

Executive summary

Accounting for nearly 40% of global energy-related carbon dioxide (CO₂) emissions, and sometimes up to 70% in large cities, buildings are central to the low-carbon transition. Decarbonising buildings, especially older stock, through energy efficiency improvements and renewable energy use not only reduces carbon emissions, but also generates co-benefits in health, energy affordability and the labour market. Additionally, global megatrends and the search for a green recovery from COVID-19 provide impetus for stakeholders to take action.

Cities and regions have huge potential to decarbonise buildings and offer place-based responses to the transition to a net-zero economy. They own an important share of public buildings, and are responsible for building regulations. They are familiar with local building stock and close to citizens and local businesses. They are already taking steps to decarbonise buildings, often with more ambitious goals than their respective governments. However, they face considerable co-ordination, funding, capacity, awareness and regulatory challenges.

Drawing on the findings from a dedicated OECD Survey on Decarbonising Buildings in Cities and Regions and a two-year policy dialogue with government officials and key stakeholders, this report makes the case for scaling up the role and actions of cities and regions for decarbonising buildings, through innovative data, analysis and policy guidance directed to national and subnational governments.

Key findings

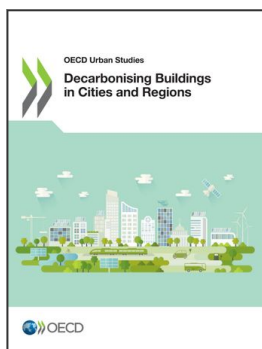
- **Key factors that affect the effectiveness of policies to decarbonise buildings differ across cities and regions**, as is the case for the carbon intensity of buildings, share of old building stock, rate of new construction and housing affordability. However, in all cases, decarbonising buildings helps to create jobs, enhance well-being and increase energy affordability at the local level.
- **Most cities and regions surveyed (86%) have their own plans or strategies, but many face challenges in implementing them.** Ministerial siloes and institutional fragmentation, combined with poor monitoring and evaluation frameworks, rank among the major obstacles in turning strategies into action, and driving effective and outcome-oriented investment.
- **Cities and regions also experience major funding and capacity gaps.** Inadequate government budgets and human resources hamper effective policy development and implementation on the local level. This results in a lack of incentives for property owners, who face high investment and transaction costs for energy efficiency retrofits. In addition, insufficient skills in the workforce and the lack of access to information and financing for small- and medium-sized enterprises (SMEs) also limit further action.
- **Cities and regions are undertaking ambitious policy measures at the subnational level, which can be scaled up.** Overall, 88% of the cities and regions surveyed demand higher energy efficiency standards than the national level in building energy codes, and 25% even call for a net-zero energy level. However, there is room to increase the enforcement of mandatory building energy codes and develop effective regulations for existing buildings beyond the 65% surveyed cities and regions currently applying building energy codes to existing buildings.

- **Collaboration across levels of government is fundamental for overcoming obstacles and making progress on the decarbonisation of buildings.** In fact, 74% of cities and regions reported that they need further support from national governments, for example to scale up pilot projects and raise awareness among the general public. National governments have a critical role to play in setting enabling policy environments for cities and regions, taking advantage of their legislative authority and access to the best available technical and financial resources within a country.

Key recommendations, based on the OECD Checklist for Public Action

- **National governments can set enabling policy environments by:**
 - **Developing common policy tools and framework across cities and regions:** National governments can set up the needed regulatory framework; strengthen incentives for energy efficiency and clean energy; and facilitate access to data and information to raise awareness.
 - **Enhancing multilevel co-ordination:** National governments can create a multilevel platform to align policies across levels of government; facilitate the design and implementation of subnational plans; and incorporate multilevel policy actions into national plans.
 - **Providing guidance and support to cities and regions:** National governments could consider giving financial support to pilot projects; supporting capacity building in local authorities as well as industries; and promoting new technologies for decarbonising buildings.
- **Cities and regions can plan a way forward by:**
 - **Creating a common vision for a broad array of stakeholders:** Cities and regions should engage diverse stakeholders around decarbonising buildings and develop a long-term common vision, with a comprehensive policy package for both public and private buildings.
 - **Devising effective regulatory frameworks for decarbonising buildings:** Cities and regions should strengthen the enforcement of mandatory building energy codes; provide a roadmap for stricter regulations; and test functional regulations for existing buildings.
 - **Introducing a monitoring and evaluation scheme for policy outcomes:** Cities and regions should assess the local policy environment for decarbonising buildings; and develop outcome-based indicators to track policy outcomes against subnational targets.
- **Cities and regions can lead by example, by:**
 - **Leveraging public buildings and procurement for further private investment:** Cities and regions should apply stricter energy efficiency standards to public buildings; and utilise public building projects for encouraging broader energy efficiency investment.
 - **Promoting pilot projects:** Cities and regions should launch pilot projects and leverage green finance to boost energy efficiency investment in buildings.
 - **Encouraging innovative business models:** Cities and regions should promote innovative business models that can make energy efficiency measures more convenient, reasonable and meaningful, by leveraging public and pilot projects and co-ordinating demands for renovation.
- **Cities and regions can engage all stakeholders by:**
 - **Raising awareness among citizens and local businesses:** Cities and regions should consider one-stop-shop advisory services, and formulate clear messages on the benefits of decarbonising buildings.

- **Providing technical and financial support to low-income households and SMEs:** Cities and regions should incentivise energy efficiency measures in low-income households and SMEs, by providing technical assistance and financial help.
- **Building capacity in subnational governments as well as local industries:** Cities and regions should encourage capacity building and facilitate skills development in the local workforce.



From:
Decarbonising Buildings in Cities and Regions

Access the complete publication at:

<https://doi.org/10.1787/a48ce566-en>

Please cite this chapter as:

OECD (2022), "Executive summary", in *Decarbonising Buildings in Cities and Regions*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/c4c248e2-en>

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document, as well as any data and map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area. Extracts from publications may be subject to additional disclaimers, which are set out in the complete version of the publication, available at the link provided.

The use of this work, whether digital or print, is governed by the Terms and Conditions to be found at <http://www.oecd.org/termsandconditions>.