

BUILDINGS



45%
climate-friendly heating, air-conditioning and hot water supply systems

Share of heating, hot water and air-conditioning systems based on renewable energies and district heating (2014).

High energy standards for both newly constructed and existing buildings and climate-friendly heating, cooling and hot water supply systems are essential, especially in view of the current population growth and the high demand for housing. Here, Vienna is currently on track for attainment of the objectives. However, in view of the long investment and refurbishment cycles of buildings, appropriate courses must be set right now so that the long-term objectives for 2030 and 2050 can be attained.

OBJECTIVE

Building standards	Cost-optimised near-zero-energy standards for all new builds, extensions and refurbishments from 2018/2020.
Heating systems	Further development of heating systems towards even better climate protection levels.
Refurbishment activities	Comprehensive refurbishment activities result in a reduction of the energy consumption for heating/cooling/hot water in existing buildings by 1% per capita and year.

STATUS QUO

Vienna is currently largely on track for attainment of its buildings objectives, not least because stringent energy standards were incorporated in the city's building regulations as a matter of priority.

The share of renewable energy sources in final energy consumption for room heating, hot water and air-conditioning grew from 3.5% in 2005 to 6.1% in 2014, and that of district heating from 32.7% to 39.3%. The percentage of non-climate-friendly coal and oil heating systems has been reduced in recent years, but not that of gas-powered ones. The past few years have seen a renaissance of gas central heating in new builds, especially in large-scale housing developments.

The objective of reducing energy consumption for heating, cooling and hot water was recently (2014) on track for attainment. Since the baseline year 2010, however, specific final energy consumption for room heating, air-conditioning and hot water supply has fluctuated considerably. The main drivers of the drop in consumption were population growth and the warmer-than-average temperatures of the past few years, the number of days when heating was necessary having decreased by 28% since 1995.¹⁴



-20%
final energy consumption for heating, cooling and hot water since 2005

Decline in per capita final energy consumption for room heating, air conditioning and hot water from 2010–2014.



ACTION REQUIRED

Swift action is necessary in the buildings field on account of the long lifetimes of heating and hot water supply systems and the extended refurbishment cycles. As well as stepping up efforts to increase the speed and quality of refurbishment activities, the use of fossil fuel heating systems in new builds must be phased out in the near future.

Recommended measures (inter alia)

- » A clear regulation for the use of climate-friendly energy systems via building regulations and other relevant guidelines to reduce the proportion of fossil fuel systems in existing buildings and limit it to an increasingly small number of exceptions in new buildings in the medium term.
- » Approval and implementation of an energy framework strategy, an action plan for energy from renewable sources and the Urban Energy Efficiency Programme (SEP 2030).
- » Analysis of the type of energy supply in newly erected buildings as documented in the energy certificates so that the trend can be assessed.

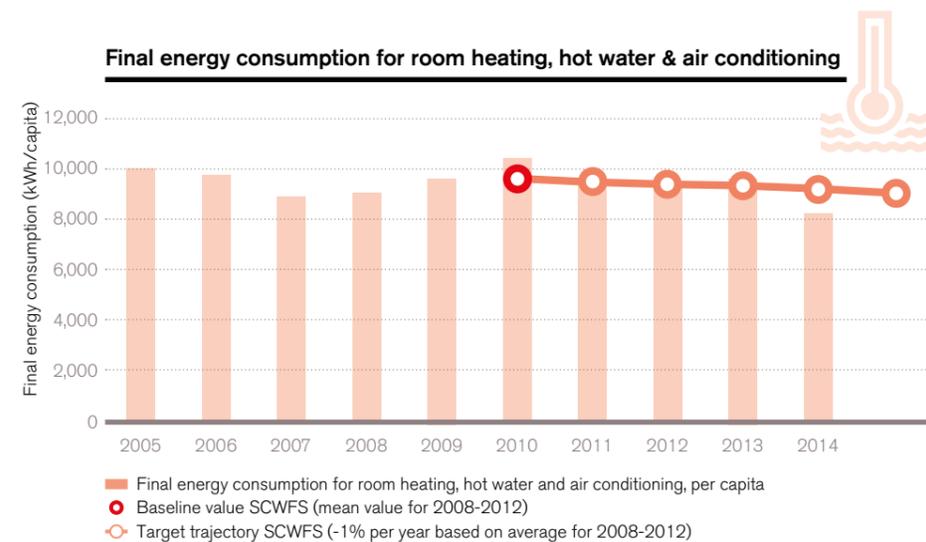


Figure 9: Per capita final energy consumption for room heating, air conditioning and hot water.

Source: Municipal Department MA 20/Energy Report 2016. Data: Useful energy analysis, 2014.

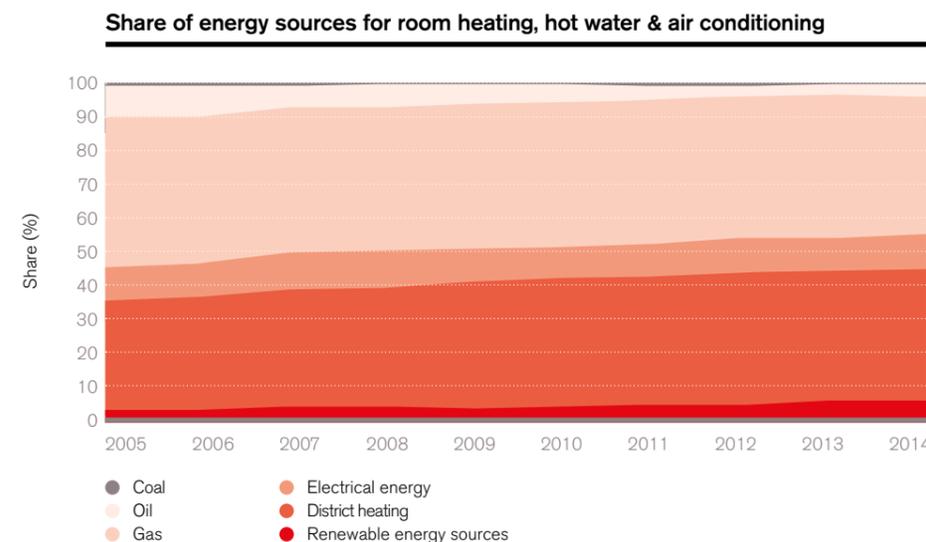


Figure 10: Share of energy sources in final energy consumption for room heating, hot water supply and air conditioning in Vienna, 2005–2014.

Source: Municipal Department MA 20/Energy Report 2016. Data: Useful energy analysis, 2014.

¹⁴ Basic climatic data for calculation of heating demand according to OIB.