



VIENNA

At the Forefront Against Climate Change

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Vienna, the Lee Kuan Yew World City Prize 2020 Laureate, is a leader in adapting to climate change and limiting its adverse effects. Here are its groundbreaking initiatives, which have helped residents slash carbon emissions and improve their quality of life.

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Danube River, Danube Island and the New Danube
(left to right)
Image: saiko3p / Shutterstock





Vienna aims to be carbon-neutral by 2040, earlier than the European Union's 2050 target.



Care for the environment has always been at the core of Vienna's planning principles. The city adopted its first climate protection programme in 1999 and launched its Vienna Climate Roadmap in 2022. Over the past two decades, Vienna has reduced its carbon emissions per capita by almost 40% and aims to be carbon-neutral by 2040, earlier than the European Union's 2050 target.

"We have one of the densest public transport networks, are among the best in Europe when it comes to eco-friendly district heating, and have over 50% of our land area dedicated to green spaces. We are in a very good position and will continue to intensify our efforts in climate protection in all areas of the city," said Vienna's Mayor Michael Ludwig.



Boating on Danube River.
Image: WienTourismus / Paul Bauer



Danube Island serves as a centrally located large public space for recreational activities.
Image: Bravavod161 / Shutterstock

Efforts Against Flood Risks

Even before its climate programmes, Vienna had already conducted studies and built defences against flood risks. The New Danube and Danube Island is an ambitious, two-decade joint project completed in 1989 that created a 21 km flood control channel and a recreational island using excavated soil. The undertaking improved the city's flood protection and added a closed water body and a large public park for outdoor activities.

Running parallel to the Danube River, the new channel is designed to cope with otherwise catastrophic river flows statistically expected

to occur every 3,000 to 5,000 years. It proved its value by averting major damages during a record torrential downpour in July 2021.

With accelerating climate change, the city started a five-year project in 2018 to further green Danube Island, install a wind-powered ditch irrigation system, and introduce a flock of 70 sheep to graze on its grassland in lieu of lawnmowers. These will decrease the island's carbon emissions and maintenance costs by up to 20% and 15%, respectively.



Vienna preserves over 50% of its land areas as green spaces.
Image: Syed Zain Mujtaba / Shutterstock



Aerial view of Nordbahnhof.
Image: Christian Fürthner

Green Capital of the World

Under its STEP 2025 urban development plan, Vienna actively expanded its green and open spaces, boosted its affordable and sustainable housing, and shifted its mobility options towards public transport, walking, cycling and other environmentally friendly modes.

To maintain the city's greenery, Vienna's guide on building 12 kinds of green and open spaces helps meet a range of constraints and needs. These include greening streets with grass verges, pavement trees and sidewalk gardens; turning open spaces in schools, kindergartens and sports complexes into community allotments; and converting walking and cycling paths into green axes.

Local green plans in renewal projects help guarantee that the city continues to enjoy diverse green and open spaces, by fulfilling conditions such as delivering at least 3.5 m² of such spaces per resident in the neighbourhoods. The city currently has an average of 9.3 m² of green space per person.

Vienna also continues to rehabilitate brownfield sites into parks. By 2025, it will convert the former Nordbahnhof railway station into Freie Mitte, a 93,000 m² park and nature area, and the city's largest new park since 1974. It will feature cycling lanes, skate parks and a wildlife reserve.

A Leader in Sustainable Housing

As Vienna's population grew, the city introduced measures to keep housing affordable and sustainable. Since its first municipal housing estate in 1925, the Austrian capital has erected some 220,000 low-rent public flats for around 500,000 people, or a quarter of its population. Successful applicants are not required to pay any deposit, commission or contract fees, making the flats truly affordable. The funding of 200,000 more subsidised apartments, run by cooperative housing associations, serves a further quarter of Vienna's residents.

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By taking a larger role in housing, including mandating low-energy standards for new public and publicly subsidised flats, the city has reined in its building sector's impact on the environment. For example, electricity for heating, the most power-consuming source in homes, has been limited to 30 kWh per square metre per year. The city estimates that its social housing averts about 371,000 tonnes of carbon dioxide emissions annually.

In June 2020, the city designated three areas as its first "climate protection areas", where new buildings are permitted only if equipped with climate-friendly heating and hot water supply systems. These areas will be extended to phase out fossil fuel-based heating and cooling systems in existing buildings.



Rudolf-Bednar-Park, a park in a modern residential neighbourhood.
Image: Kagan Kaya / Shutterstock



Vienna's historic centre.
Image: lizenzfrei

A Model for Eco-Friendly Mobility

Vienna has made strides in cutting carbon from its transport system, with only a third of the population owning a car today. Public transport makes up 38% of passenger trips, while walking has replaced the car as the second most popular mode of transport, at 28% and 27%, respectively, and cycling accounts for the remaining 7%.

The city's investments in its bus, train, tram and cycling networks make them easier and more affordable to use. A low-priced annual public transportation ticket costing 365 euros (S\$531), or 1 euro (S\$1.46) per day, incentivises more residents to give up driving. The new WienMobil app combines various mobility providers' offerings, such as bicycle and car-sharing services, and allows users to plan and pay for greener journeys.

Recent policies have further persuaded private car owners to make the switch. The government eliminated free parking throughout the city in March 2022, while progressively expanding its

park and ride system. Upcoming initiatives such as a new tram line, and a 7 km-long cycling highway will help make the final push.

"We are taking the right steps towards promoting climate-friendly mobility," said Mayor Ludwig. "We will continue on our consistent path of high quality of life for everyone through social and technical innovation in all areas, while maximising the conservation of resources and being a reliable partner for others." 

The above was adapted from an article from the website of the Lee Kuan Yew World City Prize, first published in May 2022. For more useful city resources, visit go.gov.sg/cities.