renovation Wave and the resolution of the housing crisis will be key for the future of Europe.

⁸⁶ Lopez E. “Breaking the silos between municipal departments to foster transversal cooperation for climate action”, Energy Cities, July 13th, 2023, <https://energy-cities.eu/breaking-the-silos-between-municipal-departments-to-foster-transversal-cooperation-for-climate-action/>

Annexe • List of the Main Relevant Initiatives Available at the EU Level

Initiative	Summary of the support
Administrative Capacity Building for Regional Development	Enhances administrative and technical skills at local and regional levels to improve the effectiveness of EU policies and funding programs.
BUILD Up Skills (LIFE Programme)	Develops technical skills for the construction sector, especially in energy efficiency.
Covenant of Mayors on Climate and Energy	Technical assistance and external expertise to supplement local staff, Peer learning and partnerships to share best practices and resources
ELENA – European Local ENergy Assistance (EIB)	Direct grants or funding for project preparation
European Regional Development Fund (ERDF)	Direct grants or funding for project preparation
Energy Poverty Advisory Hub (EPAH)	Guidance and assistance to navigate EU funding processes
Enhancing the European Administrative Space (ComPAct)	Strengthens administrative capacity at the local level for better public governance and coordination.
ESPON (Interreg)	Supports territorial development through research and data provision to inform policymaking.
EU Peers Initiative (LIFE Programme)	Promotes knowledge exchange among cities on energy and climate policies.
Eurocities	A network of major European cities promoting policy exchange and capacity building at the local level.
European Investment Advisory Hub (EIAH)	Provides tailored advisory services to support investment projects, including technical and regulatory guidance.
European City Facility	Direct grants or funding for project preparation
European Urban Initiative	Combines capacity-building activities with funding for sustainable urban development.
Eurotowns Mentorship of Small and Medium-Sized Cities	Focuses on smaller cities, offering guidance on regulatory and technical challenges
Frugal Cities through Energy Efficiency and Low-Tech Communities (FEEL)	Aims to apply the principles of frugality in schemes to renovate older housing, enhance biodiversity, improve services & engage their communities
Horizon Europe	Direct grants or funding for project preparation
Intelligent Cities Challenge (ICC)	Provides support to cities in leveraging smart technologies and regulatory frameworks for sustainable growth.

Interact	Peer learning and partnerships to share best practices and resources
Just Transition Mechanism	Guidance and assistance to navigate EU funding processes
LIFE LOOP - Local Ownership Of Power	Technical assistance and external expertise to supplement local staff
ManagEnergy	Builds capacity in sustainable energy through workshops, peer learning, and tailored advice for local and regional energy agencies.
New European Bauhaus (NEB)	Inspires and supports local sustainable design initiatives
Structural Reform Support Programme (SRSP)	Technical assistance and external expertise to supplement local staff
Technical Support Instrument (TSI)	Technical assistance and external expertise to supplement local staff
URBACT Programme (Interreg)	Peer learning and partnerships to share best practices and resources
Urban Agenda	<ul style="list-style-type: none"> Aligns EU policies with urban needs and encourages political commitment to sustainable urban development. Brings high-level political actors into the governance process for urban sustainability.

Managing Editor: Sylvie Matelly • The document may be reproduced in part or in full on the dual condition that its meaning is not distorted and that the source is mentioned • The views expressed are those of the author(s) and do not necessarily reflect those of the publisher • The Jacques Delors Institute cannot be held responsible for the use which any third party may make of the document • Original version • Edited by Marjolaine Bergonnier • © Notre Europe - Jacques Delors Institute

Institut Jacques Delors

Penser l'Europe • Thinking Europe • Europa Denken
18 rue de Londres 75009 Paris, France • www.delorsinstitute.eu
T +33 (0)1 44 58 97 97 • info@delorsinstitute.eu



This project is funded by the European Commission's Citizens, Equality, Rights and Values Programme (CERV) under project number 101104850 – IJD 2025.