



HEATING BRUSSELS CAPITAL REGION BEYOND GAS

The Brussels-Capital Region's full strategy for phasing out fossil gas has not yet been formally approved, but several key measures have already been adopted.

How is your city reducing its reliance on gas for heating?

As part of its medium-term planning, the Region has decided to ban gas heating systems in new buildings from 2025 onwards. Gas heating will also be prohibited in buildings undergoing major renovations from 2030.

In terms of technologies, air-source heat pumps are being deployed at an increasing rate, while shallow geothermal energy has seen strong growth in recent years. As a densely populated urban region, Brussels has limited potential for biogas production, and solid biomass is not considered a viable option due to air quality concerns. Apart from one waste incineration plant and two wastewater treatment facilities, the Region has little industrial activity and therefore limited opportunities to recover waste heat.

Brussels has developed a long-term vision for how the Region could be heated by 2050. This vision foresees a heating system based primarily on heat pumps, with district heating and cooling (DHC) networks playing an important role.

Which flagship projects or infrastructures illustrate your approach?

One of the most practical ways Brussels Environment is contributing to the Region's heat decarbonisation efforts is through the development and implementation of the Be.SHARE project.



BRUSSELS-CAPITAL REGION, BELGIUM

Sources used:

- Electricity

Technologies used:

- Primarily air-source heat pumps

Key figures

- Buildings account for **55% of the Region's GHG emissions**, with reduction targets of **-47% by 2030** and **-90% by 2050** (compared to 2005).
- District heating and cooling networks currently **cover less than 1% of total heat demand**, with existing systems mainly supplied by **waste heat from an incinerator and natural gas**.
- No official DHC deployment target has been adopted, but modelling for the 2050 vision suggests networks could supply up to **36% of heat demand**, requiring a **more than thirty-fold expansion** over the next 25 years.
- The share of renewables in heating is estimated at **below 5%**.
- Shallow geothermal installations have increased significantly, with a **threefold rise since 2022** compared to previous years.

With the launch of this pilot project, the Brussels-Capital Region is taking another significant step towards phasing out fossil fuels. Supported by the European Union, Be.SHARE will create an innovative carbon-neutral heating and cooling network in the Brussels North District.

The system is designed to supply heating and cooling to a diverse range of users, from office buildings to social housing, enabling direct energy exchanges based on complementary needs. Be.SHARE harnesses local renewable energy sources located in public spaces, helping to overcome both legal and economic barriers. Geothermal installations will be placed beneath parks and roads, while innovative riothermal technology will be scaled up to recover heat from sewage collectors, reducing district-wide CO₂ emissions.

The project also adopts a Public-Private-Citizens governance model, bringing together public utilities, private-sector experts and end users. Around 200 low-income households will be involved in the design of the network and supported in taking part in their own energy transition.

What are the main challenges you are currently facing in decarbonising heating?

Financial and economic barriers remain among the most significant challenges.

Renewable heating technologies such as heat pumps generally require higher upfront investment than gas boilers. In Belgium, electricity is also taxed more heavily than gas, meaning that switching from a gas boiler to a heat pump can result not only in higher capital costs but also higher operating costs.

Another major challenge relates to noise from air-source heat pumps. In a dense urban environment such as Brussels, it is not always possible to position outdoor units in a way that avoids disturbance to neighbouring residents.

Step in Brussels-Capital Region heat strategy:

HEAT PLANNING



This can create barriers to deployment, particularly in apartment buildings and closely built urban areas.

Being part of a European Urban Initiative project, with a financial contribution of around 5 millions euros by EU, will help the Brussels Region to further examine solutions, and get input from the EUI experts and other European cities.

What are the next key steps in advancing your city's heat decarbonisation efforts?

The next major milestone is the development of a regional Heat and Cooling Plan, which is expected to be finalised by September 2027.

The plan will establish a clear pathway for phasing out fossil fuels for heating and cooling, including potential cut-off dates for the installation of fossil-fuel-based heating systems. It will also set out ambitions for scaling up renewable alternatives such as geothermal, riothermal, aquathermal and air-source heat pumps, alongside the wider deployment of district heating and cooling networks.

In addition, the plan will include policy measures designed to address the key barriers to decarbonisation, particularly the financial and economic challenges associated with deploying heat pumps and district heating and cooling systems.

What kind of support would most help your city accelerate the transition away from gas?

Additional financial support would be particularly valuable, especially for the development of district heating and cooling networks, which require significant upfront investment.

Clearer and more stringent standards relating to noise from air-source heat pumps could also help increase public acceptance and reduce complaints in densely populated urban areas, facilitating wider deployment.

What is the foreseen budget for your heat transition? What are the main sources of funding and financing for your heat transition?

A dedicated budget has not yet been agreed, as the Heat and Cooling Plan is still under development.

Potential funding sources include revenues generated through European climate policies and mechanisms such as the EU Emissions Trading System (ETS 1 and ETS 2) and the Carbon Border Adjustment Mechanism (CBAM). In addition, energy network charges within electricity and gas bills could contribute to financing parts of the transition.



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